



AIR AND RADIATION ADMINISTRATION DRAFT PART 70 OPERATING PERMIT

DOCKET # 24-510-0001

COMPANY: JHMI Utilities, LLC

LOCATION: 600 North Wolf Street
Baltimore, Maryland 21287

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**MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION
AIR QUALITY PERMITS PROGRAM
TITLE V – PART 70 OPERATING PERMIT PROGRAM OVERVIEW**

Title V of the Clean Air Act (amended) requires each state to implement a federally enforceable operating permit program for major sources of air pollution. This program, the Part 70 Permit Program, also known as the Title V Permit Program, is designed to provide a comprehensive administrative document (a Part 70 Operating Permit) that identifies all air emissions sources at a given facility and the federal air quality regulations applicable to those sources. The permit establishes the methodology by which the owner/operator will demonstrate compliance, and includes testing, monitoring, record-keeping, and reporting requirements for each emissions source.

A Part 70 Operating Permit does not authorize new construction, and does not add any new emissions limitations, standards, or work practices on an affected facility. There may, however, be additional testing, record keeping, monitoring, and reporting requirements. A Part 70 Operating Permit is a five-year renewable permit. A responsible official for each facility subject to a Part 70 Operating Permit is required to annually certify compliance with each applicable requirement for that facility.

When an application for a Part 70 Operating Permit is received, the Department will complete a technical review of the application and will prepare a draft Part 70 Operating Permit and Fact Sheet. The Fact Sheet will explain the basis and technical analysis used by the Department to develop the federally enforceable permit conditions, including the required testing, monitoring, record keeping, and reporting provisions for each emissions unit at the permitted facility. The Fact Sheet will also include a description of the facility operations and the current compliance status with applicable requirements. If there are any discrepancies between the Part 70 Operating Permit application and the draft permit, the Fact Sheet will contain a discussion of the inconsistencies and the final resolution.

Public Participation Process

The Part 70 Operating Permit Program provides the public, adjacent states, and EPA the opportunity to review and submit comments on draft permits. The public may also request a public hearing on the draft permit.

The purpose of a public hearing is to give interested parties the opportunity to submit comments for the record which are germane to the draft federally enforceable permit conditions. Comments made at the hearing, or in writing to the Department during the comment period, should address errors and deficiencies in the permit such as unidentified emissions units, incorrect or deficient regulation citation, deficient record keeping, monitoring, reporting or testing requirements and unresolved compliance issues. After the public comment period has closed, the Department will review the formal testimony as part of the final review and prepare a Response to Comments document which will be sent to the EPA along with the draft Part 70 Operating Permit and Fact Sheet.

Testimony on state-only requirements will be kept on file at the Department as part of the formal record, however, state-only rules and regulations are not federally enforceable, and therefore are not within the scope of the EPA review. The Department will keep a record of the identity of the commenters, their statements, a summary of the issues raised during the public comment period, and the Response to Comments document for at least five years.

Citizen Petition to EPA to Object to Permit Issuance

Interested parties may petition the EPA to object to the Part 70 Permit if the EPA has not already objected, within 60 days after the 45-day EPA review period has ended. The petition period will be posted on the EPA website. The EPA will only consider objections to the federally enforceable provisions of the draft permit which were raised with reasonable specificity during the public comment period, unless: (1) the petitioner demonstrates that it was impractical to raise the objections within the public comment period, or (2) the grounds for the objection arose after the comment period. If the EPA agrees with the petition, the Department will reopen, revise, or revoke the permit as determined.

Applicant Objection to Permit Issuance and Recourse

If the applicant objects to the federally enforceable permit conditions contained in the issued Part 70 Operating permit, the applicant has 15 days from receipt of the issued permit to request a contested case hearing. More information on that can be found in 40 CFR, Part 70, and COMAR 26.11.03.11.

**MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION**

**NOTICE OF INTENT TO ISSUE PART 70 OPERATING PERMIT, OPPORTUNITY TO SUBMIT
WRITTEN COMMENTS OR TO REQUEST A PUBLIC HEARING**

The Department of the Environment, Air and Radiation Administration (ARA) has completed its review of the application for a renewal Part 70 Operating Permit submitted by the JHMI Utilities, LLC. The facility includes four boilers rated at 102.5 MMBtu/hr, one boiler rated at 94 MMBtu/hr, and one boiler rated at 50.4 MMBtu/hr, eight diesel-fired generators. The JHMI Utilities, LLC operates two (2) Combined Heat and Power combustion turbines each rated at 7.5 MW and equipped with a 42 MMBtu/hr duct burner.

The applicant is represented by:

Mr. Phillip Kruer, Assistant Director
Energy Management
Johns Hopkins Hospital
600 N. Wolfe Street
Baltimore, MD 21289

The Department has prepared a draft Part 70 Operating Permit for review and is now ready to receive public comment. A docket containing the application, draft permit, and supporting documentation is available for review on the Department's website, under the Air Quality Permitting Page's Title V link under "Draft Title V Permits" and may be viewed here:

<https://tinyurl.com/DraftTitleV>

Interested persons may submit written comments or request a public hearing on the draft permit. Written comments must be received by the Department no later than 30 days from the date of this notice. Requests for a public hearing must be submitted in writing and must also be received by the Department no later than 30 days from the date of this notice.

Comments and requests for a public hearing will be accepted by the Department if they raise issues of law or material fact regarding applicable requirements of Title V of the Clean Air Act, and/or regulations implementing the Title V Program in Maryland found in COMAR.

A Request for public hearing shall include the following:

- 1) The name, mailing address, and telephone number of the person making the request;
- 2) The names and addresses of any other persons for whom the person making the request is representing; and
- 3) The reason why a hearing is requested, including the air quality concern that forms the basis for the request and how this concern relates to the person making the request.

All written comments and requests for a public hearing should be directed to the attention of Ms. Shannon Heafey via email at Shannon.heafey@maryland.gov or by post at Air Quality Permits Program, Air and Radiation Administration, 1800 Washington Boulevard Suite 720, Baltimore, Maryland 21230-1720. Further information may be obtained by calling Ms. Shannon Heafey at (410) 537-4433.

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BACKGROUND

JHMI Utilities, LLC (formerly referred to as Johns Hopkins Hospital) is a major medical facility that also provides an educational and research setting for undergraduate and graduate students. The primary SIC code for the facility is 8062.

JHMI Utilities, LLC (the “Permittee”) has the following air emission units: four (4) boilers rated at 102.5 MMBtu/hr, one (1) boiler rated at 94 MMBtu/hr, and one (1) boiler rated at 50.4 MMBtu/hr. All six (6) boilers can be fired with distillate fuel oil or natural gas.

JHMI Utilities, LLC operates eight (8) diesel-fired generators all of which may be used for emergency purposes. Seven (7) of these generators (EU-14 through EU-19 and EU-23), are also operated for peak shaving and demand response purposes. These diesel generators are located in several different buildings on the hospital’s campus.

JHMI Utilities, LLC operates two (2) Combined Heat and Power combustion turbines each rated at 7.5 MW and equipped with a 42 MMBtu/hr duct burner. The duct burner is fired only by natural gas.

The following table summarizes the actual emissions from JHMI Utilities, LLC based on its Annual Emission Certification Reports:

Table 1: Actual Emissions

Year	NO _x (TPY)	SO _x (TPY)	PM ₁₀ (TPY)	CO (TPY)	VOC (TPY)	Total HAP (TPY)
2017	66.90	3.82	6.83	37.70	3.42	<1
2018	54.67	1.29	1.24	82.14	3.78	<1
2019	47.83	0.91	2.13	56.98	3.55	<1
2020	45.53	0.67	0.92	53.63	3.36	<1
2021	48.46	0.46	0.87	54.30	2.99	<1
2022	47.29	0.72	0.77	54.43	2.88	<1
2023	46.86	0.72	0.81	53.31	3.40	<1

The major source threshold for triggering Title V permitting requirements in Baltimore City is 25 tons per year for NO_x, 25 tons per year for VOCs, and 100 tons per year for any other criteria pollutants and 10 tons per year for a single HAP or 25 tons per year for total HAPs. Since the actual NO_x emissions from the

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facility are greater than the major source threshold, JHMI Utilities, LLC is required to obtain a Title V-Part 70 Operating Permit under COMAR 26.11.03.01.

As a major source of NO_x, this facility is also subject to requirements of Reasonably Available Control Technology (RACT) for NO_x found in COMAR 26.11.09.08.

The Department received JHMI Utilities, LLC Part 70 renewal permit application on September 6, 2022. An administrative completeness review was conducted and the application was deemed to be administratively complete. An Administrative Completeness Letter was sent on September 16, 2022.

On February 22, 2024, MDE conducted a full on-site compliance evaluation. During this inspection, the combustion turbines (CHP systems) were operating at both the North and South Energy Plants. Boilers #8, #10, and #11 were operating on natural gas. There were no generators operating. Records were reviewed for the boilers, generators, and combustion turbines with no violations noted at this time. A Method 9 Observation was conducted on the Boiler stack showing no visible emissions. No violations were reported. The facility was found to be in compliance with all permit requirements.

Changes / Modifications to this Facility since the Prior Title V Permit was Issued:

On November 6, 2024, JHMI Utilities was issued a Permit to Construct for one (1) diesel-fired Caterpillar CAT 3516C non-emergency generator rated at 2,695 horsepower. This engine has been added to the permit as EU-23.

COMPLIANCE ASSURANCE MONITORING (CAM)

The facility is **not** subject to the CAM Rule 40 CFR Subpart 64. CAM is intended to provide a reasonable assurance of compliance with applicable requirements under the Clean Air Act for large emission units that rely on air pollution control (APC) equipment to achieve compliance. The CAM approach establishes monitoring for the purpose of: (1) documenting continued operation of the control measures within ranges of specified indicators of performance (such as emissions, control device parameters, and process parameters) that are designed to provide a reasonable assurance of compliance with applicable requirements; (2) indicating any excursions from these ranges; and (3) responding to the data so that the cause or causes of the excursions are corrected. In order for a unit to be subject to CAM, the unit must be located at a major source, be subject to an emission limitation or standard; use a control device to achieve compliance; have post-control emissions of at least 100% of the major source amount (for initial CAM submittals); and must not otherwise be

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exempt from CAM. Applicability determinations are made on a pollutant-by-pollutant basis for each emission unit.

No control device has been added to the facility that is used to achieve compliance with an emission standard and therefore CAM has not been triggered.

GREENHOUSE GAS (GHG) EMISSIONS

JHMI Utilities, LLC emits the following greenhouse gases (GHGs) related to Clean Air Act requirements: carbon dioxide, methane, and nitrous oxide. These GHGs originate from various processes (i.e., internal combustion engines, boilers, combustion turbines, and charbroilers) contained within the facility premises applicable to JHMI Utilities, LLC. The facility has not triggered Prevention of Significant Deterioration (PSD) requirements for GHG emissions; therefore, there are no applicable GHG Clean Air Act requirements. The Permittee shall quantify facility wide GHGs emissions and report them in accordance with Section 3 of the Part 70 permit.

The following table summarizes the actual emissions from JHMI Utilities, LLC based on its Annual Emission Certification Reports:

Table 2: Actual Greenhouse Gases Emissions Summary

GHG	Conversion factor	2021 tpy CO₂e	2022 tpy CO₂e	2023 tpy CO₂e
Carbon dioxide CO ₂	1	106416	129747	110032
Methane CH ₄	25	6.05	6.54	6.40
Nitrous Oxide N ₂ O	300	2.54	2.71	2.66
Total GHG CO ₂ eq		107329	130724	110990

Plantwide Applicability Limit (PAL)

In 2017, the Department issued a PAL permit of 104.9 tons of NO_x emissions per year to JHMI Utilities, LLC with an expiration date of August 31, 2023. On February 17, 2023, the Department received a renewal application of the PAL permit. See Appendix A for the renewal PAL permit.

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EMISSION UNIT IDENTIFICATION

JHMI Utilities, LLC has identified the following emission units as being subject to Title V permitting requirements and having applicable requirements.

Table 3: Emission Unit Identification

Emissions Unit Number	MDE – ARA Registration Number	Emissions Unit Name and Description	Date of Installation
EU-1 through EU-4	5-0303 through 5-0306	Four (4) Cleaver Brooks, model AO-24 boilers, each rated at 102.5 million Btu per hour heat input. Boilers are fired on natural gas or distillate oil only.	January 1963
EU-5	5-0734	One (1) Cleaver Brooks, model DLD-94E boiler rated at 94 million Btu per hour heat input. Boiler is fired on natural gas or distillate oil only.	May 1981
EU-13	9-0951	One (1) Caterpillar 3516-D1 diesel generator rated at 2520 bHP. Used for emergency backup power. Located in the Outpatient Center.	1989
EU-14 and EU-15	9-0949 and 9-0950	Two (2) Caterpillar 3516-B diesel generators, each rated at 2520 bHP. Used for emergency backup power and peak shaving. Located in the South Energy Plant.	1999
EU-16 and EU-17	9-0988 and 9-0989	Two (2) Caterpillar 3516-B diesel generators, each rated at 2520 bHP. Used for emergency backup power and peak shaving. Located in the North Energy Plant.	2004
EU-18 and EU-19	9-1015 and 9-1016	Two (2) Caterpillar 3516-B diesel generators, each rated at 2520 bHP. Used for emergency backup power and peak shaving. Located in the South Energy Plant.	2005

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Emissions Unit Number	MDE – ARA Registration Number	Emissions Unit Name and Description	Date of Installation
EU-20	5-2073	Combined Heat and Power system (CHP) – One (1) 7.5 MW combustion turbine equipped with a heat recovery steam generator (HRSG) and a 42 million Btu per hour duct burner. Located in the North Energy Plant Building.	2011
EU-21	5-2074	Combined Heat and Power system (CHP) – One (1) 7.5 MW combustion turbine equipped with a heat recovery steam generator (HRSG) and a 42 million Btu per hour duct burner. Located in the South Energy Plant Building.	2011
EU-22	5-2075	One (1) Hurst 50.4 million Btu per hour natural gas and No. 2 fuel oil fired boiler equipped with a low NO _x burner and flue gas recirculation. Located in the South Energy Plant Building.	2011
EU-23	9-1449	One (1) diesel-fired Caterpillar CAT3516C non-emergency generator rated at 2,695 horsepower.	2024

Federal Regulation Review

- A. 40 CFR Part 60, Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units
The four (4) Cleaver Brooks, model AO-24 boilers, EU-1 through EU-4, would be subject to this subpart due to size. However, the four boilers are exempt from this regulation because they were installed prior to July 19 1984, per 40 CFR §60.40c(a).
- B. 40 CFR Part 60, Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
The one (1) Cleaver Brooks, model DLD-94E, EU-5, would be subject to this subpart due to size. However, the boiler is exempt from this regulation because it was installed prior to June 8, 1989.

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One (1) boiler, EU-22, is subject to this regulation per 40 CFR §60.40c(a). All requirements of this regulation were included in the Title V Operating Permit.

C. 40 CFR Part 60, Subpart KKKK – Standards of Performance for Stationary Combustion Turbines

The Combined Heat and Power system (CHP) consisting of two (2) identical units each consisting of one (1) 7.5 MW combustion turbine equipped with a heat recovery steam generator (HRSG) and a 42 million Btu per hour duct burner. Located in the South Energy Plant Building are the CHPs are subject to this regulation. All requirements of this regulation were included in the Title V Operating Permit.

Per 40 CFR §60.4305(b), heat recovery steam generators (HRSG) and duct burners regulated under this subpart, are exempt from the requirements of 40 CFR Part 60, Subpart Dc.

D. 40 CFR Part 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

The seven (7) diesel-fired generators (EU-13 through EU-19) may be used for emergency purposes. The six (6) 1825 kW rated generators (EU-14 through EU-19) may be operated without limitation, for peak shaving and demand response purposes, due to their retrofitting with oxidation catalyst.

E. 40 CFR Part 63, Subpart JJJJJJ – National Emissions Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers at Area Sources

This regulation applies to all six (6) boilers at this facility. All boilers are capable of burning natural gas and No. 2 fuel oil. No. 2 fuel oil is not burned solely as a backup. EU-1 through EU-5 are considered “existing” boilers in this regulation per 40 CFR §63.11194(b). EU-22 is considered a “new” boiler per 40 CFR §63.11194(c). All requirements of this regulation were included in the Title V Operating Permit.

F. 40 CFR Part 63, Subpart WWWW - National Emission Standards for Hospital Ethylene Oxide Sterilizers

JHMI Utilities, LLC operates four (4) Ethylene Oxide (EO) sterilizers. They submitted the Initial Notice of Compliance Status on June 4, 2009. All requirements of this subpart were included in the Title V Operating Permit under Section V - Insignificant Activities.

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AN OVERVIEW OF THE PART 70 PERMIT

The Fact Sheet is an informational document. If there are any discrepancies between the Fact Sheet and the Part 70 permit, the Part 70 permit is the enforceable document.

Section I of the Part 70 Permit contains a brief description of the facility and an inventory list of the emissions units for which applicable requirements are identified in Section IV of the permit.

Section II of the Part 70 Permit contains the general requirements that relate to administrative permit actions. This section includes the procedures for renewing, amending, reopening, and transferring permits, the relationship to permits to construct and approvals, and the general duty to provide information and to comply with all applicable requirements.

Section III of the Part 70 Permit contains the general requirements for testing, record keeping and reporting; and requirements that affect the facility as a whole, such as open burning, air pollution episodes, particulate matter from construction and demolition activities, asbestos provisions, ozone depleting substance provisions, general conformity, and acid rain permit. This section includes the requirement to report excess emissions and deviations, to submit an annual emissions certification report and an annual compliance certification report, and results of sampling and testing.

Section IV of the Part 70 Permit identifies the emissions standards, emissions limitations, operational limitations, and work practices applicable to each emissions unit located at the facility. For each standard, limitation, and work practice, the permit identifies the basis upon which the Permittee will demonstrate compliance. The basis will include testing, monitoring, record keeping, and reporting requirements. The demonstration may include one or more of these methods.

Section V of the Part 70 Permit contains a list of insignificant activities. These activities emit very small quantities of regulated air pollutants and do not require a permit to construct or registration with the Department. For insignificant activities that are subject to a requirement under the Clean Air Act, the requirement is listed under the activity.

Section VI of the Part 70 Permit contains State-only enforceable requirements. Section VI identifies requirements that are not based on the Clean Air Act, but solely on Maryland air pollution regulations. These requirements generally relate

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to the prevention of nuisances and implementation of Maryland's Air Toxics Program.

**REGULATORY REVIEW/TECHNICAL REVIEW/COMPLIANCE
METHODOLOGY**

**Emission Units – EU-1 through EU-4
Existing Boilers >100MMBtu/hr (Natural Gas/Diesel)**

EU-1 through EU-4 (MDE Registration Nos. 510-0001-5-0303, 5-0304, 5-0305, and 5-0306) consists of four (4) Cleaver Brooks, model AO-24, boilers, each rated at 102.5 million Btu per hour heat input. Boilers are fired on natural gas or distillate oil only.

Stack testing was conducted on the boilers January 9 through 23, 2017 to demonstrate compliance with the NO_x emission limits determined in the Plant wide Applicability Limit Permit. Separate tests were conducted on both oil and gas. The results are as follows:

Boiler	Avg. NO_x emissions (gas) (lb/MMBtu) (O₂ based)	Avg. NO_x emissions (oil) (lb/MMBtu) (O₂ based)
EU-1	0.074	0.125
EU-2	0.081	0.140
EU-3	0.083	0.112
EU-4	0.077	0.168

Applicable Standards/Limits

A. Control of Visible Emissions

1. COMAR 26.11.09.05A(2), Fuel Burning Equipment. “Areas III and IV. In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.”
2. COMAR 26.11.09.05A(3), Exceptions. “Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if:
 - a. The visible emissions are not greater than 40 percent opacity; and
 - b. The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period.

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Compliance Demonstration:

The Permittee shall properly operate and maintain the boiler in a manner to prevent visible emissions; and verify no visible emissions when burning No. 2 fuel oil. The Permittee shall perform a visual observation for a 6-minute period once for every 168 hours that the boiler burns oil or at a minimum of once per year.

The Permittee shall perform the following, if emissions are visible: inspect combustion control system and boiler operations; perform all necessary adjustments and/or repairs to the boiler within 48 hours, so that visible emissions are eliminated; document in writing the results of the inspections, adjustments and/or repairs to the boiler; and after 48 hours, if the required adjustments and/or repairs had not eliminated the visible emissions, perform Method 9 observations once daily for 18 minutes until corrective actions have eliminated the visible emissions. The Permittee shall: maintain an operation manual and preventative maintenance plan on site; maintain a record of the maintenance performed that relates to combustion performance; maintain a log of visible emissions observations performed and make it available to the Department's representative upon request; maintain a record of the hours that No. 2 fuel oil is burned.

The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, "Report of Excess Emissions and Deviations".

Rationale for Periodic Monitoring:

Boilers that burn Natural Gas fuel or No. 2 Fuel Oil with a rated heat input capacity of more than 10 MM Btu/hr and less than 250 MM Btu/hr rarely have visible emissions if properly operated and maintained. The Permittee is required to maintain on site an operations manual, a preventative maintenance plan, and records of maintenance performed that relate to combustion performance.

If visible emissions occur, it will happen when burning No. 2 fuel oil. The Permittee is required to perform a visual observation of the exhaust gases from the boiler stack for a 6-minute period, once every 168 hours that fuel oil is burned. In mild winters, the hours of interrupted gas service may be less than 168 hours. Therefore, at a minimum, one observation for visible emissions is required each year. The Permittee is required to maintain a record of the results of the observations and the number of hours that No. 2 fuel oil was burned.

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B. Control of Sulfur Oxides

COMAR 26.11.09.07A, Sulfur Content Limitations for Fuel. “A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: (2) In Areas III and IV: (b) Distillate fuel oils, 0.3 percent.”

Compliance Demonstration:

The Permittee shall obtain a certification from the fuel supplier indicating that the oil complies with the limitation on the sulfur content of the fuel oil. The Permittee shall maintain records of fuel supplier’s certification and shall make records available to the Department upon request.

The Permittee shall report fuel supplier certification to the Department upon request.

Rationale for Periodic Monitoring:

Fuel oil certifications are sufficient to demonstrate compliance with the applicable fuel sulfur limits. Therefore, no additional monitoring is required.

C. Control of Nitrogen Oxides

1. COMAR 26.11.09.08B(1)(a), Emission Standards and Requirements. “A person who owns or operates an installation that causes NO_x emissions subject to this regulation is in compliance with this regulation if the person establishes compliance with the emissions standards in §B(1)(c) of this regulation.”
2. COMAR 26.11.09.08B(1)(c), Emission Standards in Pounds of NO_x per Million Btu of heat input.
 - a. A person who owns or operates an installation that causes NO_x emissions subject to this regulation is in compliance with this regulation if the person establishes compliance with the emissions standards in §B(1)(c) of this regulation.
 - b. Any other person subject to this regulation shall comply with the applicable source specific requirements in §§C—J of this regulation.
 - c. Emission Standards in Pounds of NO_x per Million Btu of heat input.

Fuel	Tangential- Fired	Wall-Fired
Gas only	0.20	0.20
Gas/Oil	0.25	0.25
Coal (dry bottom)	0.38	0.38
Coal (wet bottom)	1.00	1.00

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Note: The four boilers burn natural gas and fuel oil and are wall-fired. The NO_x emissions limit for the boilers is 0.25 pounds of NO_x per million Btu of heat input.

3. COMAR 26.11.09.08B(2), Demonstration of Compliance. "(a) A person subject to a NO_x emission standard in this regulation shall demonstrate compliance as follows: (ii) For all other installations, compliance with the NO_x emissions standards in this regulation shall be established by stack tests using Method 07 of the test methods Authority in COMAR 26.11.01.04C(1) or other test methods approved by the Department and the EPA."
4. COMAR 26.11.09.08B(2)(e), Demonstration of Compliance. "For a person who establishes compliance using a stack test, compliance shall be determined as averages of the stack test duration."
5. COMAR 26.11.09.08B(5), Operator Training.
 - a. "For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.
 - b. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department."

Compliance Demonstration:

Within the term of the issuance of this permit, the Permittee shall perform a stack test on the four (4) Cleaver-Brooks boilers both on oil and natural gas. The Permittee shall submit a test protocol to the Department for approval at least 30 days before the scheduled test date. The Permittee shall submit all test results and supporting data from the stack tests to the Department within 45 days after the stack tests are conducted. The Permittee shall measure the NO_x content of the flue gases from each boiler for a 5-minute period every 168 hours of operation. The Permittee shall use an analyzer that is properly calibrated and maintained in accordance with the vendor specification. The analyzer shall be the type approved by the Department. The Permittee shall maintain the results of the NO_x stack tests and the NO_x analyzer readings for at least 5 years and make them available to the Department upon request.

The Permittee shall maintain a record of training program attendance for each operator at the site.

The Permittee shall report the results of NO_x testing on these boilers along with supporting data from the stack test within 45 days of the completion of the stack test.

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Rationale for Periodic Monitoring:

Records of the stack test data are deemed sufficient to determine compliance with this regulation.

D. Operational Limit

The Permittee shall burn only natural gas or No. 2 fuel oil unless the Permittee applies for and receives an approval or permit from the Department to burn an alternative fuel. **[Authority: COMAR 26.11.02.09A]**

Compliance Demonstration:

The Permittee shall maintain and submit records of the quantity and type of fuels burned with the annual emissions certification report.

Rationale for Periodic Monitoring:

Records of the quantity and type of fuels burned are deemed sufficient to determine compliance with this regulation.

E. Control of Hazardous Air Pollutants

1. The Permittee shall conduct a tune-up of each boiler biennially, while burning the type of fuel that provided the majority of the heat input to the boiler over the 12 months prior to the tune up, as specified:
 - a. Inspect the burner and clean or replace any components of the burner as necessary. The Permittee may delay the burner inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection.
 - b. 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.
 - c. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly. The Permittee may delay the inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection.
 - d. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any nitrogen oxide requirement to which the unit is subject.

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- e. 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 bases, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.
- f. Maintain on-site and submit, if requested by the Administrator, a report containing the following information:
 - i. 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.
 - ii. A description of any corrective actions taken as a part of the tune-up of the boiler.
 - iii. The type and amount of fuel used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.
- g. The Permittee must maintain the following records 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.
 - i. A copy of each notification and report that you submitted to comply with this subpart and all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted.
 - ii. Records to document conformance with the work practices, emission reduction measures, and management practices required by § 63.11214 and § 63.11223 as specified in paragraphs (c)(2)(i) through (vi) of this section.
 - 1. 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.
 - 2. A copy of the energy assessment report for each boiler.
 - 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 § 63.11205(a), including corrective

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actions to restore the malfunctioning boiler, air pollution control, or monitoring equipment to its normal or usual manner of operation. **[Reference: 40 CFR §63.11225(c)(1), (2)(i) and (iii), (4), (5), and 40 CFR §63.6625(d)]**

- h. 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. **[Authority: 40 CFR §63.11196(a)(1), §63.11201(b), 40 CFR Part 63, Subpart JJJJJJ, Table 2, Items 4 and 5, 40 CFR §63.11223(a) and (b)(1) through (7), and 40 CFR §63.11210(c)]**
- 2. The standards apply at all times the affected boiler is operating, except during periods of startup and shutdown as defined in §63.11237, during which time the Permittee must comply only with 40 CFR Part 63, Subpart JJJJJJ, Table 2. **[Authority: 40 CFR §63.11210(d)]**
- 3. The Permittee shall operate and maintain the boilers, 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 the Permittee to make any further efforts to reduce emission if levels required beyond this standard have been achieved. **[Authority: 40 CFR §63.11205(a)]**
- 4. By March 21, 2014, The Permittee shall conduct a one-time energy assessment performed by a qualified energy assessor. The energy assessment must include the following:
 - a. A visual inspection of the boiler system;
 - b. An evaluation of operating characteristics of the affected boiler systems, specifications of energy use systems, operating and maintenance procedures, and unusual operating constraints;
 - c. An inventory of major energy use systems consuming energy from the affected boilers and which are under control of the Permittee;
 - d. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage;
 - e. A list of major energy conservation measures that are within the facility's control;
 - f. A list of the energy savings potential of the energy conservation measures identified; and
 - g. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.

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[Authority: 40 CFR §63.11196(a)(3), 40 CFR Part 63, Subpart JJJJJJ, Table 2, Item 16, and 40 CFR §63.11210(c)]

Note: The Permittee conducted the one-time energy assessment on July 10, 2013, and is required to maintain records of the assessment.

Compliance Demonstration:

The Permittee shall demonstrate compliance with this requirement by conducting a tune-up of each boiler biennially and a one-time energy assessment of each boiler. The Permittee must also monitor and record on a monthly basis the type and amount of fuel that is combusted.

The Permittee shall maintain on site, records of the following information:

1. 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 each tune up;
2. A description of any corrective actions taken as part of the tune-up of the boiler;
3. The type and amount of fuel used over the 12 months prior to tune-up of the boiler;
4. Copies of each notification and report submitted to the Department;
5. Records to document conformance with the work practices, emission reduction measures, and management practices;
6. A copy of the energy assessment report for each boiler, as applicable;
7. Records of occurrence and duration of each malfunction or the associated air pollution control and monitoring equipment; and
8. Records of actions taken during periods of malfunctions to minimize emissions.

Note: The Permittee conducted the one-time energy assessment on August 21, 2014.

Rationale for Periodic Monitoring Strategy:

Documentation of the energy assessment and boiler tune-ups as well as records of fuel usage are deemed sufficient to demonstrate compliance with this requirement.

Emission Unit – EU-5

Existing Boiler <100MMBtu/hr (Natural Gas/Diesel)

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EU-5 (MDE Registration No. 510-0001-5-0734) consists of one (1) Cleaver Brooks, model DLD-94E, boiler rated at 94 million Btu per hour heat input. Boiler is fired on natural gas and distillate oil only.

Applicable Standards/Limits:

A. Control of Visible Emissions

1. COMAR 26.11.09.05A(2), Fuel Burning Equipment. "Areas III and IV. In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity."
2. COMAR 26.11.09.05A(3), Exceptions. "Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if:
 - a. The visible emissions are not greater than 40 percent opacity; and
 - b. The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period.

Compliance Demonstration:

The Permittee shall properly operate and maintain the boiler in a manner to prevent visible emissions; and verify no visible emissions when burning No. 2 fuel oil. The Permittee shall perform a visual observation for a 6-minute period once for every 168 hours that the boiler burns oil or at a minimum of once per year.

The Permittee shall perform the following, if emissions are visible: inspect combustion control system and boiler operations; perform all necessary adjustments and/or repairs to the boiler within 48 hours, so that visible emissions are eliminated; document in writing the results of the inspections, adjustments and/or repairs to the boiler; and after 48 hours, if the required adjustments and/or repairs had not eliminated the visible emissions, perform Method 9 observations once daily for 18 minutes until corrective actions have eliminated the visible emissions. The Permittee shall: maintain an operation manual and preventative maintenance plan on site; maintain a record of the maintenance performed that relates to combustion performance; maintain a log of visible emissions observations performed and make it available to the Department's representative upon request; maintain a record of the hours that No. 2 fuel oil is burned.

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The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, "Report of Excess Emissions and Deviations."

Rationale for Periodic Monitoring:

Boilers that burn Natural Gas fuel or No. 2 Fuel Oil as with a rated heat input capacity of more than 10 MM Btu/hr and less than 250 MM Btu/hr rarely have visible emissions if properly operated and maintained. The Permittee is required to maintain on site an operations manual, a preventative maintenance plan, and records of maintenance performed that relate to combustion performance.

If visible emissions occur, it will happen when burning No. 2 fuel oil. The Permittee is required to perform a visual observation of the exhaust gases from the boiler stack for a 6-minute period, once every 168 hours that fuel oil is burned. In mild winters, the hours of interrupted gas service may be less than 168 hours. Therefore, at a minimum, one observation for visible emissions is required each year. The Permittee is required to maintain a record of the results of the observations and the number of hours that No. 2 fuel oil was burned.

B. Control of Sulfur Oxides

1. COMAR 26.11.09.07A, Sulfur Content Limitations for Fuel. "A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: (2) In Areas III and IV: (b) Distillate fuel oils, 0.3 percent."

Compliance Demonstration:

The Permittee shall obtain a certification from the fuel supplier indicating that the oil complies with the limitation on the sulfur content of the fuel oil. The Permittee shall maintain records of fuel supplier's certification and shall make records available to the Department upon request.

The Permittee shall report fuel supplier certification to the Department upon request.

Rationale for Periodic Monitoring:

Fuel oil certifications are sufficient to demonstrate compliance with the applicable fuel sulfur limits. Therefore, no additional monitoring is required.

C. Control of Nitrogen Oxides

1. COMAR 26.11.09.08E, Requirements for Fuel-Burning Equipment with a Rated Heat Input Capacity of 100 Million Btu Per Hour or Less.

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- a. "Submit to the Department an identification of each affected installation, the rated heat input capacity of each installation, and the type of fuel burned in each;
 - b. Perform a combustion analysis for each installation at least once each year and optimize combustion based on the analysis;
 - c. Maintain the results of the combustion analysis at the site for at least 2 years and make this data available to the Department and the EPA upon request;
 - d. Once every 3 years, require each operator of the installation to attend operator training programs on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and
 - e. Prepare and maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request."
2. COMAR 26.11.09.08B(5), Operator Training.
- a. "For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.
 - b. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department."

Compliance Demonstration:

The Permittee shall perform a combustion analysis on the boiler at least once a year. The Permittee shall optimize combustion based on the annual combustion analysis.

The Permittee shall maintain on-site, records of the annual fuel, the results of the annual combustion analysis, and records of training program attendance for each operator. The Permittee shall submit the results of combustion analysis and records of training program attendance to the Department and the EPA upon request.

Rationale for Periodic Monitoring:

Records of the annual combustion analysis and the operator training records are deemed sufficient to demonstrate compliance with this requirement.

D. Operational Limit

The Permittee shall burn only natural gas or No. 2 fuel oil unless the Permittee applies for and receives an approval or permit from the Department to burn an alternative fuel. **[Authority: COMAR 26.11.02.09A]**

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Compliance Demonstration:

The Permittee shall maintain records of the quantity and types of fuel burned. The Permittee shall submit records of the quantity and type of fuels burn with the annual emissions certification report.
See permit condition 8 of Section III.

Rationale for Periodic Monitoring:

Records of fuel type and quantity burned are deemed sufficient to demonstrate compliance with this requirement.

E. Control of Hazardous Air Pollutants

1. The Permittee shall conduct a tune-up of each boiler biennially, while burning the type of fuel that provided the majority of the heat input to the boiler over the 12 months prior to the tune up, as specified:
 - a. Inspect the burner and clean or replace any components of the burner as necessary. The Permittee may delay the burner inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection.
 - b. 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.
 - c. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly. The Permittee may delay the inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection.
 - d. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any nitrogen oxide requirement to which the unit is subject.
 - e. 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 bases, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.
 - f. Maintain on-site and submit, if requested by the Administrator, a report containing the following information:
 - i. 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.

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- ii. A description of any corrective actions taken as a part of the tune-up of the boiler.
 - iii. The type and amount of fuel used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.
- g. The Permittee must maintain the following records 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.
- i. A copy of each notification and report that you submitted to comply with this subpart and all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted.
 - ii. Records to document conformance with the work practices, emission reduction measures, and management practices required by § 63.11214 and § 63.11223 as specified in paragraphs (c)(2)(i) through (vi) of this section.
 - 1. 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.
 - 2. A copy of the energy assessment report for each boiler.
 - 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 § 63.11205(a), including corrective actions to restore the malfunctioning boiler, air pollution control, or monitoring equipment to its normal or usual manner of operation. **[Reference: 40 CFR §63.11225(c)(1), (2)(i) and (iii), (4), (5), and 40 CFR §63.6625(d)]**
- h. 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. **[Authority: 40 CFR §63.11196(a)(1), §63.11201(b), 40 CFR Part 63, Subpart JJJJJJ, Table 2, Items 4 and 5, 40 CFR §63.11223(a) and (b)(1) through (7), and 40 CFR §63.11210(c)]**
2. The standards apply at all times the affected boiler is operating, except during periods of startup and shutdown as defined in §63.11237, during

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which time the Permittee must comply only with 40 CFR Part 63, Subpart JJJJJJ, Table 2. **[Authority: 40 CFR §63.11210(d)]**

3. The Permittee shall operate and maintain the boilers, 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 the Permittee to make any further efforts to reduce emission if levels required beyond this standard have been achieved. **[Authority: 40 CFR §63.11205(a)]**
4. By March 21, 2014, The Permittee shall conduct a one-time energy assessment performed by a qualified energy assessor. The energy assessment must include the following:
 - a. A visual inspection of the boiler system;
 - b. An evaluation of operating characteristics of the affected boiler systems, specifications of energy use systems, operating and maintenance procedures, and unusual operating constraints;
 - c. An inventory of major energy use systems consuming energy from the affected boilers and which are under control of the Permittee;
 - d. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage;
 - e. A list of major energy conservation measures that are within the facility's control;
 - f. A list of the energy savings potential of the energy conservation measures identified; and
 - g. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.

[Authority: 40 CFR §63.11196(a)(3), 40 CFR Part 63, Subpart JJJJJJ, Table 2, Item 16, and 40 CFR §63.11210(c)]

Note: *The Permittee conducted the one-time energy assessment on July 10, 2013, and is required to maintain records of the assessment.*

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Compliance Demonstration:

The Permittee shall demonstrate compliance with this requirement by conducting a tune-up of each boiler biennially and a one-time energy assessment of each boiler. The Permittee must also monitor and record on a monthly basis the type and amount of fuel that is combusted.

The Permittee shall maintain on site, records of the following information:

1. 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 each tune up;
2. A description of any corrective actions taken as part of the tune-up of the boiler;
3. The type and amount of fuel used over the 12 months prior to tune-up of the boiler;
4. Copies of each notification and report submitted to the Department;
5. Records to document conformance with the work practices, emission reduction measures, and management practices;
6. A copy of the energy assessment report for each boiler, as applicable;
7. Records of occurrence and duration of each malfunction or the associated air pollution control and monitoring equipment; and
8. Records of actions taken during periods of malfunctions to minimize emissions.

Note: The Permittee conducted the one-time energy assessment July 10, 2013.

Rationale for Periodic Monitoring Strategy:

Documentation of the energy assessment and boiler tune-ups as well as records of fuel usage are deemed sufficient to demonstrate compliance with this requirement.

Emission Unit – EU-22

Dual-Fired Boiler <100MMBtu/hr (Natural Gas/Diesel)

EU-22 (MDE Registration No. 510-0001-5-2075) consists of one (1) boiler rated at 50.4 million Btu per hour heat input firing natural gas and No. 2 fuel oil only and equipped with a low NO_x burner and flue gas recirculation.

Stack testing was conducted on the boiler January 9 through 23, 2017 to demonstrate compliance with the NO_x emission limits determined in the Plant wide Applicability Limit Permit, and PM emissions limit of 0.03 lb/MMBtu. Separate tests were conducted on both oil and gas.

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The results are as follows:

Boiler	NO _x emissions (gas) (lb/MMBtu)	NO _x emissions (oil) (lb/MMBtu)
EU-22	0.089	0.094

40 CFR Part 60, Subpart Dc:

Per §60.43c(e)(4), this facility is not subject to a PM emission limit. The sulfur weight percent for this unit is limited to 0.3% by COMAR 26.11.09.07A(2). The only other fuel that it burns is natural gas which is not subject to a PM limit under §60.43c. The boiler is however subject to the opacity requirements of this subpart per 40 CFR §60.43c.

40 CFR Part 63, Subpart JJJJJJ:

This boiler is subject to this subpart due to burning No, 2 fuel oil. The boiler complies with this fuel sulfur limit by complying with COMAR 26.11.09.07A(2) with a fuel sulfur limit of 0.3% by weight.

Applicable Standards/Limits:

A. Control of Visible Emissions

1. COMAR 26.11.09.05A(2), Fuel Burning Equipment. “In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.”
2. COMAR 26.11.09.05A(3), Exceptions. “Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if:
 - a. The visible emissions are not greater than 40 percent opacity; and
 - b. The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period.”
3. The Permittee shall not 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. The opacity standards apply at all times except during periods of startup, shutdown, or malfunction.

[Authority: 40 CFR §60.43c(c) and (d)]

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4. The Permittee that is subject to an opacity standard in § 60.43c(c) is not required to operate a continuous opacity monitoring system (COMS) if the Permittee burns only gaseous fuels and/or fuel oils that contain no greater than 0.5 weight percent sulfur, and the Permittee operates the boilers according to the site-specific monitoring plan approved by the Department. **[Authority: 40 CFR 60.47c(f)(3)]**

Compliance Demonstration:

When burning fuel oil, the Permittee shall conduct periodic Method 9 performance tests or periodic Method 22 observations as specified in the Permittee's site-specific monitoring plan approved by the Department as allowed under 40 CFR §60.47c(f)(3). **[Authority: 40 CFR §60.47c(f)(3)]**

The Permittee shall: properly operate and maintain the boiler in a manner to prevent visible emissions; and verify no visible emissions when burning No. 2 fuel oil. The Permittee shall perform a visual observation for a 6-minute period once for every 168 hours that the boiler burns oil or at a minimum of once per year.

The Permittee shall perform the following, if emissions are visible: inspect combustion control system and boiler operations; perform all necessary adjustments and/or repairs to the boiler within 48 hours, so that visible emissions are eliminated; document in writing the results of the inspections, adjustments and/or repairs to the boiler; and after 48 hours, if the required adjustments and/or repairs had not eliminated the visible emissions, perform Method 9 observations once daily for 18 minutes until corrective actions have eliminated the visible emissions. The Permittee shall: maintain an operation manual and preventative maintenance plan on site; maintain a record of the maintenance performed that relates to combustion performance; maintain a log of visible emissions observations performed and make it available to the Department's representative upon request; maintain a record of the hours that No. 2 fuel oil is burned.

***Note:** Visible emissions monitoring requirements serve as the approved site-specific monitoring plan allowed under 40 CFR §60.47c(f)(3)*

The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, "Report of Excess Emissions and Deviations".

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Rationale for Periodic Monitoring:

Natural gas boilers during normal operation rarely cause visible emissions. Visible emissions would only occur if the boilers were not maintained or operated properly or when burning fuel oil. The Permittee is required to maintain the boilers in good working order in accordance with an operations manual and preventive maintenance plan. Records of maintenance performed are sufficient to confirm that the boilers are maintained in a manner to prevent visible emissions when burning natural gas. Since low-sulfur content fuel oil is only burned as a back-up fuel when natural gas is not available, a continuous opacity monitoring system (COMS) is not required provided that a site-specific monitoring plan is in place. Periodic opacity tests when burning oil are sufficient to ensure that the opacity standard is met.

B. Control of Sulfur Oxides

1. COMAR 26.11.09.07A, Sulfur Content Limitations for Fuel. "A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: (2) In Areas III and IV: (b) Distillate fuel oils, 0.3 percent."
2. On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, the Permittee shall not cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of 215 ng/J (0.50 lb/MMBtu) heat input from oil; or, **as an alternative, 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**. The percent reduction requirements are not applicable to affected facilities under this paragraph. **[Authority: 40 CFR §60.42c(d)]**
3. The Permittee may combust oil that contains no more than 0.5 weight percent sulfur or a mixture of 0.50 weight percent sulfur with other fuel not subject to a PM standard under § 60.43c and not using a post-combustion technology (except a wet scrubber) to reduce PM or SO₂ emissions is not subject to the PM limit in this section. **[Authority: 40 CFR §60.42c(e)(4)]**
4. The Permittee may not use a post-combustion technology (except a wet scrubber) to reduce PM or SO₂ emissions. **[Authority: 40 CFR §60.42c(e)(4)]**

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5. The Permittee shall demonstrate compliance with the SO₂ standards based on fuel supplier certification, the performance test shall consist of the certification from the fuel supplier, as described in § 60.48c(f), as applicable. **[Authority: 40 CFR §60.44c(h)]**

Compliance Demonstration:

The Permittee shall obtain a certification from the fuel supplier indicating that the oil complies with the limitation on the sulfur content of the fuel oil. The Permittee shall maintain records of fuel supplier's certification and shall make records available to the Department upon request.

The Permittee shall report fuel supplier certification to the Department upon request

Rationale for Periodic Monitoring:

Fuel oil certifications are deemed sufficient to demonstrate compliance with the applicable fuel sulfur limits. Therefore, no additional monitoring is required.

C. Control of Nitrogen Oxides

1. COMAR 26.11.09.08B(5), Operator Training.
 - a. For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.
 - b. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department."
2. COMAR 26.11.09.08E, Requirements for Fuel-Burning Equipment with a Rated Heat Input Capacity of 100 Million Btu Per Hour or Less. "A person who owns or operates fuel-burning equipment with a rated heat input capacity of 100 Million Btu per hour or less shall:
 - a. Submit to the Department an identification of each affected installation, the rated heat input capacity of each installation, and the type of fuel burned in each;
 - b. Perform a combustion analysis for each installation at least once each year and optimize combustion based on the analysis;
 - c. Maintain the results of the combustion analysis at the site for at least 2 years and make this data available to the Department and the EPA upon request;

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- d. Once every 3 years, require each operator of the installation to attend operator training programs on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and
 - e. Prepare and maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request.”
3. COMAR 26.11.09.08K(3), Record Keeping Requirements. “A person subject to this regulation shall maintain annual fuel use records on site for not less than 3 years, and make these records available to the Department upon request.”

Compliance Demonstration:

The Permittee shall perform a combustion analysis on the boilers at least once a year. The Permittee shall optimize combustion based on the annual combustion analysis.

The Permittee shall maintain on-site, records of the results of the annual combustion analysis, records of annual fuel use, and records of training program attendance for each operator. The Permittee shall submit the results of combustion analysis and records of training program attendance to the Department and the EPA upon request.

Rationale for Periodic Monitoring:

Records of the annual combustion analysis, annual fuel use, and the operator training records are deemed sufficient to demonstrate compliance with this requirement.

D. Control of Hazardous Air Pollutants

- 1. The Permittee shall conduct a tune-up of each boiler biennially, while burning the type of fuel that provided the majority of the heat input to the boiler over the 12 months prior to the tune up, as specified:
 - a. Inspect the burner and clean or replace any components of the burner as necessary. The Permittee may delay the burner inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection.
 - b. 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.
 - c. Inspect the system controlling the air-to-fuel ratio, as applicable,

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- d. and ensure that it is correctly calibrated and functioning properly. The Permittee may delay the inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection.
- e. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any nitrogen oxide requirement to which the unit is subject.
- f. 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 bases, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.
- g. Maintain on-site and submit, if requested by the Administrator, a report containing the following information:
 - i. 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.
 - ii. A description of any corrective actions taken as a part of the tune-up of the boiler.
 - iii. The type and amount of fuel used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.
- h. 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.

[Authority: 40 CFR §63.11196(a)(1), §63.11201(b), 40 CFR Part 63, Subpart JJJJJJ, Table 2, Items 4 and 5, 40 CFR §63.11223(a) and (b)(1) through (7), and 40 CFR §63.11210(c)]

- 2. The standards apply at all times the affected boiler is operating, except during periods of startup and shutdown as defined in §63.11237, during which time the Permittee must comply only with 40 CFR Part 63, Subpart JJJJJJ, Table 2. **[Authority: 40 CFR §63.11210(d)]**

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3. The Permittee shall operate and maintain the boilers, 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 the Permittee to make any further efforts to reduce emission if levels required beyond this standard have been achieved. **[Authority: 40 CFR §63.11205(a)]**

4. The Permittee shall combust only oil that contains no more than 0.50 weight percent sulfur. **[Authority: 40 CFR §63.11210(e)]**

Note: Compliance with this requirement is met by meeting COMAR 26.11.09.07A(2)(b), which limits the sulfur in fuel to 0.3 weight percent.

5. The Permittee is not required to complete an initial performance tune-up, but must complete the applicable biennial tune-up as specified in § 63.11223 no later than 25 months after the initial startup of the affected source. **[Authority: 40 CFR §63.11210(f)]**

6. The Permittee must minimize the boiler's startup and shutdown periods and conduct startups and shutdowns according to the manufacturer's recommended procedures. If manufacturer's recommended procedures are not available, the Permittee must follow recommended procedures for a unit of similar design for which manufacturer's recommended procedures are available. **[Authority: 40 CFR §63.11201(b) and 40 CFR Part 63, Subpart JJJJJJ, Table 2, Item 1]**

Compliance Demonstration:

The Permittee shall maintain on site, records of the following information:

1. 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 each tune up;
2. A description of any corrective actions taken as part of the tune-up of the boiler;
3. The type and amount of fuel used over the 12 months prior to tune-up of the boiler;
4. Copies of each notification and report submitted to the Department;
5. Records to document conformance with the work practices, emission reduction measures, and management practices;
6. A copy of the energy assessment report for each boiler, as applicable;

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7. Records of occurrence and duration of each malfunction or the associated air pollution control and monitoring equipment; and
8. Records of actions taken during periods of malfunctions to minimize emissions.

Rationale for Periodic Monitoring Strategy:

Documentation of the energy assessment and boiler tune-ups as well as records of fuel usage are deemed sufficient to demonstrate compliance with this requirement.

Emission Units – EU-13

Emergency Generator exempt from NSPS

EU-13: One (1) Caterpillar 3516-D1 diesel generator rated at 2520 bHP. Used for emergency power backup. Located in the Outpatient Center. (MDE Registration No. 510-0001-9-0951)

Applicable Standards/Limits:

A. Control of Visible Emissions

1. COMAR 26.11.09.05E(2), Emissions During Idle Mode. “A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.”
2. COMAR 26.11.09.05E(3), Emissions During Operating Mode. “A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.”
3. COMAR 26.11.09.05E(4), Exceptions.
 - a. “Section E(2) of this regulation does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.
 - b. Section E(2) of this regulation does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:
 - i. Engines that are idled continuously when not in service: 30 minutes;
 - ii. All other engines: 15 minutes.
 - c. Section E(2) and (3) of this regulation do not apply while maintenance, repair, or testing is being performed by qualified mechanics.”

Compliance Demonstration:

The Permittee shall perform preventive maintenance to optimize combustion performance. The Permittee shall retain preventive maintenance records on

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site for at least five (5) years and make the records available to the Department upon request.

The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, "Report of Excess Emissions and Deviations."

Rationale for Periodic Monitoring Strategy:

A properly operated and maintained engine is not expected to produce visible emissions. Proper maintenance combined with a preventative maintenance plan is sufficient to demonstrate compliance with the visible emissions standards.

B. Control of Sulfur Oxides

COMAR 26.11.09.07A(2)(b), Sulfur Content Limitations for Fuel. "A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: (2) In Areas III and IV: (b) Distillate fuel oils, 0.3 percent."

Compliance Demonstration:

The Permittee shall obtain a certification from the fuel supplier that the fuel oil is in compliance with the sulfur in fuel limitation. The Permittee shall retain fuel supplier certifications for at least five (5) years and shall submit them to the Department upon request.

Rationale for Periodic Monitoring Strategy:

Fuel oil certifications are deemed sufficient to demonstrate compliance with the applicable fuel sulfur limits. No additional monitoring is required.

C. Control of Nitrogen Oxides

1. COMAR 26.11.09.08B(5), Operator Training.
 - a. "For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.
 - b. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department."
2. COMAR 26.11.09.08G(1), Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 Percent or Less, and Combustion Turbines with a Capacity Factor Greater than 15 Percent. "A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:

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- a. Provide certification of the capacity factor of the equipment to the Department in writing;
- b. For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually;
- c. Maintain the results of the combustion analysis at the site for at least 2 years and make these results available to the Department and the EPA upon request;
- d. Require each operator of an installation, except combustion turbines, to attend operator training programs at least once every 3 years, on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and
- e. Maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request."

Compliance Demonstration:

If either emergency generator operates more than 500 hours during a calendar year, the Permittee shall perform an annual combustion analysis that includes the measurement of CO, O₂, and NO_x in the flue gas and optimizes the combustion in accordance with manufacturer's recommendations. The Permittee shall maintain records of operation and fuel use on site for at least five (5) years and make them available to the Department upon request. If a combustion analysis is performed, the Permittee shall maintain the results of the combustion analysis and make them available to the Department and the EPA upon request. The Permittee shall maintain a record of training program attendance for each operator at the site and make these records available to the Department upon request. The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing. The Permittee shall report incidents of visible emissions in accordance with Section III of the Title V operating permit.

Rationale for Periodic Monitoring Strategy:

A preventative maintenance plan, maintenance records, operator training records, and combustion analysis, if applicable, are deemed sufficient to demonstrate compliance with the nitrogen oxides standards.

D. Control of Hazardous Air Pollutants

1. In order for the emergency generators to be considered institutional emergency stationary RICE exempt from the requirements of 40 CFR 63, Subpart ZZZZ, any operation other than emergency operation,

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maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in (a) through (c) below, is prohibited.

- (a) There is no time limit on the use of emergency stationary RICE in emergency situations.
- (b) For a maximum of 100 hours per calendar year, emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The Permittee may petition the Department for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.
- (c) The Permittee may operate the emergency stationary RICE for up to 50 hours per year in non-emergency situations, but those 50 hours are counted toward the 100 hours per year provided for the maintenance and testing and emergency response. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. **[Authority: 40 CFR §63.6640(f)(1), (2), and (4)]**

Compliance Demonstration:

The Permittee shall record the hours of operation and reason for operation of each generator.

Rationale for Periodic Monitoring:

The records of hours of operation shall be reported to the Department with the annual emissions certification report and are deemed sufficient to demonstrate compliance with this regulation.

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**Emissions Unit Numbers – EU-14 through EU-19
Peak Shaving Generators**

EU-14 and EU-15 – Two (2) Caterpillar 3516-B diesel generators, each rated at 2520 bHP. Used for emergency backup power and peak shaving. Located in the South Energy Plant. (MDE Registration Nos. 510-0001-9-0949 and 9-0950)

EU-16 and EU-17 - Two (2) Caterpillar 3516-B diesel generators, each rated at 2520 bHP. Used for emergency backup power and peak shaving. Located in the North Energy Plant. (MDE Registration Nos. 510-0001-9-0988 and 9-0989)

EU-18 and EU-19 - Two (2) Caterpillar 3516-B diesel generators, each rated at 2520 bHP. Used for emergency backup power and peak shaving. Located in the South Energy Plant. (MDE Registration Nos. 510-0001-9-1015 and 9-1016)

Applicable Standards/Limits:

A. Control of Visible Emissions

1. COMAR 26.11.09.05E(2), Emissions During Idle Mode. “A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.”
2. COMAR 26.11.09.05E(3), Emissions During Operating Mode. “A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.”
3. COMAR 26.11.09.05E(4), Exceptions.
 - a. “Section E(2) of this regulation does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.
 - b. Section E(2) of this regulation does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:
 - i. Engines that are idled continuously when not in service: 30 minutes;
 - ii. All other engines: 15 minutes.
 - c. Section E(2) and (3) of this regulation do not apply while maintenance, repair, or testing is being performed by qualified mechanics.”

Compliance Demonstration:

The Permittee shall properly operate and maintain the engines in a manner to minimize visible emissions. The Permittee shall maintain an operational manual and preventative maintenance plan on site and maintain a record of

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the maintenance performed that relates to combustion performance. The Permittee shall report incidents of visible emissions in accordance with Section III of the Title V operating permit.

Rationale for Periodic Monitoring Strategy

A properly operated and maintained engine is not expected to produce visible emissions. Proper maintenance combined with a preventative maintenance plan is deemed sufficient to demonstrate compliance with the visible emissions standards.

B. Control of Sulfur Oxides

1. COMAR 26.11.09.07A(2)(b), Sulfur Content Limitations for Fuel. “A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: (2) In Areas III and IV: (b) Distillate fuel oils, 0.3 percent.”

Note: Compliance with 40 CFR §63.6604(a) and 40 CFR §1090.305 will demonstrate compliance with this requirement. See Table IV-6a, Section 6a.1(5) for additional detail.

Compliance Demonstration

The Permittee shall obtain a certification from the fuel supplier that the fuel oil is in compliance with the sulfur in fuel limitation. The Permittee shall retain fuel supplier certifications for at least five (5) years and shall submit them to the Department upon request.

Rationale for Periodic Monitoring Strategy

Fuel oil certifications are sufficient to demonstrate compliance with the applicable fuel sulfur limits. Therefore, no additional monitoring is required.

C. Control of Nitrogen Oxides

1. COMAR 26.11.09.08B(5), Operator Training.
 - a. “For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.
 - b. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.”
2. COMAR 26.11.09.08G(1), Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 Percent or Less, and Combustion Turbines with a Capacity Factor Greater than 15 Percent. “A person who owns or

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operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:

- a. Provide certification of the capacity factor of the equipment to the Department in writing;
- b. For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually;
- c. Maintain the results of the combustion analysis at the site for at least 2 years and make these results available to the Department and the EPA upon request;
- d. Require each operator of an installation, except combustion turbines, to attend operator training programs at least once every 3 years, on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and
- e. Maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request."

Compliance Demonstration:

The Permittee shall perform an annual combustion analysis on each of the six (6) peak shaving generators that operates more than 500 hours during a calendar year, that includes the measurement of CO, O₂, and NO_x in the flue gas and optimizes the combustion in accordance with manufacturer's recommendations. The Permittee shall maintain records of operation and fuel use on site for at least five (5) years and make them available to the Department upon request. If a combustion analysis is performed, the Permittee shall maintain the results of the combustion analysis and make them available to the Department and the EPA upon request. The Permittee shall maintain a record of training program attendance for each operator at the site and make these records available to the Department upon request. The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing. The Permittee shall report incidents of visible emissions in accordance with Section III of the Title V operating permit.

Rationale for Periodic Monitoring Strategy

A preventative maintenance plan, maintenance records, operator training records, and combustion analysis, if applicable, are deemed sufficient to demonstrate compliance with the nitrogen oxides standards.

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D. Operational Limits

The following condition applies only to EU-14 and EU-15 (MDE Registration Nos. 510-1043-9-0949 and 9-0950)

1. The combined NO_x emissions from both of these diesel generators must not exceed 25 tons in any rolling 12-month period. **[Reference: Permit to Construct 510-9-0949 and 0950N issued on April 2, 2002]**

Compliance Demonstration:

For EU-14 and EU-15: The Permittee shall calculate the monthly NO_x emissions from both of these emission units combined at the end of each calendar month. The Permittee shall maintain records of the monthly NO_x emissions totals from both units combined and an operating log that includes the date that each unit operates and the total operating time for each day that the unit operated, for at least five years to demonstrate compliance with the requirement that the combined NO_x emissions from both units do not exceed 25 tons in any 12-month rolling period.

The Permittee shall report the type and quantity of fuel used in the engines, and the monthly NO_x emissions from EU-14 and EU-15 to the Department in the annual emissions certification report due on April 1 of each year

Rationale for Periodic Monitoring:

For EU-14 and EU-15: The records of the operation date, time and duration for each engine, type and quantity of fuel used and the monthly NO_x emissions for EU-14 and EU-15 shall be reported to the Department with the annual emissions certification. This is deemed sufficient to demonstrate compliance with this requirement.

Emissions Unit Number – EU-14 through EU-19
Existing 40 CFR Part 63 ZZZZ Peak Shaving Generators

EU-14 and EU-15: Two (2) Caterpillar 3516-B diesel generators, each rated at 2520 bHP. Used for emergency backup power and peak shaving. Located in the South Energy Plant. (MDE Registration Nos. 510-0001-9-0949 and 9-0950)

EU-16 and EU-17: Two (2) Caterpillar 3516-B diesel generators, each rated at 2520 bHP. Used for emergency backup power and peak shaving. Located in the North Energy Plant. (MDE Registration Nos. 510-0001-9-0988 and 9-0989)

EU-18 and EU-19: Two (2) Caterpillar 3516-B diesel generators, each rated at 2520 bHP. Used for emergency backup power and peak shaving. Located in the South Energy Plant. (MDE Registration Nos. 510-0001-9-1015 and 9-1016)

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Applicable Standards/Limits:

Control of Hazardous Air Pollutants

1. The Permittee shall:
 - a. Limit the concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O₂; or
 - b. Reduce CO emissions by 70 percent or more.**[Reference: 40 CFR §63.6603(a) and 40 CFR Part 63, Subpart ZZZZ, Table 2d, Item 3]**

2. If the Permittee is using a catalyst to reduce or limit CO emissions, the Permittee shall:
 - a. Maintain the catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test; and
 - b. Maintain the temperature of the stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450°F and less than or equal to 1350°F.**[Reference: 40 CFR §63.6603(a) and 40 CFR Part 63, Subpart ZZZZ, Table 2b, Item 2]**

3. If the Permittee is not using a catalyst to reduce or limit CO emissions, the Permittee shall comply with any operating limitations approved by the Administrator. **[Reference: 40 CFR §63.6603(a) and 40 CFR Part 63, Subpart ZZZZ, Table 2b, Item 3]**

4. The Permittee shall:
 - a. Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or
 - b. Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates and metals.**[Reference: 40 CFR §63.6625(g)]**

Note: The Permittee must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters.

5. The Permittee shall only use fuel that meets the following per-gallon standards:
 - a. Sulfur content.

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- i. 15 ppm maximum for NR diesel fuel.
- ii. 500 ppm maximum for LM diesel fuel.
- b. Cetane index or aromatic content, as follows:
 - i. A minimum cetane index of 40; or
 - ii. A maximum aromatic content of 35 volume percent.

[Reference: 40 CFR §63.6604(a) and 40 CFR §1090.305]

[Note: Compliance with 5. above will demonstrate compliance with COMAR 26.11.09.07A(2)(b) discussed in Table IV – 5, Section 5.1B.]

Compliance Demonstration:

The Permittee shall demonstrate compliance by submitting the required notifications, conduct an initial performance test, conduct subsequent performance tests for CO every 8,760 hour or 3 years whichever comes first (if the Permittee is not using a CEMS), installing and operating a Continuous Parameter Monitoring System (CPMS) to continuously monitor catalyst inlet temperature, or a Continuous Emissions Monitoring System (CEMS) to continuously monitor CO and O₂ or CO₂, as applicable, minimizing the engine's time spent at idle during startup, minimize the engines startup time to a time not to exceed 30 minutes, preparing a site-specific monitoring plan, and reporting each instance in which the emission limits are not met. The Permittee shall maintain on site, all records to demonstrate compliance with this requirement. The Permittee must submit semi-annual compliance reports to the Department.

Rationale for Periodic Monitoring:

Records of the performance tests, notifications, the site-specific monitoring plan, and reports of deviations are deemed sufficient to demonstrate compliance with this requirement.

Emissions Unit Number – EU-20 and EU-21
Combined Heat and Power System

EU-20 and EU-21 (MDE Registration Nos. 510-0001-5-2073 and 5-2074)
One (1) Combined Heat and Power system (CHP) consisting of two (2) identical units, each comprised of one (1) 7.5 MW combustion turbine and one (1) heat recovery steam generator (HRSG) and a 42 million Btu per hour duct burner.

Stack testing was conducted on the CHP located at the South Energy Plant (MDE Registration No. 510-0001-5-5074) on January 10, 17, and 18, 2017. Stack testing was last conducted on the CHP located at the North Energy Plant (MDE Registration No. 510-0001-5-2073) in March of 2017. The results were

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received on March 24, 2017. The stack testing was performed to demonstrate compliance with the NO_x emission limit of 25 ppmvd at 15% O₂ (1.2 lb/MWh) when the CT is firing natural gas, 75 ppmvd at 15% O₂ (3.6 lb/MWh) when the CT is firing fuel oil, and 54 ppmvd at 15% O₂ (0.86 lb/MWh) when the CT and HRSG are firing natural gas. Separate tests were conducted on both oil and gas. The results of both testing events are as follows:

	NO _x emissions (CT – natural gas)		NO _x emissions (CT – oil)		NO _x emissions (CT and HRSG – natural gas)	
	(ppmvd at 15% O ₂)	(lb/MWh)	(ppmvd at 15% O ₂)	(lb/MWh)	(ppmvd at 15% O ₂)	(lb/MWh)
EU-21	5.46	0.07	21.15	0.28	8.07	0.10
EU-22	6.8	0.29	37.7	1.55	12.9	0.86

Applicable Standards/Limits:

A. Control of Visible Emissions

1. COMAR 26.11.09.05A(2), Fuel Burning Equipment. “In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.”
2. COMAR 26.11.09.05A(3), Exceptions. “Section (A)(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if:
 - a. The visible emissions are not greater than 40 percent opacity ; and
 - b. The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period.”

Compliance Demonstration:

The Permittee shall properly operate and maintain the equipment in a manner to prevent visible emissions and verify no visible emissions when burning No. 2 fuel oil. The Permittee shall perform a visual observation for a 6-minute period once for every 168 hours that the equipment burns oil or at a minimum of once per year. If visible emissions occur, the Permittee shall perform the following: inspect combustion control system and operations; perform all necessary adjustments and/or repairs to the boiler within 48 hours, so that visible emissions are eliminated; document in writing the results of the inspections, adjustments, and/or repairs to the equipment; and after 48 hours, if the required adjustments and/or repairs had not eliminated the visible

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emissions, perform Method 9 observations once daily for 18 minutes until corrective actions have eliminated the visible emissions.

The Permittee shall maintain on-site the following: an operation manual and preventative maintenance plan on site, records of the maintenance performed that relates to combustion performance, a log of visible emissions observations performed, and a record of the hours that No. 2 fuel oil was burned.

Rationale for Periodic Monitoring:

Visible emission observations, proper maintenance and operation of the equipment and maintenance records are deemed sufficient to demonstrate compliance with the visible emissions standards.

B. Control of Sulfur Oxides

- (1) COMAR 26.11.09.07A, Sulfur Content Limitations for Fuel. "A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: (2) In Areas III and IV: (b) Distillate fuel oils, 0.3 percent."
- (2) The Permittee must meet either of the following emission limits for SO₂:
 - a. You must not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain SO₂ in excess of 110 nanograms per Joule (ng/J) (0.90 pounds per megawatt-hour (lb/MWh)) gross output; or
 - b. You must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO₂ /J (0.060 lb SO₂ /MMBtu) heat input. If your turbine simultaneously fires multiple fuels, each fuel must meet this requirement. **[Authority: 40 CFR §60.4330(a)(1) and (2)]**

Note: Heat recovery steam generators and duct burners regulated under this subpart are exempted from the requirements of 40 CFR Part 60 subparts Da, Db, and Dc per 40 CFR §60.4305(b).

Compliance Demonstration:

The Permittee shall obtain a certification from the fuel supplier indicating that the oil complies with the limitation on the sulfur content of the fuel oil. The Permittee shall maintain records of fuel supplier's certification and shall report fuel supplier certification available to the Department upon request.

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The Permittee must monitor the total sulfur content of the fuel being fired in the turbine, except as provided in §60.4365. The sulfur content of the fuel must be determined using total sulfur methods described in §60.4415.

The Permittee may elect not to monitor the total sulfur content of the fuel combusted in the turbine, if the fuel is demonstrated not to exceed potential sulfur emissions of 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input.

The Permittee shall maintain for at least five years and shall make available to the Department upon request records and results of any tests performed in compliance with the initial testing as required under 40 CFR §60.8 and 40 CFR Part 60, Subpart KKKK and records and results of fuel sulfur content monitoring.

The Permittee must submit reports of excess emissions and monitor downtime, in accordance with §60.7(c). Excess emissions must be reported for all periods of unit operation, including start-up, shutdown, and malfunction.

Rationale for Periodic Monitoring:

The strategy for the compliance demonstration is based on the compliance demonstration for NSPS Subpart KKKK turbines that burn fuel oil.

C. Control of Nitrogen Oxides

1. COMAR 26.11.09.08G, Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 Percent or Less, and Combustion Turbines with a Capacity Factor Greater than 15 Percent.
 - a. "A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:
 - i. Provide certification of the capacity factor of the equipment to the Department in writing;
 - ii. For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually;
 - iii. Maintain the results of the combustion analysis at the site for at least 2 years and make these results available to the Department and the EPA upon request;"
 - iv. Not applicable.
 - v. Not applicable.
 - b. "A person who owns or operates a combustion turbine with a capacity factor greater than 15 percent shall meet an hourly average NO_x emission rate of not more than 42 ppm when burning gas or 65 ppm when burning fuel oil (dry volume at 15 percent

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oxygen) or meet applicable Prevention of Significant Deterioration limits, whichever is more restrictive.”

2. The Permittee must meet the NO_x emissions limits specified in the following Table:

Combustion turbine type	Combustion turbine heat input at peak load (HHV)	NO_x emission standard
New turbine firing natural gas	> 50 MMBtu/h and ≤ 850 MMBtu/h	25 ppm at 15 percent O ₂ or 150 ng/J of useful output (1.2 lb/MWh).
New turbine firing fuels other than natural gas	> 50 MMBtu/h and ≤ 850 MMBtu/h	74 ppm at 15 percent O ₂ or 460 ng/J of useful output (3.6 lb/MWh).
Heat recovery units operating independent of the combustion turbine	All sizes	54 ppm at 15 percent O ₂ or 110 ng/J of useful output (0.86 lb/MWh).

[Authority: 40 CFR §60.4320 and 40 CFR Part 60, Table 1]

Compliance Demonstration:

The Permittee shall demonstrate compliance by conducting a performance test for NO_x in accordance with §63.4340, §60.4400, and §60.8. If the Permittee does not use water or steam injection to control NO_x emissions, the Permittee must conduct annual performance tests in accordance with §60.4400. If the NO_x emission result from the performance test is less than or equal to 75 percent of the NO_x emission limit for the turbine, you may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test). If the results of any subsequent performance test exceed 75 percent of the NO_x emission limit for the turbine, you must resume annual performance tests.

The Permittee shall establish and document an appropriate parametric monitoring plan in accordance with 40 CFR §60.4355. The plan shall include, but not be limited to: selection of indicators to be monitored, ranges of indicators, process used to obtain representative data, quality assurance, frequency of monitoring, and justification for the proposed elements of monitoring. The parametric monitoring plan is due to the Department sixty day after completion of the performance testing. In addition, the Permittee shall perform a combustion analysis and optimize combustion annually in any year in which the turbine operates for 500 hours or more.

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The Permittee shall maintain on-site all records of notifications, stack tests, combustion analysis, fuel use records, and operator training records as applicable.

Rationale for Periodic Monitoring Strategy

Stack test demonstrations, combustion analysis and operator training records, as applicable, are deemed sufficient to demonstrate compliance with the NO_x emissions standards.

D. Operational Limit

1. The CHP Project consisting of two (2) identical units comprising of a 7.5 MW combustion turbine and HRSG and a 42 million Btu per hour duct burner shall fire on natural gas as a primary fuel and No. 2 fuel oil as backup fuel except for the duct burner which is fired on natural gas only. **[Authority: Permit to Construct 510-0001-5-2073, 5-2074, and 5-2075 issued on June 17, 2011, Part C, Condition 3]**
2. The Permittee must operate and maintain the stationary combustion turbines, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction. **[Authority: 40 CFR §60.4333(a)]**

Compliance Demonstration:

The Permittee shall submit a notification of any physical or operational change to the 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 information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator (Department) may request additional relevant information subsequent to this notice.

The Permittee shall maintain records of fuel type and quantity and shall properly operate and maintain the turbines and associated equipment.

Rationale for Periodic Monitoring:

The records of any physical or operational change at the facility, records of fuel type and quantity and proper operation of the equipment is deemed sufficient to demonstrate compliance with this requirement.

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Emissions Unit Number(s) EU-23
Non- Emergency Generator

EU-23 – One (1) diesel-fired Caterpillar CAT3516C non-emergency generator rated at 2,695 horsepower.

Applicable Standards/Limits:

A. Control of Visible Emissions

1. COMAR 26.11.09.05E(2), Emissions During Idle Mode. “A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.”
2. COMAR 26.11.09.05E(3), Emissions During Operating Mode. “A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.”
3. COMAR 26.11.09.05E(4), Exceptions.
 - a. “Section E(2) of this regulation does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.
 - b. Section E(2) of this regulation does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:
 - i. Engines that are idled continuously when not in service: 30 minutes;
 - ii. All other engines: 15 minutes.
 - c. Section E(2) and (3) of this regulation do not apply while maintenance, repair, or testing is being performed by qualified mechanics.”

Compliance Demonstration:

The Permittee shall perform preventive maintenance to optimize combustion performance. The Permittee shall retain preventive maintenance records on site for at least five (5) years and make the records available to the Department upon request.

The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, “Report of Excess Emissions and Deviations.”

Rationale for Periodic Monitoring Strategy:

A properly operated and maintained engine is not expected to produce visible emissions. Proper maintenance combined with a preventative maintenance

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plan is sufficient to demonstrate compliance with the visible emissions standards.

B. Control of Sulfur Oxides

COMAR 26.11.09.07A(2)(b), Sulfur Content Limitations for Fuel. "A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: (2) In Areas III and IV: (b) Distillate fuel oils, 0.3 percent."

Compliance Demonstration:

The Permittee shall obtain a certification from the fuel supplier that the fuel oil is in compliance with the sulfur in fuel limitation. The Permittee shall retain fuel supplier certifications for at least five (5) years and shall submit them to the Department upon request.

Rationale for Periodic Monitoring Strategy:

Fuel oil certifications are deemed sufficient to demonstrate compliance with the applicable fuel sulfur limits. No additional monitoring is required.

C. Control of Nitrogen Oxides

1. COMAR 26.11.09.08B(5), Operator Training.

- a. "For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.
- b. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department."

2. COMAR 26.11.09.08G(1), Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 Percent or Less, and Combustion Turbines with a Capacity Factor Greater than 15 Percent. "A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:

- a. Provide certification of the capacity factor of the equipment to the Department in writing;
- b. For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually;
- c. Maintain the results of the combustion analysis at the site for at least 2 years and make these results available to the Department and the EPA upon request;
- d. Require each operator of an installation, except combustion turbines, to attend operator training programs at least once every 3

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- years, on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and
- e. Maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request."

Compliance Demonstration:

If either emergency generator operates more than 500 hours during a calendar year, the Permittee shall perform an annual combustion analysis that includes the measurement of CO, O₂, and NO_x in the flue gas and optimizes the combustion in accordance with manufacturer's recommendations. The Permittee shall maintain records of operation and fuel use on site for at least five (5) years and make them available to the Department upon request. If a combustion analysis is performed, the Permittee shall maintain the results of the combustion analysis and make them available to the Department and the EPA upon request. The Permittee shall maintain a record of training program attendance for each operator at the site and make these records available to the Department upon request. The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing. The Permittee shall report incidents of visible emissions in accordance with Section III of the Title V operating permit.

Rationale for Periodic Monitoring Strategy:

A preventative maintenance plan, maintenance records, operator training records, and combustion analysis, if applicable, are deemed sufficient to demonstrate compliance with the nitrogen oxides standards.

D. NSPS Requirements

1. The Permittee must meet the following emissions standards:
 - a. Particulate matter (PM): 0.03 grams per kilowatt hour (g/kW hr);
 - b. Nitrogen Oxides (NO_x): 0.67 g/kW hr;
 - c. Non-Methane Hydrocarbons (NMHC): 0.19 g/kW hr; and
 - d. Carbon Monoxide (CO): 3.5 g/kW hr.

[Reference: 40 CFR §60.4204(b), 40 CFR §60.4201(a), and 40 CFR §1039.101, Table 1]

Note: *Compliance with this condition will be demonstrated by the purchase of a certified engine and operating that engine as required under 40 CFR§60.4211(c).*

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2. The Permittee must not exceed the following opacity emission standards:
- a. 20 percent during the acceleration mode;
 - b. 15 percent during the lugging mode; and
 - c. 50 percent during the peaks in either the acceleration or lugging modes. **[Reference: 40 CFR §60.4205(b), §60.4201(a), and §1039.105(b)]**

Note: *Compliance with this condition will be demonstrated by the purchase of a certified engine and operating that engine as required under 40 CFR§60.4211(c).*

3. The Permittee must meet the non-road diesel fuel sulfur requirements of 40 CFR §1090.305 as follows:
- a. Sulfur content – 15 ppm maximum and
 - b. Cetane index or aromatic content as follows:
 - i. A minimum cetane index of 40; or
 - ii. A maximum aromatic content of 35 volume percent.
- [Reference: 40 CFR §60.4207(b) and 40 CFR §1090.305]**
4. The Permittee must purchase an engine certified to the emissions standards in 40 CFR §60.4204(b). **[Reference: 40 CFR§60.4211(c)]**
5. Except as provided in 40 CFR §60.4211(g), the Permittee shall do all of the following:
- a. Operate and maintain the generator 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 Part 1068, as applicable.
- [Reference: 40 CFR §60.4211(a)]**
6. The Permittee must operate and maintain the generator so that the emission standards are achieved over the entire life of the engines. **[Reference: 40 CFR §60.4206]**

Compliance Demonstration:

The Permittee shall install the diesel particulate filter with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached. **[Reference: 40 CFR §60.4209(b)]**

The Permittee shall maintain the following:

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1. A log for the generator indicating the date of operation, hours of operation, and the reason for operation (i.e. maintenance, power outage, emergency demand response, etc.).
2. For each fuel delivery, obtain a fuel supplier certification that includes the name of the fuel supplier, the amount of fuel delivered, and a statement from the fuel supplier that the diesel fuel complies with the specifications of 40 CFR §1090.305.
3. The EPA Certificate of Conformity demonstrating that the non-emergency generator meets the applicable emissions standards of 40 CFR 60, Subpart IIII. If the non-emergency engine is equipped with a diesel particulate filter, the Permittee must keep records of any corrective action taken after the backpressure monitor has notified the Permittee that the high backpressure limit of the engine is approached. **[Reference: 40 CFR §62.4214(c)]**

Rationale for Periodic Monitoring:

The records of fuel supplier certification and purchase of a certified engine combined with the annual emissions certification report are deemed sufficient to demonstrate compliance with these regulations.

COMPLIANCE SCHEDULE

JHMI Utilities, LLC is currently in compliance with all applicable air quality regulations.

TITLE IV – ACID RAIN

JHMI Utilities, LLC is not subject to the Acid Rain Program requirements.

TITLE VI – OZONE DEPLETING SUBSTANCES

JHMI Utilities, LLC is not subject to Title VI requirements.

SECTION 112(r) – ACCIDENTAL RELEASE

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JHMI Utilities, LLC is not subject to the requirements of Section 112 (r).

PERMIT SHIELD

The JHMI Utilities, LLC facility requested that a permit shield be expressly included in the Permittee's Part 70 permit. Permit shields are granted on an emission unit by emission unit basis. If an emission unit is covered by a permit shield, a permit shield statement will follow the emission unit table in Section IV - Plant Specific Conditions of the permit. In this case, a permit shield was granted for each emission unit covered by the permit.

SECTION V INSIGNIFICANT ACTIVITIES

This section provides a list of insignificant emissions units that were reported in the Title V permit application. The applicable Clean Air Act requirements, if any, are listed below the insignificant activity.

- (1) No. 3 Stationary internal combustion engines with an output less than 500 brake horsepower (373 kilowatts) and which are not used to generate electricity for sale or for peak or load shaving;

The engines are subject to the following requirements:

- (A) COMAR 26.11.09.05E(2), Emissions During Idle Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.
- (B) COMAR 26.11.09.05E(3), Emissions During Operating Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.
- (C) Exceptions:
 - (i) COMAR 26.11.09.05E(2) does not apply for a period of 2 consecutive minutes after a period of idling of 15

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consecutive minutes for the purpose of clearing the exhaust system.

- (ii) COMAR 26.11.09.05E(2) does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:

(a) Engines that are idled continuously when not in service: 30 minutes

(b) all other engines: 15 minutes.

- (iii) COMAR 26.11.09.05E(2) & (3) do not apply while maintenance, repair or testing is being performed by qualified mechanics.

(D) New Source Performance Standards: 40 CFR 60, Subpart IIII and 40 CFR 60, Subpart JJJJ as applicable.

(E) National Emission Standards for Hazardous Air Pollutants: 40 CFR 63, Subpart ZZZZ as applicable.

- (2) ✓ Space heaters utilizing direct heat transfer and used solely for comfort heat;

- (3) ✓ Water cooling towers and water cooling ponds unless used for evaporative cooling of water from barometric jets or barometric condensers, or used in conjunction with an installation requiring a permit to operate;

- (4) No. 4 Unheated VOC dispensing containers or unheated VOC rinsing containers of 60 gallons (227 liters) capacity or less;

The units are subject to COMAR 26.11.19.09D, which requires that the Permittee control emissions of volatile organic compounds (VOC) from cold degreasing operations by meeting the following requirements:

- (a) COMAR 26.11.19.09D(2)(b), which establishes that the Permittee shall not use any VOC degreasing material that exceeds a vapor pressure of 1 mm Hg at 20 ° C;

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- (b) COMAR 26.11.19.09D(3)(a—d), which requires that the Permittee implement good operating practices designed to minimize spills and evaporation of VOC degreasing material. These practices, which shall be established in writing and displayed such that they are clearly visible to operators, shall include covers (including water covers), lids, or other methods of minimizing evaporative losses, and reducing the time and frequency during which parts are cleaned;
- (c) COMAR 26.11.19.09D(4), which prohibits the use of any halogenated VOC for cold degreasing.

The Permittee shall maintain on site for at least five (5) years, and shall make available to the Department upon request, the following records of operating data:

- (a) Monthly records of the total VOC degreasing materials used; and
 - (b) Written descriptions of good operating practices designed to minimize spills and evaporation of VOC degreasing materials.
-
- (5) ✓ Commercial bakery ovens with a rated heat input capacity of less than 2,000,000 Btu per hour;
 - (6) ✓ Confection cookers where the products are edible and intended for human consumption;
 - (7) ✓ Photographic process equipment used to reproduce an image upon sensitized material through the use of radiant energy;
 - (8) ✓ Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding, or disc sanding of wood or wood products;
 - (9) ✓ Equipment for washing or drying products used exclusively for electrolytic plating work, or electrolytic polishing, or electrolytic

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stripping of brass, bronze, cadmium, copper, iron, lead, nickel,
tin, zinc and precious metals;

- (10) Containers, reservoirs, or tanks used exclusively for:
- (a) ✓ Storage of butane, propane, or liquefied petroleum, or natural gas;
 - (b) ✓ Storage of lubricating oils;
 - (c) No. 16 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel;
 - (d) ✓ The storage of VOC normally used as solvents, diluents, thinners, inks, colorants, paints, lacquers, enamels, varnishes, liquid resins, or other surface coatings and having individual capacities of 2,000 gallons (7.6 cubic meters) or less;
- (11) ✓ Charbroilers and pit barbecues as defined in COMAR 26.11.18.01 with a total cooking area of 5 square feet (0.46 square meter) or less;
- (12) ✓ First aid and emergency medical care provided at the facility, including related activities such as sterilization and medicine preparation used in support of a manufacturing or production process;
- (13) ✓ Potable water treatment equipment, not including air stripping equipment;
- (14) ✓ Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;
- (15) ✓ Laboratory fume hoods and vents;
- (16) any other emissions unit at the facility which is not subject to an applicable requirement of the Clean Air Act (list and describe):

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No. 2 Vulcan VCCB-47 Charbroiler equipped with an exhaust ventilator hood (ARA Registration No. 510-0001-8-0364 and 8-0365)

No. 4 Ethylene Oxide (EO) sterilizers with add on catalytic oxidizers.

Unit	Sterilizer Description	Cycles/Yr	Sterilizer Size
1	Steris Amsco Eagle 3016 EO Sterilizer.	87	4.8 ft ³
2	Steris Amsco Eagle 3016 EO Sterilizer.	87	4.8 ft ³
3	Steris Amsco Eagle 3016 EO Sterilizer.	87	4.8 ft ³
4	Steris Amsco Eagle 3016 EO Sterilizer.	87	4.8 ft ³

The Air Pollution Control Device (APCD), consists of two (2) catalytic oxidizers. Each EO sterilizer vents to one of the two catalytic oxidizers. The catalytic oxidizers have a self-check for catalyst operation by verifying a temperature increase during the exhaust and an alarm if a minimum temperature is not detected. LHMI Utilities, LLC has a service contract for all sterilization related equipment.

The EO sterilizers are subject to 40 CFR Part 63 Subpart WWWW – National Emission Standards for Hospital Ethylene Oxide Sterilizers, which requires that the Permittee control emissions from the EO sterilizers by meeting the following requirements:

- (a) The Permittee must sterilize full loads of items having a common aeration time, except under medically necessary circumstances as that term is defined in §63.10448.
- (b) The Permittee must submit an Initial Notification of Compliance Status as specified in §63.10430(a). In the Initial Notification of Compliance Status, you must certify that you are venting the ethylene oxide emissions from each sterilization unit to an add-on air pollution control device. You must certify that you are operating the control device during all sterilization processes and in accordance with manufacturer's recommended procedures.

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- (c) The Permittee shall maintain records in a form suitable and readily available for review for five (5) years following the date of each record. The records must be kept on site for at least two (2) years after the date of each record and may be kept offsite for the remaining three (3) years. The records shall include a copy of the Initial Notification of Compliance Status that was submitted to comply with this subpart.

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SECTION VI STATE-ONLY ENFORCEABLE CONDITIONS

The Permittee is subject to the following State-only enforceable requirements:

1. Applicable Regulations:
 - a. **COMAR 26.11.06.08, Nuisance.** “An installation or premises may not be operated or maintained in such a manner that a nuisance or air pollution is created. Nothing in this regulation relating to the control of emissions may in any manner be construed as authorizing or permitting the creation of, or maintenance of, nuisance or air pollution.”
 - b. **COMAR 26.11.06.09, Odors.** “A person may not cause or permit the discharge into the atmosphere of gases, vapors, or odors beyond the property line in such a manner that a nuisance or air pollution is created.”
2. Record Keeping and Reporting Requirements:
 - a. The Permittee shall submit to the Department, by April 1 of each year during the term of this permit, a written certification of the results of an analysis of emissions of toxic air pollutants from the Permittee’s facility during the previous calendar year. The analysis shall include either:
 - i. a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or
 - ii. a revised compliance demonstration, developed in accordance with requirements included under COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.

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APPENDIX A. – PLANTWIDE APPLICABILITY LIMIT (PAL)

Appendix A - PAL	
A.0	<u>Emissions Unit Number(s)</u> Plant Wide Applicability Limit (PAL)
A.1	<u>Applicable Standards/Limits:</u> [Authority: PAL issued on June 17, 2011] A. <u>General Requirements</u> <ol style="list-style-type: none"> 1. COMAR 26.11.03.14A, <u>Revisions of Part 70 Permits – General Requirements</u>. “The Permittee shall submit an application to the Department to revise a part 70 permit when required under Regulations .15-.17 of this chapter.” 2. COMAR 26.11.17.08D, <u>Plant wide Applicability Limit: Permit - General Requirements</u>. <ol style="list-style-type: none"> a. “For each month during the PAL effective period after the first 12 months of establishing a PAL, the Permittee shall show that the sum of the monthly emissions from each emissions unit under the PAL for the previous 12 consecutive months is less than the PAL. For each month during the first 11 months from the PAL effective date, the Permittee shall show that the sum of the preceding monthly emissions from the PAL effective date for each emissions unit under the PAL is less than the PAL.” b. “The Permittee is subject to: <ol style="list-style-type: none"> i. All applicable existing State and federal requirements; and ii. Any future State or federal requirements that apply to an emissions unit under an approved PAL.” c. “During the PAL effective period, emission reductions of a PAL pollutant may not be creditable for use as ERCs unless the level of the PAL is reduced by the amount of the reduction and the reduction would be creditable in the absence of the PAL.” d. “This PAL shall be established, renewed, or increased through a public participation procedure that is consistent with 40 CFR §§51.160 and 51.161. The Department shall provide the public with notice of the proposed approval of the PAL permit and at least a 30-day period for submittal of public comment. All comments received by the Department shall be addressed before the Department takes final action on the permit.”

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Appendix A - PAL

3. COMAR 26.11.17.08E, Expiration of a PAL.
- a. This PAL shall expire at the end of the PAL effective period unless it is renewed according to section G of this regulation and the requirements of (2) through (7) shall apply.”
 - b. The Permittee shall submit a proposed allowable emission limitation for each emissions unit (or each group of emissions units, if this distribution is more appropriate, as determined by the Department) by distributing the PAL allowable emissions among each of the emissions units that existed under the PAL. If the PAL had not yet been adjusted for any applicable requirement that became effective during the PAL effective period, as required under §G of this regulation, the distribution shall be made as if the PAL had been adjusted.”
 - c. “The Department shall decide whether and how the PAL allowable emissions will be distributed and issue a revised permit incorporating allowable limits for each emissions unit, or each group of emissions units, as the Department determines is appropriate.”
 - d. “Each emissions unit shall comply with the allowable emission limitation on a 12-month rolling basis. The Department may approve the use of monitoring systems (for example, source testing or emission factors) other than CEMs, CERMes, PEMs, or CPMs to demonstrate compliance with the allowable emission limitation.”
 - e. “Until the Department issues the revised permit incorporating allowable limits for each emissions unit, or each group of emissions units, the Permittee shall continue to comply with the source-wide, multi-unit emissions cap equivalent to the level of the PAL emission limitation.”
 - f. “Any physical change or change in the method of operation at the facility is subject to the nonattainment major NSR requirements if the change meets the definition of a major modification.”
 - g. The Permittee shall continue to comply with any State or federal applicable requirements (BACT, RACT, NSPS, etc.) that may have applied either during the PAL effective period or before the PAL effective period, except for those emission limitations that had been established pursuant to Regulation .02G of this chapter but were eliminated by the PAL in accordance with Regulation .07A(2)(c) of this chapter.

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| | <p>4. COMAR 26.11.17.08F, <u>Reopening a PAL Permit.</u></p> <ul style="list-style-type: none">a. During the PAL effective period, the permit may be reopened to:<ul style="list-style-type: none">i. Correct any errors in setting the PAL or to reflect a more accurate determination of emissions used to establish the PAL;ii. Reduce the PAL if the source creates emission reduction credits; oriii. Reflect a necessary increase in the PAL level.b. The Department may reopen the PAL to:<ul style="list-style-type: none">i. Reflect a new federal or State requirement that would apply to an emissions unit after the effective date or for other reasons determined by the Department;ii. Reduce the PAL consistent with any other requirement that is enforceable as a practicable matter, and that the Department may impose on the major stationary source; oriii. Reduce the PAL if the Department determines that a reduction is necessary to avoid causing or contributing to:<ul style="list-style-type: none">1. A NAAQS or PSD increment violation; or2. An adverse impact on an air quality related value that has been identified for a Federal Class I Area by a federal land manager and for which information is available to the general public.c. Any adjustment to the PAL shall be made through the public participation procedures required when the PAL was first established. <p>5. COMAR 26.11.17.08G, <u>Renewal of a PAL.</u></p> <ul style="list-style-type: none">a. The Permittee shall request a renewal of the PAL by applying for the renewal not later than 6 months before the existing PAL permit expiration date. If the Permittee submits a complete application to renew the PAL within that time period, the PAL shall continue to be effective until a renewed permit is issued.b. The application to renew the PAL shall contain the following:<ul style="list-style-type: none">i. The information required in §A of this regulation;ii. A proposed PAL level;iii. The sum of potential to emit of all emissions units under the PAL and supporting documentation; and |
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	<ul style="list-style-type: none"> iv. Any other information the Permittee wishes the Department to consider in determining the appropriate level for renewing the PAL. c. Adjustments at Renewal. <ul style="list-style-type: none"> i. If the emissions level calculated in accordance with paragraph (f)(6) of this section is equal to or greater than 80 percent of the PAL level, the reviewing authority may renew the PAL at the same level without considering the factors set forth in paragraph (f)(10)(iv)(B) of this section (§51.165). ii. The Department may set the PAL at a level that it determines to be more representative of the source's baseline actual emissions, or that it determines to be appropriate considering air quality needs, advances in control technology, anticipated economic growth in the area, desire to reward or encourage the source's voluntary emissions reductions, or other factors as specifically identified by the Department in its written rationale. iii. If the potential to emit of the source is less than the PAL, the Department shall adjust the PAL to a level not greater than the potential to emit of the source, and the Department may not approve a renewed PAL level higher than the current PAL unless the Permittee has complied with the provisions of Regulation .09A of this chapter." d. If a compliance date for a State or federal requirement that applies to the PAL source occurs during the PAL effective period, and if the Department has not already adjusted for this requirement, that PAL shall be adjusted at the time of PAL renewal or Title V permit renewal, whichever occurs first. e. The Department shall provide both the proposed PAL level and a written rationale for the proposed PAL level to the public for review and comment. During the public review, any person may propose a PAL level for the source for consideration by the Department.
6.	<p>COMAR 26.11.17.08H, <u>Increasing a PAL.</u></p> <ul style="list-style-type: none"> a. Requirements for Increasing a PAL.

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	<ul style="list-style-type: none"> i. A PAL may be increased during the PAL effective period if the requirements of this subsection are met. ii. The Permittee shall submit a complete application to request an increase in the PAL limit for a PAL major modification. The application shall identify the emissions units contributing to the increase in emissions so as to cause the major stationary source's emissions to equal or exceed its PAL. iii. As part of this application, the Permittee shall demonstrate that the sum of the baseline actual emissions of the small emissions units, plus the sum of the baseline actual emissions of the significant and major emissions units assuming application of BACT equivalent controls, plus the sum of the allowable emissions of the new or modified emissions units, exceeds the PAL. The level of control that would result from BACT equivalent controls on each significant or major emissions unit shall be determined by conducting a new BACT analysis at the time the application is submitted, unless the emissions unit is currently required to comply with a BACT or LAER requirement that was established within the preceding 10 years. In this case, the assumed control level for that emissions unit shall be equal to the level of BACT or LAER with which that emissions unit shall currently comply. iv. The Permittee shall obtain a major NSR permit for all emissions units identified in this subsection regardless of the magnitude of the emissions increase resulting from them (that is, no significant levels apply). These emissions units shall comply with any emissions requirements resulting from the nonattainment major NSR program processed (for example, LAER), even though they have also become subject to the PAL or continue to be subject to the PAL. v. The PAL permit shall require that the increased PAL level be effective on the day any emissions unit that is part of the PAL major modification becomes operational and begins to emit the PAL pollutant. <p>b. The Department shall calculate the new PAL as the sum of the allowable emissions for each modified or new emissions unit, plus the sum of the baseline actual emissions of the significant</p>

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	<p>and major emissions units (assuming application of BACT equivalent controls as determined in accordance with §H(1)(c) of this regulation), plus the sum of the baseline actual emissions of the small emissions units.</p> <p>c. The PAL permit shall be revised to reflect the increased PAL level pursuant to the public notice requirements of §D(6) of this regulation.</p> <p>B. <u>Control of Nitrogen Oxides</u> The Permittee is subject to a Plant wide Applicability Limit (PAL) of 104.9 tons of NO_x emissions in any 12-month rolling period. The baseline period of 2005-2006 was used to determine the baseline actual emissions for all existing emission units. [Authority: PAL issued on June 17, 2011]</p>
A.2	<p><u>Testing Requirements:</u></p> <p>A. <u>General Requirements</u> See Section A.3, Monitoring Requirements.</p> <p>B. <u>Control of Nitrogen Oxides</u> See Section A.3, Monitoring Requirements.</p>
A.3	<p><u>Monitoring Requirements:</u></p> <p>A. <u>General Requirements</u> The PAL permit shall remain in effect for a period not to exceed 5 years from the PAL effective date unless the Permittee applies to renew the PAL in accordance with COMAR 26.11.07.08G before the end of the PAL effective period, then the PAL does not expire at the end of the PAL effective period but remains in effect until a revised PAL permit is issued by the Department. [Authority: PAL issued on June 17, 2011]</p> <p>B. <u>Control of Nitrogen Oxides</u> 1. For each month during the PAL effective period after the first 12 months of establishing a PAL, the Permittee shall show that the sum of the monthly emissions from each emissions unit under the PAL for the previous 12 consecutive months is less than the PAL. For each month during the first 11 months from the PAL effective date, the Permittee shall show that the sum of the preceding monthly emissions from the PAL effective date for each emissions</p>

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	<p>unit under the PAL is less than the PAL. [Authority: COMAR 26.11.17.08D(3)]</p> <ol style="list-style-type: none"> 2. After the first twelve months of the effective date of the PAL period, the Permittee shall document the total NO_x emissions for each emissions unit identified in the PAL and demonstrate that the aggregate emissions have not exceeded the prescribed PAL. Additionally, for each month after the first year, the Permittee shall document NO_x emissions for each emissions unit identified in the PAL and continue to demonstrate that the aggregate emissions for the previous 12 months have not exceeded the PAL 3. The Permittee's NO_x emissions calculations shall include emissions from startup, shutdowns, and malfunctions. The Permittee shall state the calculation procedures used to convert the monitoring system data to a monthly emissions and annual emissions based on a 12-month rolling total for each month. [Authority: COMAR 26.11.17.08C(2)(d) and (f)] 4. The Permittee shall conduct monitoring and record keeping requirements in accordance with COMAR 26.11.17.09A, <u>Monitoring and Record Keeping Requirements</u>. 5. Emissions of NO_x from all of the emission units (EUs) at the facility will be calculated on a 12-month rolling annual basis using emission factors (EFs) and activity levels. EFs will have units of mass of NO_x generated per unit of activity. The primary unit of activity will be the amount of the fuel burned in each EU in MMBtu/hr. The fuel use activity level for each EU will be measured continuously using totalizing flow meters for both natural gas and fuel oil. The process control system will convert raw volumetric flow data from the meters to mass flow data. The mass flow data will then be converted using fuel energy content (e.g. Btu/cubic foot, Btu/lb, Btu/gal, etc.) to rates of energy input: MMBtu/hr. NO_x emissions for each EU will be calculated each month using the EF and activity level as follows: <p style="text-align: center;">$M_{NOxEUi} = A_{LEUi} \times EF_{EUi}$</p> <p>Where: M_{NOxEUi} is the tons of NO_x emitted by the ith EU during the period</p>

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AL_{EUI} is the activity level (fuel burned) for the i th EU during the period.

EF_{EUI} is the emission factor for the i th emission unit.

Total NO_x emission for a monthly period will be calculated by summing M_{NOxEUI} for all EUs, as shown in the following table, except as revised per footnote 3 to the table.

Significant/ Small	Device	Fuel Type	AL_{EUI} Heat Input (MMBtu/m onth)	EF_{EUI} NO_x Emission Factor (lb/MMBtu)	Emissions (lb/month)	Unit Conversion	M_{NOxEUI} Emission (tons/ Month)
Significant	EU-1 – EU-4 (Boiler Nos. 7- 10)	Gas		X 0.086 =		/2000 =	
Significant	EU-1 – EU-4 (Boiler Nos. 7- 10)	Oil		X 0.156 =		/2000 =	
Significant	EU-1 – EU-4 (Boiler Nos. 7- 10)	Gas		X 0.098 =		/2000 =	
Significant	EU-1 – EU-4 (Boiler Nos. 7- 10)	Oil		X 0.143 =		/2000 =	
Significant	EU-20 (NEP CT)	Gas		X 0.066 =		/2000 =	
Significant	EU-20 (NEP CT)	Oil		X 0.266 =		/2000 =	
Significant	EU-21 (SEP CT)	Gas		X 0.066 =		/2000 =	
Significant	EU-21 (SEP CT)	Oil		X 0.266 =		/2000 =	
Significant	EU-20 (NEP Duct Burner)	Gas		X 0.080 =		/2000 =	
Significant	EU-21 (SEP Duct Burner)	Gas		X 0.080 =		/2000 =	
Significant	EU-22 (SEP Boiler)	Gas		X 0.035 =		/2000 =	
Significant	EU-22 (SEP Boiler)	Oil		X 0.143 =		/2000 =	

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Significant	EU-13; and EU-14 EU-19 (Engine Generators (3: 750 kW; 1: 1750 kW and 6: 1825 kW))	Oil		X 3.200 =		/2000 =	
Small	Engine Generators (2: 250 kW & 275 kW)	Oil		X 4.410 =		/2000 =	
Small	Fire Pump (244 HP)	Oil		X 4.410 =		/2000 =	
Small	(Gas-fired cooking equipment)	Gas		X 0.137 =		/2000 =	
Significant	EU-23 (Engine Generator, 1,825 kW)	Oil		X 0.123		/2000	
						Total	

Notes: 1. EPA HHV oil = 140,000 Btu/gal; HHV Gas = 1,020 Btu/ccf
2. Final emission factors for new equipment will be submitted to MDE in the future.
3. Emission factors from the most recent, Department approved, stack tests will be used where applicable.

6. The Permittee shall revalidate the PAL pollutant through performance testing or other scientifically valid means approved by the Department. This testing shall occur at least once during the term of this permit. **[Authority: COMAR 26.11.17.09A(12)]**
7. The Permittee shall retain a copy of all records necessary to determine compliance with any requirement of Regulations .07—.09 of this chapter and of the PAL, including a determination of each emissions unit's 12-month rolling total emissions for 5 years from the date of that record. **[Authority: COMAR 26.11.17.09A(13)]**
8. The Permittee shall retain a copy of the following records for the duration of the PAL effective period plus 5 years:

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	<ul style="list-style-type: none">a. A copy of the PAL permit application and any application for revisions to the PAL; andb. Each annual certification of compliance pursuant to Title V and the data relied on in certifying the compliance. [Authority: COMAR 26.11.17.09A(14)] <p>9. <u>Monitoring Plan for the Facility</u> 12-month rolling annual NO_x emissions totals for the entire source will be complied by summing monthly NO_x emissions for each EU calculated in this manner. This tally will demonstrate that total NO_x emissions are below the PAL: 104.9 tons. [Authority: PAL issued on June 17, 2011]</p> <p>10. <u>Monitoring System for Emissions Units Added or Modified After Issuance of the PAL</u> The monitoring system for emissions units added or modified after issuance of the PAL shall use one of the four general monitoring approaches in paragraphs (a) through (d) below.</p> <ul style="list-style-type: none">a. Mass balance calculations - The owner or operator using mass balance calculations to monitor PAL pollutant emissions shall meet the following requirements:<ul style="list-style-type: none">i. Provide a demonstrated means of validating the published content of the PAL pollutant that is contained in or created by all materials used in or at the emissions unit;ii. Assume that the emissions unit emits all of the PAL pollutant that is contained in or created by any raw material or fuel used in or at the emissions unit, if it cannot otherwise be accounted for in the process; andiii. Where the vendor of a material or fuel, which is used in or at the emissions unit, publishes a range of pollutant content from such material, the owner or operator must use the highest value of the range to calculate the PAL pollutant emissions unless the Director determines there is site-specific data or a site-specific monitoring program to support another content within the range. [Authority: 40 CFR §52.21(aa)(12)(iii)]b. CEMS - An owner or operator using CEMS to monitor PAL pollutant emissions shall meet the following requirements:<ul style="list-style-type: none">i. CEMS must comply with applicable Performance Specifications found in 40 CFR part 60, appendix B; and

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	<ul style="list-style-type: none"> ii. CEMS must sample, analyze and record data at least every 15 minutes while the emissions unit is operating. [Authority: 40 CFR §52.21(aa)(12)(iv)] c. CPMS or PEMS - An owner or operator using CPMS or PEMS to monitor PAL pollutant emissions shall meet the following requirements: <ul style="list-style-type: none"> i. The CPMS or the PEMS must be based on current site-specific data demonstrating a correlation between the monitored parameter(s) and the PAL pollutant emissions across the range of operation of the emissions unit; and ii. Each CPMS or PEMS must sample, analyze, and record data at least every 15 minutes, or at another less frequent interval approved by the Director, while the emissions unit is operating. [Authority: 40 CFR §52.21(aa)(12)(v)] d. Emissions Factors - An owner or operator using emission factors to monitor PAL pollutant emissions shall meet the following requirements: <ul style="list-style-type: none"> i. All emission factors shall be adjusted, if appropriate, to account for the degree of uncertainty or limitations in the factors' development; ii. The emissions unit shall operate within the designated range of use for the emission factor, if applicable; and iii. If technically practicable, the owner or operator of a significant emissions unit that relies on an emission factor to calculate PAL pollutant emissions shall conduct validation testing to determine a site-specific emission factor within 6 months of PAL permit issuance, unless the Director determines that testing is not required. [Authority: 40 CFR §52.21(aa)(12)(vi)]
A.4	<p><u>Record Keeping Requirements:</u></p> <p><u>General Requirements</u> See Section A.3, Monitoring Requirements.</p> <p>B. <u>Control of Nitrogen Oxides</u></p> <ul style="list-style-type: none"> 1. The PAL shall remain in effect for a period not to exceed 5 years from the PAL effective. [Authority: COMAR 26.11.17.08C(1)]

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	<p>2. The Permittee shall retain a copy of all records necessary to determine compliance with any requirement of COMAR 26.11.17.07 through .09 and of the PAL, including a determination of each emission unit's 12-month rolling total emissions for 5 years from the date of that record. [Authority: COMAR 26.11.17.09A(13)]</p> <p>3. The Permittee shall retain a copy of the following records for the duration of the PAL effective period plus 5 years:</p> <ul style="list-style-type: none"> a. A copy of the PAL permit application and any application for revisions to the PAL; and b. Each annual certification of compliance pursuant to Title V and the data relied on in certifying the compliance. [Authority: COMAR 26.11.17.09A(14)] <p>4. 12-month rolling annual NO_x emissions totals for the entire source will be compiled by summing month NO_x emissions for each EU calculated in this manner. This tally will demonstrate that total NO_x emissions are below the PAL.</p>
A.5	<p><u>Reporting Requirements:</u></p> <p>A. <u>General Requirements</u> See Section A.3, Monitoring Requirements.</p> <p>B. <u>Control of Nitrogen Oxides</u></p> <p>2. The Permittee shall conduct reporting requirements in accordance with COMAR 26.11.17.09B, <u>Reporting Requirements</u>.</p> <ul style="list-style-type: none"> a. "A semiannual report shall be submitted to the Department within 30 days of the end of each reporting period, beginning 6 months after the PAL effective date. This report shall contain the following information: <ul style="list-style-type: none"> i. The identification of the owner and operator and the permit number; ii. Total annual emissions in tons per year based on a 12-month rolling total for each month in the reporting period recorded pursuant to §A(13) of this regulation; iii. All data relied upon including any quality assurance or quality control data in calculating the monthly and annual PAL pollutant emissions;

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	<ul style="list-style-type: none"> iv. A list of any emissions units modified or added to the major stationary source during the preceding 6-month period; v. The number, duration, and cause of any deviation or monitoring malfunction, other than the time associated with zero and span calibration checks, and any corrective actions taken; vi. A notification of a shutdown of any monitoring system, whether the shutdown was permanent or temporary, the reason for the shutdown, the anticipated date that the monitoring system will be fully operational or replaced with another monitoring system, and whether the emissions unit monitored by the system continued to operate and the calculation of the emissions of the pollutant or the number determined by methods included in the permit; and vii. A signed statement by the responsible official certifying the truth, accuracy, and completeness of the information provided in the report. <p>b. The Permittee shall promptly submit reports of any deviation or exceedances of the PAL requirements including periods when no monitoring is available. A report submitted pursuant to COMAR 26.11.03.06C(7)(a)(i) shall satisfy this reporting requirement. The deviation reports shall be submitted within the time limits prescribed in the source's Title V permit. The report shall contain the following information:</p> <ul style="list-style-type: none"> i. The identification of the owner or operator and the permit number; ii. The PAL requirement that experienced the deviation or that was exceeded; iii. The emissions resulting from the deviation or the exceedances; and iv. A signed statement by the responsible official certifying the truth, accuracy, and completeness of the information provided in the report. <p>c. The Permittee shall submit to the reviewing authority the results of any revalidation test or method within 3 months after completion of the test method.</p>

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Appendix A : Plant-Wide Applicability Limitation (PAL) Permit

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SECTION I SOURCE IDENTIFICATION

1. DESCRIPTION OF FACILITY

JHMI Utilities, LLC (formerly referred to as Johns Hopkins Hospital) is a major medical facility that also provides an educational and research setting for undergraduate and graduate students. The air emission units at the facility comprise of a number of fuel burning equipment which include: boilers fired on natural gas or diesel, diesel generators for emergency power generation and peak shaving, and Combined Heat and Power combustion turbines. The primary SIC code for the facility is 8062.

2. FACILITY INVENTORY LIST

Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
EU-1 through EU-4	5-0303 through 5-0306	Four (4) Cleaver Brooks, model AO-24 boilers, each rated at 102.5 million Btu per hour heat input. Boilers are fired on natural gas or distillate oil only.	January 1963
EU-5	5-0734	One (1) Cleaver Brooks, model DLD-94E boiler rated at 94 million Btu per hour heat input. Boiler is fired on natural gas or distillate oil only.	May 1981
EU-13	9-0951	One (1) Caterpillar 3516-D1 diesel generator rated at 2520 bHP. Used for emergency backup power. Located in the Outpatient Center.	1989
EU-14 and EU-15	9-0949 and 9-0950	Two (2) Caterpillar 3516-B diesel generators, each rated at 2520 bHP. Used for emergency backup power and peak shaving. Located in the South Energy Plant.	1999
EU-16 and EU-17	9-0988 and 9-0989	Two (2) Caterpillar 3516-B diesel generators, each rated at 2520 bHP. Used for emergency backup power and peak shaving. Located in the North Energy Plant.	2004

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Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
EU-18 and EU-19	9-1015 and 9-1016	Two (2) Caterpillar 3516-B diesel generators, each rated at 2520 bHP. Used for emergency backup power and peak shaving. Located in the South Energy Plant.	2005
EU-20	5-2073	Combined Heat and Power system (CHP) – One (1) 7.5 MW combustion turbine equipped with a heat recovery steam generator (HRSG) and a 42 million Btu per hour duct burner. Located in the North Energy Plant Building.	2011
EU-21	5-2074	Combined Heat and Power system (CHP) – One (1) 7.5 MW combustion turbine equipped with a heat recovery steam generator (HRSG) and a 42 million Btu per hour duct burner. Located in the South Energy Plant Building.	2011
EU-22	5-2075	One (1) Hurst 50.4 million Btu per hour natural gas and No. 2 fuel oil fired boiler equipped with a low NO _x burner and flue gas recirculation. Located in the South Energy Plant Building.	2011
EU-23	9-1449	One (1) diesel-fired Caterpillar CAT3516C non-emergency generator rated at 2,695 horsepower.	2024

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SECTION II GENERAL CONDITIONS

1. DEFINITIONS

[COMAR 26.11.01.01] and [COMAR 26.11.02.01]

The words or terms in this Part 70 permit shall have the meanings established under COMAR 26.11.01 and .02 unless otherwise stated in this permit.

2. ACRONYMS

ARA	Air and Radiation Administration
BACT	Best Available Control Technology
Btu	British thermal unit
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEM	Continuous Emissions Monitor
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COMAR	Code of Maryland Regulations
EPA	United States Environmental Protection Agency
FR	Federal Register
gr	grains
HAP	Hazardous Air Pollutant
MACT	Maximum Achievable Control Technology
MDE	Maryland Department of the Environment
MVAC	Motor Vehicle Air Conditioner
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NO _x	Nitrogen Oxides
NSPS	New Source Performance Standards
NSR	New Source Review
OTR	Ozone Transport Region
PM	Particulate Matter
PM10	Particulate Matter with Nominal Aerodynamic Diameter of 10 micrometers or less
ppm	parts per million
ppb	parts per billion
PSD	Prevention of Significant Deterioration
PTC	Permit to construct
PTO	Permit to operate (State)
SIC	Standard Industrial Classification
SO ₂	Sulfur Dioxide

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TAP	Toxic Air Pollutant
tpy	tons per year
VE	Visible Emissions
VOC	Volatile Organic Compounds

3. EFFECTIVE DATE

The effective date of the conditions in this Part 70 permit is the date of permit issuance, unless otherwise stated in the permit.

4. PERMIT EXPIRATION

[COMAR 26.11.03.13B(2)]

Upon expiration of this permit, the terms of the permit will automatically continue to remain in effect until a new Part 70 permit is issued for this facility provided that the Permittee has submitted a timely and complete application and has paid applicable fees under COMAR 26.11.02.16.

Otherwise, upon expiration of this permit the right of the Permittee to operate this facility is terminated.

5. PERMIT RENEWAL

[COMAR 26.11.03.02B(3)] and [COMAR 26.11.03.02E]

The Permittee shall submit to the Department a completed application for renewal of this Part 70 permit at least 12 months before the expiration of the permit. Upon submitting a completed application, the Permittee may continue to operate this facility pending final action by the Department on the renewal.

The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall submit such supplementary facts or corrected information no later than 10 days after becoming aware that this occurred. The Permittee shall also provide additional information as necessary to address any requirements that become applicable to the facility after the date a completed application was submitted, but prior to the release of a draft permit. This information shall be submitted to the Department no later than 20 days after a new requirement has been adopted.

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6. CONFIDENTIAL INFORMATION

[COMAR 26.11.02.02G]

In accordance with the provisions of the State Government Article, Sec. 10-611 et seq., Annotated Code of Maryland, all information submitted in an application shall be considered part of the public record and available for inspection and copying, unless the Permittee claims that the information is confidential when it is submitted to the Department. At the time of the request for inspection or copying, the Department will make a determination with regard to the confidentiality of the information. The Permittee, when requesting confidentiality, shall identify the information in a manner specified by the Department and, when requested by the Department, promptly provide specific reasons supporting the claim of confidentiality. Information submitted to the Department without a request that the information be deemed confidential may be made available to the public. Subject to approval of the Department, the Permittee may provide a summary of confidential information that is suitable for public review. The content of this Part 70 permit is not subject to confidential treatment.

7. PERMIT ACTIONS

[COMAR 26.11.03.06E(3)] and [COMAR 26.11.03.20(A)]

This Part 70 permit may be revoked or reopened and revised for cause. The filing of an application by the Permittee for a permit revision or renewal; or a notification of termination, planned changes or anticipated noncompliance by the facility, does not stay a term or condition of this permit.

The Department shall reopen and revise, or revoke the Permittee's Part 70 permit under the following circumstances:

- a. Additional requirements of the Clean Air Act become applicable to this facility and the remaining permit term is 3 years or more;
- b. The Department or the EPA determines that this Part 70 permit contains a material mistake, or is based on false or inaccurate information supplied by or on behalf of the Permittee;
- c. The Department or the EPA determines that this Part 70 permit must be revised or revoked to assure compliance with applicable requirements of the Clean Air Act; or

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- d. Additional requirements become applicable to an affected source under the Federal Acid Rain Program.

8. PERMIT AVAILABILITY

[COMAR 26.11.02.13G]

The Permittee shall maintain this Part 70 permit in the vicinity of the facility for which it was issued, unless it is not practical to do so, and make this permit immediately available to officials of the Department upon request.

9. REOPENING THE PART 70 PERMIT FOR CAUSE BY THE EPA

[COMAR 26.11.03.20B]

The EPA may terminate, modify, or revoke and reissue a permit for cause as prescribed in 40 CFR §70.7(g)

10. TRANSFER OF PERMIT

[COMAR 26.11.02.02E]

The Permittee shall not transfer this Part 70 permit except as provided in COMAR 26.11.03.15.

11. REVISION OF PART 70 PERMITS – GENERAL CONDITIONS

[COMAR 26.11.03.14] and [COMAR 26.11.03.06A(8)]

- a. The Permittee shall submit an application to the Department to revise this Part 70 permit when required under COMAR 26.11.03.15 -.17.
- b. When applying for a revision to a Part 70 permit, the Permittee shall comply with the requirements of COMAR 26.11.03.02 and .03 except that the application for a revision need include only information listed that is related to the proposed change to the source and revision to the permit. This information shall be sufficient to evaluate the proposed change and to determine whether it will comply with all applicable requirements of the Clean Air Act.

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- c. The Permittee may not change any provision of a compliance plan or schedule in a Part 70 permit as an administrative permit amendment or as a minor permit modification unless the change has been approved by the Department in writing.
- d. A permit revision is not required for a change that is provided for in this permit relating to approved economic incentives, marketable permits, emissions trading, and other similar programs.

12. SIGNIFICANT PART 70 OPERATING PERMIT MODIFICATIONS

[COMAR 26.11.03.17]

The Permittee may apply to the Department to make a significant modification to its Part 70 Permit as provided in COMAR 26.11.03.17 and in accordance with the following conditions:

- a. A significant modification is a revision to the federally enforceable provisions in the permit that does not qualify as an administrative permit amendment under COMAR 26.11.03.15 or a minor permit modification as defined under COMAR 26.11.03.16.
- b. This permit does not preclude the Permittee from making changes, consistent with the provisions of COMAR 26.11.03, that would make the permit or particular terms and conditions of the permit irrelevant, such as by shutting down or reducing the level of operation of a source or of an emissions unit within the source. Air pollution control equipment shall not be shut down or its level of operation reduced if doing so would violate any term of this permit.
- c. Significant permit modifications are subject to all requirements of COMAR 26.11.03 as they apply to permit issuance and renewal, including the requirements for applications, public participation, and review by affected states and EPA, except:
 - (1) An application need include only information pertaining to the proposed change to the source and modification of this permit, including a description of the change and modification, and any new applicable requirements of the Clean Air Act that will apply if the change occurs;

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- (2) Public participation, and review by affected states and EPA, is limited to only the application and those federally enforceable terms and conditions of the Part 70 permit that are affected by the significant permit modification.
- d. As provided in COMAR 26.11.03.15B(5), an administrative permit amendment may be used to make a change that would otherwise require a significant permit modification if procedures for enhanced preconstruction review of the change are followed that satisfy the requirements of 40 CFR 70.7(d)(1)(v).
- e. Before making a change that qualifies as a significant permit modification, the Permittee shall obtain all permits-to-construct and approvals required by COMAR 26.11.02.
- f. The Permittee shall not make a significant permit modification that results in a violation of any applicable requirement of the Clean Air Act.
- g. The permit shield in COMAR 26.11.03.23 applies to a final significant permit modification that has been issued by the Department, to the extent applicable under COMAR 26.11.03.23.

13. MINOR PERMIT MODIFICATIONS

[COMAR 26.11.03.16]

The Permittee may apply to the Department to make a minor modification to the federally enforceable provisions of this Part 70 permit as provided in COMAR 26.11.03.16 and in accordance with the following conditions:

- a. A minor permit modification is a Part 70 permit revision that:
 - (1) Does not result in a violation of any applicable requirement of the Clean Air Act;
 - (2) Does not significantly revise existing federally enforceable monitoring, including test methods, reporting, record keeping, or compliance certification requirements except by:
 - (a) Adding new requirements,

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- (b) Eliminating the requirements if they are rendered meaningless because the emissions to which the requirements apply will no longer occur, or
 - (c) Changing from one approved test method for a pollutant and source category to another;
 - (3) Does not require or modify a:
 - (a) Case-by-case determination of a federally enforceable emissions standard,
 - (b) Source specific determination for temporary sources of ambient impacts, or
 - (c) Visibility or increment analysis;
 - (4) Does not seek to establish or modify a federally enforceable permit term or condition for which there is no corresponding underlying applicable requirement of the Clean Air Act, but that the Permittee has assumed to avoid an applicable requirement to which the source would otherwise be subject, including:
 - (a) A federally enforceable emissions standard applied to the source pursuant to COMAR 26.11.02.03 to avoid classification as a Title I modification; and
 - (b) An alternative emissions standard applied to an emissions unit pursuant to regulations promulgated under Section 112(i)(5) of the Clean Air Act
 - (5) Is not a Title I modification; and
 - (6) Is not required under COMAR 26.11.03.17 to be processed as a significant modification to this Part 70 permit.
- b. Application for a Minor Permit Modification

The Permittee shall submit to the Department an application for a minor permit modification that satisfies the requirements of COMAR 26.11.03.03 which includes the following:

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- (1) A description of the proposed change, the emissions resulting from the change, and any new applicable requirements that will apply if the change is made;
 - (2) The proposed minor permit modification;
 - (3) Certification by a responsible official, in accordance with COMAR 26.11.02.02F, that:
 - (a) The proposed change meets the criteria for a minor permit modification, and
 - (b) The Permittee has obtained or applied for all required permits-to-construct required by COMAR 26.11.03.16 with respect to the proposed change;
 - (4) Completed forms for the Department to use to notify the EPA and affected states, as required by COMAR 26.11.03.07-.12.
- c. Permittee's Ability to Make Change
- (1) For changes proposed as minor permit modifications to this permit that will require the applicant to obtain a permit to construct, the permit to construct must be issued prior to the new change.
 - (2) During the period of time after the Permittee applies for a minor modification but before the Department acts in accordance with COMAR 26.11.03.16F(2):
 - (a) The Permittee shall comply with applicable requirements of the Clean Air Act related to the change and the permit terms and conditions described in the application for the minor modification.
 - (b) The Permittee is not required to comply with the terms and conditions in the permit it seeks to modify. If the Permittee fails to comply with the terms and conditions in the application during this time, the terms and conditions of both this permit and the application for modification may be enforced against it.

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- d. The Permittee is subject to enforcement action if it is determined at any time that a change made under COMAR 26.11.03.16 is not within the scope of this regulation.
- e. Minor permit modification procedures may be used for Part 70 permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, but only to the extent that the minor permit modification procedures are explicitly provided for in regulations approved by the EPA as part of the Maryland SIP or in other applicable requirements of the Clean Air Act.

14. ADMINISTRATIVE PART 70 OPERATING PERMIT AMENDMENTS

[COMAR 26.11.03.15]

The Permittee may apply to the department to make an administrative permit amendment as provided in COMAR 26.11.03.15 and in accordance with the following conditions:

- a. An application for an administrative permit amendment shall:
 - (1) Be in writing;
 - (2) Include a statement certified by a responsible official that the proposed amendment meets the criteria in COMAR 26.11.03.15 for an administrative permit amendment, and
 - (3) Identify those provisions of this part 70 permit for which the amendment is requested, including the basis for the request.
- b. An administrative permit amendment:
 - (1) Is a correction of a typographical error;
 - (2) Identifies a change in the name, address, or phone number of a person identified in this permit, or a similar administrative change involving the Permittee or other matters which are not directly related to the control of air pollution;
 - (3) requires more frequent monitoring or reporting by the Permittee;

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- (4) Allows for a change in ownership or operational control of a source for which the Department determines that no other revision to the permit is necessary and is documented as per COMAR 26.11.03.15B(4);
 - (5) Incorporates into this permit the requirements from preconstruction review permits or approvals issued by the Department in accordance with COMAR 26.11.03.15B(5), but only if it satisfies 40 CFR 70.7(d)(1)(v);
 - (6) Incorporates any other type of change, as approved by the EPA, which is similar to those in COMAR 26.11.03.15B(1)—(4);
 - (7) Notwithstanding COMAR 26.11.03.15B(1)—(6), all modifications to acid rain control provisions included in this Part 70 permit are governed by applicable requirements promulgated under Title IV of the Clean Air Act; or
 - (8) Incorporates any change to a term or condition specified as State-only enforceable, if the Permittee has obtained all necessary permits-to-construct and approvals that apply to the change.
- c. The Permittee may make the change addressed in the application for an administrative amendment upon receipt by the Department of the application, if all permits-to-construct or approvals otherwise required by COMAR 26.11.02 prior to making the change have first been obtained from the Department.
- d. The permit shield in COMAR 26.11.03.23 applies to administrative permit amendments made under Section B(5) of COMAR 26.11.03.15 , but only after the Department takes final action to revise the permit.
- e. The Permittee is subject to enforcement action if it is determined at any time that a change made under COMAR 26.11.03.15 is not within the scope of this regulation.

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15. OFF-PERMIT CHANGES TO THIS SOURCE

[COMAR 26.11.03.19]

The Permittee may make off-permit changes to this facility as provided in COMAR 26.11.03.19 and in accordance with the following conditions:

- a. The Permittee may make a change to this permitted facility that is not addressed or prohibited by the federally enforceable conditions of this Part 70 permit without obtaining a Part 70 permit revision if:
 - (1) The Permittee has obtained all permits and approvals required by COMAR 26.11.02 and .03;
 - (2) The change is not subject to any requirements under Title IV of the Clean Air Act;
 - (3) The change is not a Title I modification; and
 - (4) The change does not violate an applicable requirement of the Clean Air Act or a federally enforceable term or condition of the permit.
- b. For a change that qualifies under COMAR 26.11.03.19, the Permittee shall provide contemporaneous written notice to the Department and the EPA, except for a change to an emissions unit or activity that is exempt from the Part 70 permit application, as provided in COMAR 26.11.03.04. This written notice shall describe the change, including the date it was made, any change in emissions, including the pollutants emitted, and any new applicable requirements of the Clean Air Act that apply as a result of the change.
- c. Upon satisfying the requirements of COMAR 26.11.03.19, the Permittee may make the proposed change.
- d. The Permittee shall keep a record describing:
 - (1) Changes made at the facility that result in emissions of a regulated air pollutant subject to an applicable requirement of the Clean Air Act , but not otherwise regulated under this permit; and
 - (2) The emissions resulting from those changes.

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- e. Changes that qualify under COMAR 26.11.03.19 are not subject to the requirements for Part 70 revisions.
- f. The Permittee shall include each off-permit change under COMAR 26.11.03.19 in the application for renewal of the part 70 permit.
- g. The permit shield in COMAR 26.11.03.23 does not apply to off-permit changes made under COMAR 26.11.03.19.
- h. The Permittee is subject to enforcement action if it is determined that an off-permit change made under COMAR 26.11.03.19 is not within the scope of this regulation.

16. ON-PERMIT CHANGES TO SOURCES

[COMAR 26.11.03.18]

The Permittee may make on-permit changes that are allowed under Section 502(b)(10) of the Clean Air Act as provided in COMAR 26.11.03.18 and in accordance with the following conditions:

- a. The Permittee may make a change to this facility without obtaining a revision to this Part 70 permit if:
 - (1) The change is not a Title I modification;
 - (2) The change does not result in emissions in excess of those expressly allowed under the federally enforceable provisions of the Part 70 permit for the permitted facility or for an emissions unit within the facility, whether expressed as a rate of emissions or in terms of total emissions;
 - (3) The Permittee has obtained all permits and approvals required by COMAR 26.11.02 and .03;
 - (4) The change does not violate an applicable requirement of the Clean Air Act;
 - (5) The change does not violate a federally enforceable permit term or condition related to monitoring, including test methods, record keeping, reporting, or compliance certification requirements;

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- (6) The change does not violate a federally enforceable permit term or condition limiting hours of operation, work practices, fuel usage, raw material usage, or production levels if the term or condition has been established to limit emissions allowable under this permit;
 - (7) If applicable, the change does not modify a federally enforceable provision of a compliance plan or schedule in this Part 70 permit unless the Department has approved the change in writing; and
 - (8) This permit does not expressly prohibit the change under COMAR 26.11.03.18.
- b. The Permittee shall notify the Department and the EPA in writing of a proposed on-permit change under COMAR 26.11.03.18 not later than 7 days before the change is made. The written information shall include the following information:
 - (1) A description of the proposed change;
 - (2) The date on which the change is proposed to be made;
 - (3) Any change in emissions resulting from the change, including the pollutants emitted;
 - (4) Any new applicable requirement of the Clean Air Act; and
 - (5) Any permit term or condition that would no longer apply.
- c. The responsible official of this facility shall certify in accordance with COMAR 26.11.02.02F that the proposed change meets the criteria for the use of on-permit changes under COMAR 26.11.03.18.
- d. The Permittee shall attach a copy of each notice required by condition b. above to this Part 70 permit.
- e. On-permit changes that qualify under COMAR 26.11.03.18 are not subject to the requirements for part 70 permit revisions.
- f. Upon satisfying the requirements under COMAR 26.11.03.18, the Permittee may make the proposed change.

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- g. The permit shield in COMAR 26.11.03.23 does not apply to on-permit changes under COMAR 26.11.03.18.
- h. The Permittee is subject to enforcement action if it is determined that an on-permit change made under COMAR 26.11.03.18 is not within the scope of the regulation or violates any requirement of the State air pollution control law.

17. FEE PAYMENT

[COMAR 26.11.02.16A(2) & (5)(b)]

- a. The fee for this Part 70 permit is as prescribed in Regulation .19 of COMAR 26.11.02.
- b. The fee is due on and shall be paid on or before each 12-month anniversary date of the permit.
- c. Failure to pay the annual permit fee constitutes cause for revocation of the permit by the Department.

18. REQUIREMENTS FOR PERMITS-TO-CONSTRUCT AND APPROVALS

[COMAR 26.11.02.09.]

The Permittee may not construct or modify or cause to be constructed or modified any of the following sources without first obtaining, and having in current effect, the specified permits-to-construct and approvals:

- a. New Source Review source, as defined in COMAR 26.11.01.01, approval required, except for generating stations constructed by electric companies;
- b. Prevention of Significant Deterioration source, as defined in COMAR 26.11.01.01, approval required, except for generating stations constructed by electric companies;
- c. New Source Performance Standard source, as defined in COMAR 26.11.01.01, permit to construct required, except for generating stations constructed by electric companies;

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- d. National Emission Standards for Hazardous Air Pollutants source, as defined in COMAR 26.11.01.01, permit to construct required, except for generating stations constructed by electric companies;
- e. A stationary source of lead that discharges one ton per year or more of lead or lead compounds measured as elemental lead, permit to construct required, except for generating stations constructed by electric companies;
- f. All stationary sources of air pollution, including installations and air pollution control equipment, except as listed in COMAR 26.11.02.10, permit to construct required;
- g. In the event of a conflict between the applicability of (a.— e.) above and an exemption listed in COMAR 26.11.02.10, the provision that requires a permit applies.
- h. Approval of a PSD or NSR source by the Department does not relieve the Permittee obtaining an approval from also obtaining all permits-to-construct required by (c.— g.) above.

19. CONSOLIDATION OF PROCEDURES FOR PUBLIC PARTICIPATION

[COMAR 26.11.02.11C] and [COMAR 26.11.03.01K]

The Permittee may request the Department to authorize special procedures for the Permittee to apply simultaneously, to the extent possible, for a permit to construct and a revision to this permit.

These procedures may provide for combined public notices, informational meetings, and public hearings for both permits but shall not adversely affect the rights of a person, including EPA and affected states, to obtain information about the application for a permit, to comment on an application, or to challenge a permit that is issued.

These procedures shall not alter any existing permit procedures or time frames.

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20. PROPERTY RIGHTS

[COMAR 26.11.03.06E(4)]

This Part 70 permit does not convey any property rights of any sort, or any exclusive privileges.

21. SEVERABILITY

[COMAR 26.11.03.06A(5)]

If any portion of this Part 70 permit is challenged, or any term or condition deemed unenforceable, the remainder of the requirements of the permit continues to be valid.

22. INSPECTION AND ENTRY

[COMAR 26.11.03.06G(3)]

The Permittee shall allow employees and authorized representatives of the Department, the EPA, and local environmental health agencies, upon presentation of credentials or other documents as may be required by law, to:

- a. Enter at a reasonable time without delay and without prior notification the Permittee's property where a Part 70 source is located, emissions-related activity is conducted, or records required by this permit are kept;
- b. Have access to and make copies of records required by the permit;
- c. Inspect all emissions units within the facility subject to the permit and all related monitoring systems, air pollution control equipment, and practices or operations regulated or required by the permit; and
- d. Sample or monitor any substances or parameters at or related to the emissions units at the facility for the purpose of determining compliance with the permit.

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23. DUTY TO PROVIDE INFORMATION

[COMAR 26.11.03.06E(5)]

The Permittee shall furnish to the Department, within a reasonable time specified by the Department, information requested in writing by the Department in order to determine whether the Permittee is in compliance with the federally enforceable conditions of this Part 70 permit, or whether cause exists for revising or revoking the permit. Upon request, the Permittee shall also furnish to the Department records required to be kept under the permit.

For information claimed by the Permittee to be confidential and therefore potentially not discloseable to the public, the Department may require the Permittee to provide a copy of the records directly to the EPA along with a claim of confidentiality.

The Permittee shall also furnish to the Department, within a reasonable time specified by the Department, information or records requested in writing by the Department in order to determine if the Permittee is in compliance with the State-only enforceable conditions of this permit.

24. COMPLIANCE REQUIREMENTS

[COMAR 26.11.03.06E(1)] and [COMAR 26.11.03.06A(11)] and [COMAR 26.11.02.05]

The Permittee shall comply with the conditions of this Part 70 permit. Noncompliance with the permit constitutes a violation of the Clean Air Act, and/or the Environment Article Title 2 of the Annotated Code of Maryland and may subject the Permittee to:

- a. Enforcement action,
- b. Permit revocation or revision,
- c. Denial of the renewal of a Part 70 permit, or
- d. Any combination of these actions.

The conditions in this Part 70 permit are enforceable by EPA and citizens under the Clean Air Act except for the State-only enforceable conditions.

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Under Environment Article Section 2-609, Annotated Code of Maryland, the Department may seek immediate injunctive relief against a person who violates this permit in such a manner as to cause a threat to human health or the environment.

25. CREDIBLE EVIDENCE

Nothing in this permit shall be interpreted to preclude the use of credible evidence to demonstrate noncompliance with any term of this permit.

26. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE

[COMAR 26.11.03.06E(2)]

The need to halt or reduce activity in order to comply with the conditions of this permit may not be used as a defense in an enforcement action.

27. CIRCUMVENTION

[COMAR 26.11.01.06]

The Permittee may not install or use any article, machine, equipment or other contrivance, the use of which, without resulting in a reduction in the total weight of emissions, conceals or dilutes emissions which would otherwise constitute a violation of any applicable air pollution control regulation.

28. PERMIT SHIELD

[COMAR 26.11.03.23]

A permit shield as described in COMAR 26.11.03.23 shall apply only to terms and conditions in this Part 70 permit that have been specifically identified as covered by the permit shield. Neither this permit nor COMAR 26.11.03.23 alters the following:

- a. The emergency order provisions in Section 303 of the Clean Air Act, including the authority of EPA under that section;

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- b. The liability of the Permittee for a violation of an applicable requirement of the Clean Air Act before or when this permit is issued or for a violation that continues after issuance;
- c. The requirements of the Acid Rain Program, consistent with Section 408(a) of the Clean Air Act;
- d. The ability of the Department or EPA to obtain information from a source pursuant to Maryland law and Section 114 of the Clean Air Act; or
- e. The authority of the Department to enforce an applicable requirement of the State air pollution control law that is not an applicable requirement of the Clean Air Act.

29. ALTERNATE OPERATING SCENARIOS

[COMAR 26.11.03.06A(9)]

For all alternate operating scenarios approved by the Department and contained within this permit, the Permittee, while changing from one approved scenario to another, shall contemporaneously record in a log maintained at the facility each scenario under which the emissions unit is operating and the date and time the scenario started and ended.

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SECTION III PLANT WIDE CONDITIONS

1. PARTICULATE MATTER FROM CONSTRUCTION AND DEMOLITION

[COMAR 26.11.06.03D]

The Permittee shall not cause or permit any building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.

2. OPEN BURNING

[COMAR 26.11.07]

Except as provided in COMAR 26.11.07.04, the Permittee shall not cause or permit an open fire from June 1 through August 31 of any calendar year. Prior to any open burning, the Permittee shall request and receive approval from the Department.

3. AIR POLLUTION EPISODE

[COMAR 26.11.05.04]

When requested by the Department, the Permittee shall prepare in writing standby emissions reduction plans, consistent with good industrial practice and safe operating procedures, for reducing emissions creating air pollution during periods of Alert, Warning, and Emergency of an air pollution episode.

4. REPORT OF EXCESS EMISSIONS AND DEVIATIONS

[COMAR 26.11.01.07] and [COMAR 26.11.03.06C(7)]

The Permittee shall comply with the following conditions for occurrences of excess emissions and deviations from requirements of this permit, including those in Section VI – State-only Enforceable Conditions:

- a. Report any deviation from permit requirements that could endanger human health or the environment, by orally notifying the Department immediately upon discovery of the deviation;

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- b. Promptly report all occurrences of excess emissions that are expected to last for one hour or longer by orally notifying the Department of the onset and termination of the occurrence;
- c. When requested by the Department the Permittee shall report all deviations from permit conditions, including those attributed to malfunctions as defined in COMAR 26.11.01.07A, within 5 days of the request by submitting a written description of the deviation to the Department. The written report shall include the cause, dates and times of the onset and termination of the deviation, and an account of all actions planned or taken to reduce, eliminate, and prevent recurrence of the deviation;
- d. The Permittee shall submit to the Department semi-annual monitoring reports that confirm that all required monitoring was performed, and that provide accounts of all deviations from permit requirements that occurred during the reporting periods. Reporting periods shall be January 1 through June 30 and July 1 through December 31, and reports shall be submitted within 30 days of the end of each reporting period. Each account of deviation shall include a description of the deviation, the dates and times of onset and termination, identification of the person who observed or discovered the deviation, causes and corrective actions taken, and actions taken to prevent recurrence. If no deviations from permit conditions occurred during a reporting period, the Permittee shall submit a written report that so states.
- e. When requested by the Department, the Permittee shall submit a written report to the Department within 10 days of receiving the request concerning an occurrence of excess emissions. The report shall contain the information required in COMAR 26.11.01.07D(2).

5. ACCIDENTAL RELEASE PROVISIONS

[COMAR 26.11.03.03B(23)] and [40 CFR 68]

Should the Permittee become subject to 40 CFR 68 during the term of this permit, the Permittee shall submit risk management plans by the date specified in 40 CFR 68.150 and shall certify compliance with the requirements of 40 CFR 68 as part of the annual compliance certification as required by 40 CFR 70.

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The Permittee shall initiate a permit revision or reopening according to the procedures of 40 CFR 70.7 to incorporate appropriate permit conditions into the Permittee's Part 70 permit.

6. GENERAL TESTING REQUIREMENTS

[COMAR 26.11.01.04]

The Department may require the Permittee to conduct, or have conducted, testing to determine compliance with this Part 70 permit. The Department, at its option, may witness or conduct these tests. This testing shall be done at a reasonable time, and all information gathered during a testing operation shall be provided to the Department.

7. EMISSIONS TEST METHODS

[COMAR 26.11.01.04]

Compliance with the emissions standards and limitations in this Part 70 permit shall be determined by the test methods designated and described below or other test methods submitted to and approved by the Department.

Authority documents of the test methods approved by the Department include the following:

- a. 40 CFR 60, appendix A
- b. 40 CFR 51, appendix M
- c. The Department's Technical Memorandum 91-01 "Test Methods and Equipment Specifications for Stationary Sources", (January 1991), as amended through Supplement 3, (October 1, 1997)

8. EMISSIONS CERTIFICATION REPORT

**[COMAR 26.11.01.05-1] and [COMAR 26.11.02.19C] and
[COMAR 26.11.02.19D]**

The Permittee shall certify actual annual emissions of regulated pollutants from the facility on a calendar year basis.

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- a. The certification shall be on forms obtained from the Department and submitted to the Department not later than April 1 of the year following the year for which the certification is required;
- b. The individual making the certification shall certify that the information is accurate to the individual's best knowledge. The individual shall be:
 - (1) Familiar with each source for which the certifications forms are submitted, and
 - (2) Responsible for the accuracy of the emissions information;
- c. The Permittee shall maintain records necessary to support the emissions certification including the following information if applicable:
 - (1) The total amount of actual emissions of each regulated pollutant and the total of all regulated pollutants;
 - (2) An explanation of the methods used to quantify the emissions and the operating schedules and production data that were used to determine emissions, including significant assumptions made;
 - (3) Amounts, types and analyses of all fuels used;
 - (4) Emissions data from continuous emissions monitors that are required by this permit, including monitor calibration and malfunction information;
 - (5) Identification, description, and use records of all air pollution control equipment and compliance monitoring equipment including:
 - (a) Significant maintenance performed,
 - (b) Malfunctions and downtime, and
 - (c) Episodes of reduced efficiency of all equipment;
 - (6) Limitations on source operation or any work practice standards that significantly affect emissions; and
 - (7) Other relevant information as required by the Department.

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9. COMPLIANCE CERTIFICATION REPORT

[COMAR 26.11.03.06G(6) and (7)]

The Permittee shall submit to the Department and EPA Region III a report certifying compliance with each term of this Part 70 permit including each applicable standard, emissions limitation, and work practice for the previous calendar year by April 1 of each year.

- a. The compliance certification shall include:
 - (1) The identification of each term or condition of this permit which is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether the compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of each source, currently and over the reporting period; and
 - (5) Any other information required to be reported to the Department that is necessary to determine the compliance status of the Permittee with this permit.
- b. The Permittee shall submit the compliance certification reports to the Department and EPA simultaneously.

10. CERTIFICATION BY RESPONSIBLE OFFICIAL

[COMAR 26.11.02.02F]

All application forms, reports, and compliance certifications submitted pursuant to this permit shall be certified by a responsible official as to truth, accuracy, and completeness. The Permittee shall expeditiously notify the Department of an appointment of a new responsible official.

The certification shall be in the following form:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system

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designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

11. SAMPLING AND EMISSIONS TESTING RECORD KEEPING

[COMAR 26.11.03.06C(5)]

The Permittee shall gather and retain the following information when sampling and testing for compliance demonstrations:

- a. The location as specified in this permit, and the date and time that samples and measurements are taken;
- b. All pertinent operating conditions existing at the time that samples and measurements are taken;
- c. The date that each analysis of a sample or emissions test is performed and the name of the person taking the sample or performing the emissions test;
- d. The identity of the Permittee, individual, or other entity that performed the analysis;
- e. The analytical techniques and methods used; and
- f. The results of each analysis.

12. GENERAL RECORDKEEPING

[COMAR 26.11.03.06C(6)]

The Permittee shall retain records of all monitoring data and information that support the compliance certification for a period of five (5) years from the date that the monitoring, sample measurement, application, report or emissions test was completed or submitted to the Department.

These records and support information shall include:

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- a. All calibration and maintenance records;
- b. All original data collected from continuous monitoring instrumentation;
- c. Records which support the annual emissions certification; and
- d. Copies of all reports required by this permit.

13. GENERAL CONFORMITY

[COMAR 26.11.26.09]

The Permittee shall comply with the general conformity requirements of 40 CFR 93, Subpart B and COMAR 26.11.26.09.

14. ASBESTOS PROVISIONS

[40 CFR 61, Subpart M]

The Permittee shall comply with 40 CFR 61, Subpart M when conducting any renovation or demolition activities at the facility.

15. OZONE DEPLETING REGULATIONS

[40 CFR 82, Subpart F]

The Permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for MVACs in subpart B:

- a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the prohibitions and required practices pursuant to 40 CFR 82.154 and 82.156.
- b. Equipment used during the maintenance, service, repair or disposal of appliances shall comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

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- c. Persons performing maintenance, service, repairs or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
- d. Persons disposing of small appliances, MVACS, and MVAC-like appliances as defined in 40 CFR 82.152, shall comply with record keeping requirements pursuant to 40 CFR 82.155.
- e. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
- f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

16. ACID RAIN PERMIT

Not applicable

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SECTION IV PLANT SPECIFIC CONDITIONS

This section provides tables that include the emissions standards, emissions limitations, and work practices applicable to each emissions unit located at this facility. The Permittee shall comply with all applicable emissions standards, emissions limitations and work practices included herein.

The tables also include testing, monitoring, record keeping and reporting requirements specific to each emissions unit. In addition to the requirements included here in **Section IV**, the Permittee is also subject to the general testing, monitoring, record keeping and reporting requirements included in **Section III – Plant Wide Conditions** of this permit.

Unless otherwise provided in the specific requirements for an emissions unit, the Permittee shall maintain at the facility for at least five (5) years, and shall make available to the Department upon request, all records that the Permittee is required under this section to establish. [Authority: COMAR 26.11.03.06C(5)(g)]

Table IV – 1	
1.0	<u>Emissions Unit Number(s): EU-1 – EU-4 Boilers</u> EU-1 through EU-4 (MDE Registration Nos. 510-0001-5-0303, 5-0304, 5-0305, and 5-0306) consists of four (4) Cleaver Brooks, model AO-24, boilers, each rated at 102.5 million Btu per hour heat input. Boilers are fired on natural gas or distillate oil only.
1.1	<u>Applicable Standards/Limits:</u> A. <u>Control of Visible Emissions</u> 1. COMAR 26.11.09.05A(2), <u>Fuel Burning Equipment</u> . “Areas III and IV. In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.” 2. COMAR 26.11.09.05A(3), <u>Exceptions</u> . “Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if:

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a. The visible emissions are not greater than 40 percent opacity; and

b. The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period.

B. Control of Sulfur Oxides
COMAR 26.11.09.07A, Sulfur Content Limitations for Fuel. “A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: (2) In Areas III and IV: (b) Distillate fuel oils, 0.3 percent.”

C. Control of Nitrogen Oxides

1. COMAR 26.11.09.08B(1)(a), Emission Standards and Requirements. “A person who owns or operates an installation that causes NO_x emissions subject to this regulation is in compliance with this regulation if the person establishes compliance with the emissions standards in §B(1)(c) of this regulation.”

2. COMAR 26.11.09.08B(1)(c), Emission Standards in Pounds of NO_x per Million Btu of heat input.

Fuel	Tangential- Fired	Wall-Fired
Gas only	0.20	0.20
Gas/Oil	0.25	0.25
Coal (dry bottom)	0.38	0.38
Coal (wet bottom)	1.00	1.00

Note: The four boilers burn natural gas and fuel oil and are wall-fired. The NO_x emissions limit for the boilers is 0.25 pounds of NO_x per million Btu of heat input.

3. COMAR 26.11.09.08B(2), Demonstration of Compliance. “(a) A person subject to a NO_x emission standard in this regulation shall demonstrate compliance as follows: (ii) For all other installations, compliance with the NO_x emissions standards in this regulation shall be established by stack tests using Method 07 of the test methods Authority in COMAR 26.11.01.04C(1) or other test methods approved by the Department and the EPA.”

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	<p>4. COMAR 26.11.09.08B(2)(e), <u>Demonstration of Compliance</u>. “For a person who establishes compliance using a stack test, compliance shall be determined as averages of the stack test duration.”</p> <p>5. COMAR 26.11.09.08B(5), <u>Operator Training</u>.</p> <p style="padding-left: 40px;">a. “For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.</p> <p style="padding-left: 40px;">b. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.”</p> <p>D. <u>Operational Limit</u> The Permittee shall burn only natural gas or No. 2 fuel oil unless the Permittee applies for and receives an approval or permit from the Department to burn an alternative fuel. [Authority: COMAR 26.11.02.09A]</p> <p>E. <u>Control of Hazardous Air Pollutants</u></p> <p>1. The Permittee shall conduct a tune-up of each boiler biennially, while burning the type of fuel that provided the majority of the heat input to the boiler over the 12 months prior to the tune up, as specified:</p> <p style="padding-left: 40px;">a. Inspect the burner and clean or replace any components of the burner as necessary. The Permittee may delay the burner inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection.</p> <p style="padding-left: 40px;">b. 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.</p> <p style="padding-left: 40px;">c. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly. The Permittee may delay the inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection.</p> <p style="padding-left: 40px;">d. Optimize total emissions of CO. This optimization should be consistent with the manufacturer’s specifications, if available, and with any nitrogen oxide requirement to which the unit is subject.</p>

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	<p>e. 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 bases, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.</p> <p>f. Maintain on-site and submit, if requested by the Administrator, a report containing the following information:</p> <p>i. 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.</p> <p>ii. A description of any corrective actions taken as a part of the tune-up of the boiler.</p> <p>iii. The type and amount of fuel used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.</p> <p>g. 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.</p> <p>[Authority: 40 CFR §63.11196(a)(1), §63.11201(b), 40 CFR Part 63, Subpart JJJJJJ, Table 2, Items 4 and 5, 40 CFR §63.11223(a) and (b)(1) through (7), and 40 CFR §63.11210(c)]</p> <p>2. The standards apply at all times that the affected boiler is operating, except during periods of startup and shutdown as defined in §63.11237, during which time the Permittee must comply only with 40 CFR Part 63, Subpart JJJJJJ, Table 2. [Authority: 40 CFR 2163.11210(d)]</p> <p>3. The Permittee shall operate and maintain the boilers, 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 the Permittee to make any further efforts to reduce emission if levels required beyond this standard have been achieved. [Authority: 40 CFR §63.11205(a)]</p> <p>4. By March 21, 2014, The Permittee shall conduct a one-time energy assessment performed by a qualified energy assessor. The energy assessment must include the following:</p>

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	<ul style="list-style-type: none"> a. A visual inspection of the boiler system; b. An evaluation of operating characteristics of the affected boiler systems, specifications of energy use systems, operating and maintenance procedures, and unusual operating constraints; c. An inventory of major energy use systems consuming energy from the affected boilers and which are under control of the Permittee; d. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage; e. A list of major energy conservation measures that are within the facility's control; f. A list of the energy savings potential of the energy conservation measures identified; and g. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments. <p>[Authority: 40 CFR §63.11196(a)(3), 40 CFR Part 63, Subpart JJJJJJ, Table 2, Item 16, and 40 CFR §63.11210(c)]</p> <p><i>Note: The previous requirement was completed by the Permittee on July 10, 2013.</i></p>
1.2	<p><u>Testing Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> See Section 2.3, Monitoring Requirements.</p> <p>B. <u>Control of Sulfur Oxides</u> See Section 2.3, Monitoring Requirements.</p> <p>C. <u>Control of Nitrogen Oxides</u> Within the term of the issuance of this permit, the Permittee shall perform a stack test on the four (4) Cleaver-Brooks boilers both on oil and natural gas. The Permittee shall submit a test protocol to the Department for approval at least 30 days before the scheduled test date. The Permittee shall submit all test results and supporting data from the stack tests to the Department within 45 days after the stack tests are conducted. [Authority: COMAR 26.11.03.06C]</p> <p>D. <u>Operational Limit</u> See Section 1.4, Record Keeping Requirements.</p>

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	<p>E. <u>Control of Hazardous Air Pollutants</u></p> <ol style="list-style-type: none"> 1. The Permittee shall conduct a tune-up of each boiler biennially as described in 40 CFR §63.11223(a) and (b) 2. The Permittee shall conduct a one-time energy assessment as described in 40 CFR Part 63, Subpart JJJJJJ, Table 2, Item 16.
1.3	<p><u>Monitoring Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u></p> <ol style="list-style-type: none"> 1. The Permittee shall: <ol style="list-style-type: none"> a. Properly operate and maintain the boilers in a manner to prevent visible emissions; and b. Verify no visible emissions when burning No. 2 fuel oil. The Permittee shall perform a visual observation for a 6-minute period once for every 168 hours that the boiler burns oil or at a minimum of once per year. 2. The Permittee shall perform the following if emissions are visible: <ol style="list-style-type: none"> a. Inspect combustion control system and boiler operations; b. Perform all necessary adjustments and/or repairs to the boiler within 48 hours, so that visible emissions are eliminated; c. Document in writing the results of the inspections, adjustments, and/or repairs to the boilers; and d. After 48 hours, if the required adjustments and/or repairs had not eliminated the visible emissions, perform Method 9 observations once daily for 18 minutes until corrective actions have eliminated the visible emissions. [Authority: COMAR 26.11.03.06C] <p>B. <u>Control of Sulfur Oxides</u> The Permittee shall obtain a certification from the fuel supplier indicating that the oil complies with the limitation on the sulfur content of the fuel oil. [Authority: COMAR 26.11.03.06C]</p> <p>C. <u>Control of Nitrogen Oxides</u> The Permittee shall measure the NO_x content of the flue gases from each boiler for a 5-minute period every 168 hours of operation. The Permittee shall use an analyzer that is properly calibrated and</p>

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	<p>maintained in accordance with the vendor specification. The analyzer shall be the type approved by the Department. [Authority: COMAR 26.11.03.06C]</p> <p>D. <u>Operational Limit</u> See Section 1.4, Record Keeping Requirements.</p> <p>E. <u>Control of Hazardous Air Pollutants</u> See Section 1.4, Record Keeping Requirements.</p>
1.4	<p><u>Record Keeping Requirements:</u></p> <p><u>Note:</u> All records must be maintained for a period of at least 5 years and shall be made available to the Department upon request. [Authority: COMAR 26.11.03.06C]</p> <p>A. <u>Control of Visible Emissions</u> The Permittee shall:</p> <ol style="list-style-type: none"> 1. Maintain an operation manual and preventative maintenance plan on site; 2. Maintain a record of the maintenance performed that relates to combustion performance; 3. Maintain a log of visible emissions observations performed; and 4. Maintain a record of the hours that No. 2 fuel oil is burned. <p>[Authority: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Sulfur Oxides</u> The Permittee shall maintain records of fuel supplier's certification. [Authority: COMAR 26.11.03.06C]</p> <p>C. <u>Control of Nitrogen Oxides</u></p> <ol style="list-style-type: none"> 1. The Permittee shall maintain annual fuel use records on site. [Authority: COMAR 26.11.09.05K(3)] 2. The Permittee shall maintain the results of NO_x stack tests and the NO_x analyzer readings. [Authority: COMAR 26.11.03.06C] 3. The Permittee shall maintain a record of training program attendance for each operator at the site. [Authority: COMAR 26.11.09.08E(5)] <p>D. <u>Operational Limit</u></p>

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	<p>The Permittee shall maintain records of the quantity and type of fuel burned. [Authority: COMAR 26.11.02.19C(1)(c)]</p> <p>E. <u>Control of Hazardous Air Pollutants</u></p> <ol style="list-style-type: none"> 1. The Permittee shall maintain on site for five (5) years and submit to the Department upon request, a report containing the following information: <ol style="list-style-type: none"> 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 part of the tune-up of the boiler. c. The type and amount of fuel used over the 12 months prior to tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit. [Authority: 40 CFR §63.611223(b)(6)] 2. The Permittee must maintain the following records 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. <ol style="list-style-type: none"> a. A copy of each notification and report that you submitted to comply with this subpart and all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted. b. Records to document conformance with the work practices, emission reduction measures, and management practices required by § 63.11214 and § 63.11223 as specified in paragraphs (c)(2)(i) through (vi) of this section. <ol style="list-style-type: none"> i. 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. ii. A copy of the energy assessment report for each boiler. c. Records of the occurrence and duration of each malfunction of the boiler, or of the associated air pollution control and monitoring equipment. d. Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to

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	minimize emissions in § 63.11205(a), including corrective actions to restore the malfunctioning boiler, air pollution control, or monitoring equipment to its normal or usual manner of operation. [Reference: 40 CFR §63.11225(c)(1), (2)(i) and (iii), (4), (5), and 40 CFR §63.6625(d)]
1.5	<p><u>Reporting Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, “Report of Excess Emissions and Deviations.”</p> <p>B. <u>Control of Sulfur Oxides</u> The Permittee shall report fuel supplier certification to the Department upon request. [Authority: COMAR 26.11.09.07C]</p> <p>C. <u>Control of Nitrogen Oxides</u> The Permittee shall report the results of NO_x testing on the four (4) Cleaver-Brooks boilers along with supporting data from the stack tests within 45 days of the completion of the stack test. [Authority: COMAR 26.11.09.08K(2) and COMAR 26.11.03.06C]</p> <p>D. <u>Operational Limit</u> The Permittee shall submit records of the quantity and type of fuels burned with the annual emissions certification report. See permit condition 8 of Section III.</p> <p>E. <u>Control of Hazardous Air Pollutants</u></p> <ol style="list-style-type: none"> 1. The Permittee must submit all of the notifications in 63.9(b) through (d), and (h) by the dates specified in those sections except as specified below in Conditions (2) and (3). [Authority: 40 CFR §63.11225(a)(1)] 2. The Permittee must submit a signed statement in the Notification of Compliance Status Report that indicates that the Permittee conducted a tune-up of the boiler. [Authority: 40 CFR §63.11214(b)] 3. The Permittee must prepare a biennial compliance report and submit it to the delegated authority upon request. The compliance report must include the following: <ol style="list-style-type: none"> a. Company name and address.

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	<p>b. 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:</p> <p>i. “This facility complies with the requirements in § 63.11223 to conduct a biennial or 5-year tune-up, as applicable, of each boiler.”</p> <p>ii. 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.” [Authority: 40 CFR §63.11225(b)(1), and (2)(i) and (ii)]</p> <p>4. By January 20, 2014, the Permittee must submit an Initial Notification. [Authority: 40 CFR §63.11225(a)(2)]</p> <p>5. The Permittee must submit a signed certification in the Notification of Compliance Status Report that an energy assessment of the boiler and its energy use systems was completed according to 40 CFR Part 63, Subpart JJJJJJ, Table 2 and is an accurate depiction of the Permittee’s facility. [Authority: 40 CFR §63.11214(c)]</p>

“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”

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2.0	<p><u>Emissions Unit Number(s):</u> EU-5 Boiler</p> <p>EU-5 (MDE Registration No. 510-0001-5-0734) consists of one (1) Cleaver Brooks, model DLD-94E, boiler rated at 94 million Btu per hour heat input. Boiler is fired on natural gas and distillate oil only.</p>
2.1	<p><u>Applicable Standards/Limits:</u></p> <p>A. <u>Control of Visible Emissions</u></p>

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	<ol style="list-style-type: none"> 1. COMAR 26.11.09.05A(2), <u>Fuel Burning Equipment</u>. “Areas III and IV. In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.” 2. COMAR 26.11.09.05A(3), <u>Exceptions</u>. “Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if: <ol style="list-style-type: none"> a. The visible emissions are not greater than 40 percent opacity; and b. The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period. <p>B. <u>Control of Sulfur Oxides</u></p> <ol style="list-style-type: none"> 1. COMAR 26.11.09.07A, <u>Sulfur Content Limitations for Fuel</u>. “A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: (2) In Areas III and IV: (b) Distillate fuel oils, 0.3 percent.” <p>C. <u>Control of Nitrogen Oxides</u></p> <ol style="list-style-type: none"> 1. COMAR 26.11.09.08E, <u>Requirements for Fuel-Burning Equipment with a Rated Heat Input Capacity of 100 Million Btu Per Hour or Less</u>. <ol style="list-style-type: none"> a. “Submit to the Department an identification of each affected installation, the rated heat input capacity of each installation, and the type of fuel burned in each; b. Perform a combustion analysis for each installation at least once each year and optimize combustion based on the analysis; c. Maintain the results of the combustion analysis at the site for at least 2 years and make this data available to the Department and the EPA upon request; d. Once every 3 years, require each operator of the installation to attend operator training programs on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and

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	<p>e. Prepare and maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request.”</p> <p>2. COMAR 26.11.09.08B(5), <u>Operator Training</u>.</p> <p>a. “For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.</p> <p>b. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.”</p> <p>D. <u>Operational Limit</u> The Permittee shall burn only natural gas or No. 2 fuel oil unless the Permittee applies for and receives an approval or permit from the Department to burn an alternative fuel. [Authority: COMAR 26.11.02.09A]</p> <p>E. <u>Control of Hazardous Air Pollutants</u></p> <p>1. By March 21, 2014, the Permittee shall conduct a tune-up of each boiler biennially, while burning the type of fuel that provided the majority of the heat input to the boiler over the 12 months prior to the tune up, as specified:</p> <p>a. Inspect the burner and clean or replace any components of the burner as necessary. The Permittee may delay the burner inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection.</p> <p>b. 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.</p> <p>c. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly. The Permittee may delay the inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection.</p> <p>d. Optimize total emissions of CO. This optimization should be consistent with the manufacturer’s specifications, if available, and with any nitrogen oxide requirement to which the unit is subject.</p>

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	<p>e. 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 bases, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.</p> <p>f. Maintain on-site and submit, if requested by the Administrator, a report containing the following information:</p> <p>i. 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.</p> <p>ii. A description of any corrective actions taken as a part of the tune-up of the boiler.</p> <p>iii. The type and amount of fuel used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.</p> <p>g. 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.</p> <p>[Authority: 40 CFR §63.11196(a)(1), §63.11201(b), 40 CFR Part 63, Subpart JJJJJJ, Table 2, Items 4 and 5, 40 CFR §63.11223(a) and (b)(1) through (7), and 40 CFR §63.11210(c)]</p> <p>2. The standards apply at all times the affected boiler is operating, except during periods of startup and shutdown as defined in §63.11237, during which time the Permittee must comply only with 40 CFR Part 63, Subpart JJJJJJ, Table 2. [Authority: 40 CFR 63.11210(d)]</p> <p>3. The Permittee shall operate and maintain the boilers, 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 the Permittee to make any further efforts to reduce emission if levels required beyond this standard have been achieved. [Authority: 40 CFR §63.11205(a)]</p> <p>4. By March 21, 2014, The Permittee shall conduct a one-time energy assessment performed by a qualified energy assessor. The energy assessment must include the following:</p>

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	<ul style="list-style-type: none"> a. A visual inspection of the boiler system; b. An evaluation of operating characteristics of the affected boiler systems, specifications of energy use systems, operating and maintenance procedures, and unusual operating constraints; c. An inventory of major energy use systems consuming energy from the affected boilers and which are under control of the Permittee; d. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage; e. A list of major energy conservation measures that are within the facility's control; f. A list of the energy savings potential of the energy conservation measures identified; and g. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments. <p>[Authority: 40 CFR §63.11196(a)(3), 40 CFR Part 63, Subpart JJJJJJ, Table 2, Item 16, and 40 CFR §63.11210(c)]</p> <p><i>Note: The previous requirement was completed by the Permittee on July 10, 2013.</i></p>
2.2	<p><u>Testing Requirements:</u></p> <ul style="list-style-type: none"> A. <u>Control of Visible Emissions</u> See Section 2.3, Monitoring Requirements. B. <u>Control of Sulfur Oxides</u> See Section 2.3, Monitoring Requirements. C. <u>Control of Nitrogen Oxides</u> The Permittee shall perform a combustion analysis on the boiler at least once a year. [Authority: COMAR 26.11.09.08E(2)] D. <u>Operational Limit</u> See Section 2.4, Record Keeping Requirements. E. <u>Control of Hazardous Air Pollutants</u> <ul style="list-style-type: none"> 1. The Permittee shall conduct a tune-up of each boiler biennially as described in 40 CFR §63.11223(a) and (b)

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	<p>2. The Permittee shall conduct a one-time energy assessment as described in 40 CFR Part 63, Subpart JJJJJJ, Table 2, Item 16.</p>
2.3	<p><u>Monitoring Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u></p> <p>1. The Permittee shall:</p> <ul style="list-style-type: none"> a. Properly operate and maintain the boilers in a manner to prevent visible emissions; and b. Verify no visible emissions when burning No. 2 fuel oil. The Permittee shall perform a visual observation for a 6-minute period once for every 168 hours that the boiler burns oil or at a minimum of once per year. <p>2. The Permittee shall perform the following if emissions are visible:</p> <ul style="list-style-type: none"> a. Inspect combustion control system and boiler operations; b. Perform all necessary adjustments and/or repairs to the boiler within 48 hours, so that visible emissions are eliminated; c. Document in writing the results of the inspections, adjustments, and/or repairs to the boilers; and d. After 48 hours, if the required adjustments and/or repairs had not eliminated the visible emissions, perform Method 9 observations once daily for 18 minutes until corrective actions have eliminated the visible emissions. [Authority: COMAR 26.11.03.06C] <p>B. <u>Control of Sulfur Oxides</u> The Permittee shall obtain a certification from the fuel supplier indicating that the oil complies with the limitation on the sulfur content of the fuel oil. [Authority: COMAR 26.11.03.06C]</p> <p>C. <u>Control of Nitrogen Oxides</u> The Permittee shall optimize combustion based on the annual combustion analysis. [Authority: COMAR 26.11.09.08E(2)]</p> <p>D. <u>Operational Limit</u> See Section 2.4, Record Keeping Requirements.</p> <p>E. <u>Control of Hazardous Air Pollutants</u> See Section 2.4, Record Keeping Requirements.</p>

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2.4	<p><u>Record Keeping Requirements:</u></p> <p><u>Note:</u> All records must be maintained for a period of at least 5 years and shall be made available to the Department upon request. [Authority: COMAR 26.11.03.06C]</p> <p>A. <u>Control of Visible Emissions</u> The Permittee shall:</p> <ol style="list-style-type: none">1. Maintain an operation manual and preventative maintenance plan on site;2. Maintain a record of the maintenance performed that relates to combustion performance;3. Maintain a log of visible emissions observations performed; and4. Maintain a record of the hours that No. 2 fuel oil is burned. [Authority: COMAR 26.11.03.06C] <p>B. <u>Control of Sulfur Oxides</u> The Permittee shall maintain records of fuel supplier's certification. [Authority: COMAR 26.11.03.06C]</p> <p>C. <u>Control of Nitrogen Oxides</u></p> <ol style="list-style-type: none">1. The Permittee shall maintain annual fuel use records on site. [Authority: COMAR 26.11.09.05K(3)]2. The Permittee shall maintain records of the results of the annual combustion analysis. [Authority: COMAR 26.11.09.08E(5)]3. The Permittee shall maintain a record of training program attendance for each operator at the site. [Authority: COMAR 26.11.09.08E(5)] <p>E. <u>Operational Limit</u> The Permittee shall maintain records of the quantity and types of fuel burned. [Authority: COMAR 26.11.02.19C(1)(c)]</p>

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E. Control of Hazardous Air Pollutants

1. The Permittee shall maintain on site for five (5) years and submit to the Department upon request, a report containing the following information:
 - 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 part of the tune-up of the boiler.
 - c. The type and amount of fuel used over the 12 months prior to tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit. **[Authority: 40 CFR §63.611223(b)(6)]**
2. The Permittee must maintain the following records 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.
 - a. A copy of each notification and report that you submitted to comply with this subpart and all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted.
 - b. Records to document conformance with the work practices, emission reduction measures, and management practices required by § 63.11214 and § 63.11223 as specified in paragraphs (c)(2)(i) through (vi) of this section.
 - i. 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.
 - ii. A copy of the energy assessment report for each boiler.
 - c. Records of the occurrence and duration of each malfunction of the boiler, or of the associated air pollution control and monitoring equipment.
 - d. Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in § 63.11205(a), including corrective actions to

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	restore the malfunctioning boiler, air pollution control, or monitoring equipment to its normal or usual manner of operation. [Reference: 40 CFR §63.11225(c)(1), (2)(i) and (iii), (4), (5), and 40 CFR §63.6625(d)]
2.5	<p><u>Reporting Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, “Report of Excess Emissions and Deviations.”</p> <p>B. <u>Control of Sulfur Oxides</u> The Permittee shall report fuel supplier’s certification to the Department upon request. [Authority: COMAR 26.11.09.07C]</p> <p>C. <u>Control of Nitrogen Oxides</u> The Permittee shall submit:</p> <ol style="list-style-type: none"> 1. The results of the combustion analysis to the Department and the EPA upon request. [Authority: COMAR 26.11.09.08E(3)] 2. A record of training program attendance for each operator to the Department upon request. [Authority: COMAR 26.11.09.08E(5)] <p>D. <u>Operational Limit</u> The Permittee shall submit records of the quantity and type of fuels burned with the annual emissions certification report. See permit condition 8 of Section III.</p> <p>E. <u>Control of Hazardous Air Pollutants</u></p> <ol style="list-style-type: none"> 1. The Permittee must submit all of the notifications in 63.9(b) through (d), and (h) by the dates specified in those sections except as specified below in Conditions (2) and (3). [Authority: 40 CFR §63.11225(a)(1)] 2. The Permittee must submit a signed statement in the Notification of Compliance Status Report that indicates that the Permittee conducted a tune-up of the boiler. [Authority: 40 CFR §63.11214(b)]

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	<p>3. The Permittee must prepare a biennial compliance report and submit it to the delegated authority upon request. The compliance report must include the following:</p> <ul style="list-style-type: none"> a. Company name and address. b. 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: <ul style="list-style-type: none"> i. “This facility complies with the requirements in § 63.11223 to conduct a biennial or 5-year tune-up, as applicable, of each boiler.” ii. 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.” [Authority: 40 CFR §63.11225(b)(1), and (2)(i) and (ii)] <p>4. By January 20, 2014, the Permittee must submit an Initial Notification. [Authority: 40 CFR §63.11225(a)(2)]</p> <p>5. The Permittee must submit a signed certification in the Notification of Compliance Status Report that an energy assessment of the boiler and its energy use systems was completed according to 40 CFR Part 63, Subpart JJJJJJ, Table 2 and is an accurate depiction of the Permittee’s facility. [Authority: 40 CFR §63.11214(c)]</p>

“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”

Table IV – 3	
3.0	<p><u>Emissions Unit Number(s):</u> EU-22 Boiler</p> <p>EU-22 (MDE Registration No. 510-0001-5-2075) consists of one (1) boiler rated at 50.4 million Btu per hour heat input firing natural gas and No. 2 fuel oil only and equipped with a low NO_x burner and flue gas recirculation.</p>

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Table IV – 3	
3.1	<p><u>Applicable Standards/Limits:</u></p> <p>A. <u>Control of Visible Emissions</u></p> <ol style="list-style-type: none"> 1. COMAR 26.11.09.05A(2), <u>Fuel Burning Equipment</u>. “In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.” 2. COMAR 26.11.09.05A(3), <u>Exceptions</u>. “Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if: <ol style="list-style-type: none"> a. The visible emissions are not greater than 40 percent opacity; and b. The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period.” 3. The Permittee shall not 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. The opacity standards apply at all times except during periods of startup, shutdown, or malfunction. [Authority: 40 CFR §60.43c(c) and (d)] 4. The Permittee that is subject to an opacity standard in § 60.43c(c) is not required to operate a continuous opacity monitoring system (COMS) if the Permittee burns only gaseous fuels and/or fuel oils that contain no greater than 0.5 weight percent sulfur, and the Permittee operates the boilers according to the site-specific monitoring plan approved by the Department. [Authority: 40 CFR 60.47c(f)(3)] <p>B. <u>Control of Sulfur Oxides</u></p> <ol style="list-style-type: none"> 1. COMAR 26.11.09.07A, <u>Sulfur Content Limitations for Fuel</u>. “A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: (2) In Areas III and IV: (b) Distillate fuel oils, 0.3 percent.”

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	<p>2. On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, the Permittee shall not cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of 215 ng/J (0.50 lb/MMBtu) heat input from oil; or, as an alternative, 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. The percent reduction requirements are not applicable to affected facilities under this paragraph. [Authority: 40 CFR §60.42c(d)]</p> <p>3. The Permittee may combust oil that contains no more than 0.5 weight percent sulfur or a mixture of 0.50 weight percent sulfur with other fuel not subject to a PM standard under § 60.43c and not using a post-combustion technology (except a wet scrubber) to reduce PM or SO₂ emissions is not subject to the PM limit in this section. [Authority: 40 CFR §60.42c(e)(4)]</p> <p>4. The Permittee may not use a post-combustion technology (except a wet scrubber) to reduce PM or SO₂ emissions. [Authority: 40 CFR §60.42c(e)(4)]</p> <p>5. The Permittee shall demonstrate compliance with the SO₂ standards based on fuel supplier certification, the performance test shall consist of the certification from the fuel supplier, as described in § 60.48c(f), as applicable. [Authority: 40 CFR §60.44c(h)]</p> <p>C. <u>Control of Nitrogen Oxides</u></p> <p>1. COMAR 26.11.09.08B(5), <u>Operator Training</u>.</p> <p style="padding-left: 40px;">a. For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.</p> <p style="padding-left: 40px;">b. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.”</p> <p>2. COMAR 26.11.09.08E, <u>Requirements for Fuel-Burning Equipment with a Rated Heat Input Capacity of 100 Million Btu Per Hour or Less</u>. “A person who owns or operates fuel-burning</p>
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	<p>equipment with a rated heat input capacity of 100 Million Btu per hour or less shall:</p> <ol style="list-style-type: none"> a. Submit to the Department an identification of each affected installation, the rated heat input capacity of each installation, and the type of fuel burned in each; b. Perform a combustion analysis for each installation at least once each year and optimize combustion based on the analysis; c. Maintain the results of the combustion analysis at the site for at least 2 years and make this data available to the Department and the EPA upon request; d. Once every 3 years, require each operator of the installation to attend operator training programs on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and e. Prepare and maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request." <p>3. COMAR 26.11.09.08K(3), <u>Record Keeping Requirements</u>. "A person subject to this regulation shall maintain annual fuel use records on site for not less than 3 years, and make these records available to the Department upon request."</p> <p>D. <u>Control of Hazardous Air Pollutants</u></p> <ol style="list-style-type: none"> 1. The Permittee shall conduct a tune-up of each boiler biennially, while burning the type of fuel that provided the majority of the heat input to the boiler over the 12 months prior to the tune up, as specified: <ol style="list-style-type: none"> a. Inspect the burner and clean or replace any components of the burner as necessary. The Permittee may delay the burner inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection. b. 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. c. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly. The Permittee may delay the inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection.

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	<p>d. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any nitrogen oxide requirement to which the unit is subject.</p> <p>e. 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 bases, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.</p> <p>f. Maintain on-site and submit, if requested by the Administrator, a report containing the following information:</p> <ul style="list-style-type: none"> i. 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. ii. A description of any corrective actions taken as a part of the tune-up of the boiler. iii. The type and amount of fuel used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit. <p>g. 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.</p> <p>[Authority: 40 CFR §63.11196(a)(1), §63.11201(b), 40 CFR Part 63, Subpart JJJJJJ, Table 2, Items 4 and 5, 40 CFR §63.11223(a) and (b)(1) through (7), and 40 CFR §63.11210(c)]</p> <p>2. The standards apply at all times the affected boiler is operating, except during periods of startup and shutdown as defined in §63.11237, during which time the Permittee must comply only with 40 CFR Part 63, Subpart JJJJJJ, Table 2. [Authority: 40 CFR §63.11210(d)]</p> <p>3. The Permittee shall operate and maintain the boilers, 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 the Permittee to make any further efforts to reduce emission if levels required beyond this standard have been achieved. [Authority: 40 CFR §63.11205(a)]</p>

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	<p>4. The Permittee shall combust only oil that contains no more than 0.50 weight percent sulfur. [Authority: 40 CFR §63.11210(e)]</p> <p><i>Note: Compliance with this requirement is met by meeting COMAR 26.11.09.07A(2)(b), which limits the sulfur in fuel to 0.3 weight percent.</i></p> <p>5. The Permittee is not required to complete an initial performance tune-up, but must complete the applicable biennial tune-up as specified in § 63.11223 no later than 25 months after the initial startup of the affected source. [Authority: 40 CFR §63.11210(f)]</p> <p>6. The Permittee must minimize the boiler’s startup and shutdown periods and conduct startups and shutdowns according to the manufacturer’s recommended procedures. If manufacturer’s recommended procedures are not available, the Permittee must follow recommended procedures for a unit of similar design for which manufacturer’s recommended procedures are available. [Authority: 40 CFR §63.11201(b) and 40 CFR Part 63, Subpart JJJJJJ, Table 2, Item 1]</p>
3.2	<p><u>Testing Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> When burning fuel oil, the Permittee shall conduct periodic Method 9 performance tests or periodic Method 22 observations as specified in the Permittee’s site-specific monitoring plan approved by the Department as allowed under 40 CFR §60.47c(f)(3). [Authority: 40 CFR §60.47c(f)(3)]</p> <p>B. <u>Control of Sulfur Oxides</u> The Permittee may demonstrate compliance with the emission limits or fuel oil sulfur limits under 40 CFR Part 60, Subpart Dc based on a certification from the fuel supplier, as described under 40 CFR § 60.48c(f), as applicable. [Authority: 40 CFR §60.42c(h)(1)]</p> <p>C. <u>Control of Nitrogen Oxides</u> See Section 3.3, Monitoring Requirements.</p> <p>D. <u>Control of Hazardous Air Pollutants</u></p>

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	The Permittee shall conduct a tune-up of each boiler biennially as described in 40 CFR §63.11223(a) and (b).
3.3	<p><u>Monitoring Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u></p> <ol style="list-style-type: none"> 1. The Permittee shall: <ol style="list-style-type: none"> a. Properly operate and maintain the boilers in a manner to prevent visible emissions; and b. Verify no visible emissions when burning No. 2 fuel oil. The Permittee shall perform a visual observation for a 6-minute period once for every 168 hours that the boiler burns oil or at a minimum of once per year. 2. The Permittee shall perform the following if emissions are visible: <ol style="list-style-type: none"> a. Inspect combustion control system and boiler operations; b. Perform all necessary adjustments and/or repairs to the boiler within 48 hours, so that visible emissions are eliminated; c. Document in writing the results of the inspections, adjustments, and/or repairs to the boilers; and d. After 48 hours, if the required adjustments and/or repairs had not eliminated the visible emissions, perform Method 9 observations once daily for 18 minutes until corrective actions have eliminated the visible emissions. [Authority: 40 CFR §60.47c and COMAR 26.11.03.06C] <p><i>Note: Visible emissions monitoring requirements serve as the approved site-specific monitoring plan allowed under 40 CFR §60.47c(f)(3)</i></p> <p>B. <u>Control of Sulfur Oxides</u> The Permittee shall obtain a certification from the fuel supplier indicating that the oil complies with the limitation on the sulfur content of the fuel oil. [Authority: COMAR 26.11.03.06C]</p> <p>C. <u>Control of Nitrogen Oxides</u> The Permittee shall perform a combustion analysis for each affected installation at least once each year and optimize combustion based on the analysis. [Authority: COMAR 26.11.09.08E(2)]</p> <p>D. <u>Control of Hazardous Air Pollutants</u></p>

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	The Permittee must monitor and record on a monthly basis the type of fuel combusted. [Authority: 40 CFR §63.11210(f)]
3.4	<p><u>Record Keeping Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> The Permittee shall:</p> <ol style="list-style-type: none"> 1. Maintain an operation manual and preventative maintenance plan on site; 2. Maintain a record of the maintenance performed that relates to combustion performance; 3. Maintain a log of visible emissions observations performed; and 4. Maintain a record of the hours that No. 2 fuel oil is burned. <p>[Authority: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Sulfur Oxides</u> The Permittee shall maintain records of fuel supplier's certification. [Authority: COMAR 26.11.03.06C]</p> <p>C. <u>Control of Nitrogen Oxides</u> The Permittee shall maintain the following records on site for at least five years and make them available to the Department upon request:</p> <ol style="list-style-type: none"> a. Records of all notifications required under regulation COMAR 26.11.09.08 of the applicable section under the regulation that applies to the boilers; b. Results of any combustion analysis required under COMAR 26.11.09.08E and make this data available to the Department and the EPA upon request [Authority: COMAR 26.11.09.08E(3)]; c. Prepare and maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request [Authority: COMAR 26.11.09.08F(1)(e) and COMAR 26.11.09.08E(5)]; and d. Annual fuel use records. [Authority: COMAR 26.11.09.08K(3)] [Authority: COMAR 26.11.03.06C] <p>D. <u>Control of Hazardous Air Pollutants</u></p> <ol style="list-style-type: none"> 1. The Permittee shall maintain on site for five (5) years and submit to the Department upon request, a report containing the following information:

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	<ul style="list-style-type: none"> 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 part of the tune-up of the boiler. c. The type and amount of fuel used over the 12 months prior to tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit. [Authority: 40 CFR §63.611223(b)(6)] <p>3. The Permittee must maintain the following records 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.</p> <ul style="list-style-type: none"> a. A copy of each notification and report that you submitted to comply with this subpart and all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted. b. Records to document conformance with the work practices, emission reduction measures, and management practices required by § 63.11214 and § 63.11223 as specified in paragraphs (c)(2)(i) through (vi) of this section. <ul style="list-style-type: none"> i. 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. c. Records of the occurrence and duration of each malfunction of the boiler, or of the associated air pollution control and monitoring equipment. d. Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in § 63.11205(a), including corrective actions to restore the malfunctioning boiler, air pollution control, or monitoring equipment to its normal or usual manner of operation. <p>[Authority: 40 CFR §63.11225(c)(1), (2)(i) and (iii), (4), (5), and 40 CFR §63.6625(d)]</p>

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3.5	<p><u>Reporting Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, “Report of Excess Emissions and Deviations.”</p> <p>B. <u>Control of Sulfur Oxides</u> The Permittee shall report fuel supplier’s certification to the Department upon request. [Authority: COMAR 26.11.09.07C]</p> <p>C. <u>Control of Nitrogen Oxides</u> The Permittee shall submit to the Department an identification of the affected installation, the rated heat input capacity of the installation, and the type of fuel burned. [Authority: COMAR 26.11.09.08E(1)]</p> <p>D. <u>Control of Hazardous Air Pollutants</u></p> <ol style="list-style-type: none"> 1. The Permittee must submit all of the notifications in 63.9(b) through (d), and (h) by the dates specified in those sections except as specified below in Conditions (2) and (3). [Authority: 40 CFR §63.11225(a)(1)] 2. The Permittee must submit a signed statement in the Notification of Compliance Status Report that indicates that the Permittee conducted a tune-up of the boiler. [Authority: 40 CFR §63.11214(b)] 3. The Permittee must prepare a biennial compliance report and submit it to the delegated authority upon request. The compliance report must include the following: <ol style="list-style-type: none"> a. Company name and address. b. 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:

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	<p>i. “This facility complies with the requirements in § 63.11223 to conduct a biennial or 5-year tune-up, as applicable, of each boiler.”</p> <p>ii. 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.” [Authority: 40 CFR §63.11225(b)(1), and (2)(i) and (ii)]</p> <p>4. By March 21, 2014, the Permittee must submit a Notification of Compliance Status electronically using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA’s Central Data Exchange (CDX) (www.epa.gov/csx). If the reporting form specific to 40 CFR 63, Subpart JJJJJJ is not available in CEDRI at the time the report is due, the written Notification of Compliance Status must be submitted to the Administrator at the address listed in §63.13. The Notification of Compliance Status must be signed by a responsible official and include the following information:</p> <p>a. The following information required in §63.9(h)(2):</p> <p>i. The methods that were used to determine compliance</p> <p>ii. The methods that will be used for determining continuing compliance, including a description of monitoring and reporting requirements and test methods;</p> <p>iii. A statement by the owner or operator of the affected existing, new, or reconstructed source as to whether the source has complied with the relevant standard or other requirements.</p> <p>b. “This facility complies with the requirements in §63.11214 to conduct an initial tune-up of the boiler.”</p> <p>c. This facility has had an energy assessment performed according to §63.11214(c).”</p> <p>d. 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.”</p> <p>[Authority: 40 CFR §63.11225(a)(4)(i), (ii), (iii), (v), and (vi) and 40 CFR §63.11214(b) and (c)]</p>

“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”

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4.0	<p><u>Emissions Unit Number(s):</u> EU-13 Emergency Generator exempt from NSPS</p> <p><u>EU-13:</u> One (1) Caterpillar 3516-D1 diesel generator rated at 2520 bHP. Used for emergency power backup. Located in the Outpatient Center. (MDE Registration No. 510-0001-9-0951)</p>
4.1	<p><u>Applicable Standards/Limits:</u></p> <p>A. <u>Control of Visible Emissions</u></p> <ol style="list-style-type: none"> 1. COMAR 26.11.09.05E(2), <u>Emissions During Idle Mode.</u> “A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.” 2. COMAR 26.11.09.05E(3), <u>Emissions During Operating Mode.</u> “A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.” 3. COMAR 26.11.09.05E(4), <u>Exceptions.</u> <ol style="list-style-type: none"> a. “Section E(2) of this regulation does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system. b. Section E(2) of this regulation does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods: <ol style="list-style-type: none"> i. Engines that are idled continuously when not in service: 30 minutes; ii. All other engines: 15 minutes. c. Section E(2) and (3) of this regulation do not apply while maintenance, repair, or testing is being performed by qualified mechanics.” <p>B. <u>Control of Sulfur Oxides</u> COMAR 26.11.09.07A(2)(b), <u>Sulfur Content Limitations for Fuel.</u> “A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: (2) In Areas III and IV: (b) Distillate fuel oils, 0.3 percent.”</p> <p>C. <u>Control of Nitrogen Oxides</u></p> <ol style="list-style-type: none"> 1. COMAR 26.11.09.08B(5), <u>Operator Training.</u>

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	<ul style="list-style-type: none"> a. “For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation. b. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.” <p>2. <u>COMAR 26.11.09.08G(1), Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 Percent or Less, and Combustion Turbines with a Capacity Factor Greater than 15 Percent.</u> “A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:</p> <ul style="list-style-type: none"> a. Provide certification of the capacity factor of the equipment to the Department in writing; b. For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually; c. Maintain the results of the combustion analysis at the site for at least 2 years and make these results available to the Department and the EPA upon request; d. Require each operator of an installation, except combustion turbines, to attend operator training programs at least once every 3 years, on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and e. Maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request.” <p>D. <u>Control of Hazardous Air Pollutants</u></p> <ul style="list-style-type: none"> 1. In order for the emergency generators to be considered institutional emergency stationary RICE exempt from the requirements of 40 CFR 63, Subpart ZZZZ, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in (a) through (c) below, is prohibited. <ul style="list-style-type: none"> (a) There is no time limit on the use of emergency stationary RICE in emergency situations.

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	<p>(b) For a maximum of 100 hours per calendar year, emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The Permittee may petition the Department for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.</p> <p>(c) The Permittee may operate the emergency stationary RICE for up to 50 hours per year in non-emergency situations, but those 50 hours are counted toward the 100 hours per year provided for the maintenance and testing and emergency response. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [Authority: 40 CFR §63.6640(f)(1), (2), and (4)]</p>
4.2	<p><u>Testing Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> See Section 4.3, Monitoring Requirements.</p> <p>B. <u>Control of Sulfur Oxides</u> See Section 4.3, Monitoring Requirements.</p> <p>C. <u>Control of Nitrogen Oxides</u> The Permittee shall perform a combustion analysis and optimize combustion at least once annually for any of the engines that operates more than 500 hours during a calendar year. [Authority: COMAR 26.11.09.08G(1)(b)]</p> <p>D. <u>Control of Hazardous Air Pollutants</u> See Section 4.4, Record Keeping Requirements.</p>

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4.3	<p><u>Monitoring Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> The Permittee shall perform preventive maintenance to optimize combustion performance. [Authority: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Sulfur Oxides</u> The Permittee shall obtain a certification from the fuel supplier that the fuel oil is in compliance with the sulfur in fuel limitation. [Authority: COMAR 26.11.03.06C]</p> <p>C. <u>Control of Nitrogen Oxides</u> The Permittee shall maintain annual fuel use records on site for not less than 3 years, and make these records available to the Department upon request. [Authority: COMAR 26.11.09.08K(3)]</p> <p>D. <u>Control of Hazardous Air Pollutants</u> See Section 4.4, Record Keeping Requirements.</p>
4.4	<p><u>Record Keeping Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> The Permittee shall retain preventive maintenance records on site for at least five (5) years and make the records available to the Department upon request. [Authority: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Sulfur Oxides</u> The Permittee shall retain fuel supplier certifications stating that the fuel oil is in compliance with this regulation and must maintain these records for at least five (5) years. [Authority: COMAR 26.11.09.07C]</p> <p>C. <u>Control of Nitrogen Oxides</u> The Permittee shall maintain the following records onsite for at least five (5) years and must make these records available to the Department upon request:</p> <ol style="list-style-type: none"> Records of the results of the combustion analysis. [Authority: COMAR 26.11.09.08G(1)(c) and COMAR 26.11.03.06C] Records of training program attendance for each operator. [Authority: COMAR 26.11.09.08G(1)(e) and COMAR 26.11.03.06C]

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	<p>3. Records of the hours of operation and fuel usage on a monthly basis for all generators. At the end of each month, the Permittee shall calculate the total hours for the prior rolling 12-month period. [Authority: COMAR 26.11.03.06C]</p> <p>D. <u>Control of Hazardous Air Pollutants</u></p> <p>1. The Permittee must maintain records of the following on site for at least five years and must make available to the Department upon request:</p> <p>a. Hours of operation of each engine.</p> <p>b. Reason for operation of each engine (i.e. emergency, emergency demand response, voltage deviation, etc.) [Authority: COMAR 26.11.03.06C]</p>
4.5	<p><u>Reporting Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, "Report of Excess Emissions and Deviations."</p> <p>B. <u>Control of Sulfur Oxides</u> The Permittee shall report fuel supplier's certification for sulfur content to the Department upon request. [Authority: COMAR 26.11.09.07C and COMAR 26.11.03.06C]</p> <p>C. <u>Control of Nitrogen Oxides"</u> The Permittee shall provide certification of the capacity factor of the engines to the Department in writing with an annual emissions certification. [Authority: COMAR 26.11.09.08G(1)(e)]</p> <p>D. <u>Control of Hazardous Air Pollutants</u> The Permittee must submit records of operation for each engine to the Department with the facility's annual Emissions Certification. [Authority: COMAR 26.11.03.06C]</p>

"A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above."

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5.0	<p><u>Emissions Unit Number(s)</u> EU-14 through EU-19 – Peak Shaving Generators</p> <p>EU-14 and EU-15 – Two (2) Caterpillar 3516-B diesel generators, each rated at 2520 bHP. Used for emergency backup power and peak shaving. Located in the South Energy Plant. (MDE Registration Nos. 510-0001-9-0949 and 9-0950)</p> <p>EU-16 and EU-17 - Two (2) Caterpillar 3516-B diesel generators, each rated at 2520 bHP. Used for emergency backup power and peak shaving. Located in the North Energy Plant. (MDE Registration Nos. 510-0001-9-0988 and 9-0989)</p> <p>EU-18 and EU-19 - Two (2) Caterpillar 3516-B diesel generators, each rated at 2520 bHP. Used for emergency backup power and peak shaving. Located in the South Energy Plant. (MDE Registration Nos. 510-0001-9-1015 and 9-1016)</p>
5.1	<p><u>Applicable Standards/Limits:</u></p> <p>A. <u>Control of Visible Emissions</u></p> <ol style="list-style-type: none"> 1. COMAR 26.11.09.05E(2), <u>Emissions During Idle Mode</u>. “A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.” 2. COMAR 26.11.09.05E(3), <u>Emissions During Operating Mode</u>. “A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.” 3. COMAR 26.11.09.05E(4), <u>Exceptions</u>. <ol style="list-style-type: none"> a. “Section E(2) of this regulation does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system. b. Section E(2) of this regulation does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods: <ol style="list-style-type: none"> i. Engines that are idled continuously when not in service: 30 minutes; ii. All other engines: 15 minutes.

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	<p>c. Section E(2) and (3) of this regulation do not apply while maintenance, repair, or testing is being performed by qualified mechanics.”</p> <p>B. <u>Control of Sulfur Oxides</u></p> <p>1. COMAR 26.11.09.07A(2)(b), <u>Sulfur Content Limitations for Fuel</u>. “A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: (2) In Areas III and IV: (b) Distillate fuel oils, 0.3 percent.”</p> <p><i>Note: Compliance with 40 CFR §63.6604(a) and 40 CFR §1090.305 will demonstrate compliance with this requirement. See Table IV-5a, Section 5a.1(5) for additional detail.</i></p> <p>C. <u>Control of Nitrogen Oxides</u></p> <p>1. COMAR 26.11.09.08B(5), <u>Operator Training</u>.</p> <p>a. “For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.</p> <p>b. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.”</p> <p>2. COMAR 26.11.09.08G(1), <u>Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 Percent or Less, and Combustion Turbines with a Capacity Factor Greater than 15 Percent</u>. “A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:</p> <p>a. Provide certification of the capacity factor of the equipment to the Department in writing;</p> <p>b. For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually;</p> <p>c. Maintain the results of the combustion analysis at the site for at least 2 years and make these results available to the Department and the EPA upon request;</p> <p>d. Require each operator of an installation, except combustion turbines, to attend operator training programs at least once every 3 years, on combustion optimization that are</p>

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	<p>sponsored by the Department, the EPA, or equipment vendors; and</p> <p>e. Maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request.”</p> <p>D. <u>Control of Hazardous Air Pollutants</u> See Table IV-5a.</p> <p>E. <u>Operational Limits</u> <i>The following condition applies only to EU-14 and EU-15 (MDE Registration Nos. 510-1043-9-0949 and 9-0950)</i></p> <p>1. The combined NO_x emissions from both of these diesel generators must not exceed 25 tons in any rolling 12-month period. [Reference: Permit to Construct 510-9-0949 and 0950N issued on April 2, 2002]</p>
5.2	<p><u>Testing Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> See Section 5.3, Monitoring Requirements.</p> <p>B. <u>Control of Sulfur Oxides</u> See Section 5.3, Monitoring Requirements.</p> <p>C. <u>Control of Nitrogen Oxides</u> The Permittee shall perform a combustion analysis and optimize combustion at least once annually for any of the engines that operates more than 500 hours during a calendar year. [Reference: COMAR 26.11.09.08G(1)]</p> <p>D. <u>Control of Hazardous Air Pollutants</u> See Table IV-5a.</p> <p>E. <u>Operational Limits</u> See Section 5.3, Monitoring Requirements.</p>
5.3	<p><u>Monitoring Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> The Permittee shall perform preventive maintenance and optimize combustion performance. [Reference: COMAR 26.11.03.06C]</p>

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	<p>B. <u>Control of Sulfur Oxides</u> The Permittee shall obtain a certification from the fuel supplier that the fuel oil is in compliance with the sulfur in fuel limitation. [Reference: COMAR 26.11.03.06C]</p> <p>C. <u>Control of Nitrogen Oxides</u> For engines that operate more than 500 hours during a calendar year; perform a combustion analysis and optimize combustion. [Reference: COMAR 26.11.09.08G(1)(c)]</p> <p>D. <u>Control of Hazardous Air Pollutants</u> See Table IV-5a.</p> <p>E. <u>Operational Limits</u> <i>The following condition applies only to EU-14 and EU-15 (MDE Registration Nos. 510-1043-9-0949 and 9-0950)</i> The Permittee shall calculate monthly NO_x emissions from both of these emission units combined at the end of each calendar month. [Reference: COMAR 26.11.03.06C]</p>
5.4	<p><u>Record Keeping Requirements:</u></p> <p><u>Note:</u> All records must be maintained at the site for a period of at least five (5) years and made available to the Department upon request. [Reference: COMAR 26.11.03.06C(5)(g)]</p> <p>A. <u>Control of Visible Emissions</u> The Permittee shall retain preventive maintenance records on site.</p> <p>B. <u>Control of Sulfur Oxides</u> The Permittee shall retain fuel supplier certifications stating that the fuel oil is in compliance with this regulation. [Reference: COMAR 26.11.09.07C]</p> <p>C. <u>Control of Nitrogen Oxides</u> The Permittee shall maintain the following:</p> <ol style="list-style-type: none"> 1. Records of the results of the combustion analysis. 2. [Reference: COMAR 26.11.09.08G(1)(c) and COMAR 26.11.03.06C] 3. Records of training program attendance for each operator. [Reference: COMAR 26.11.09.08G(1)(e) and COMAR 26.11.03.06C]

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	<p>4. Records of hours of operation and fuel usage on a monthly basis for all generators. At the end of each month, the Permittee shall calculate the total hours for the prior rolling 12-month period. [Reference: COMAR 26.11.03.06C]</p> <p>D. <u>Control of Hazardous Air Pollutants</u> See Table IV-5a.</p> <p>E. <u>Operational Limits</u> The Permittee shall maintain for 5 years and make available to the department upon request the following information:</p> <ol style="list-style-type: none"> 1. An operating log that includes the date the unit operated and the total operating time for each day that the unit operated and 2. Monthly calculations of NO_x emissions from EU-14 and EU-15. [Reference: COMAR 26.11.03.06C]
5.5	<p><u>Reporting Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, “Report of Excess Emissions and Deviations.”</p> <p>B. <u>Control of Sulfur Oxides</u> The Permittee shall report fuel supplier certifications for sulfur content to the Department upon request. [Reference: COMAR 26.11.09.07C and COMAR 26.11.03.06C]</p> <p>C. <u>Control of Nitrogen Oxides</u></p> <ol style="list-style-type: none"> 1. The Permittee shall maintain annual fuel use records on site for not less than 3 years, and make these records available to the Department upon request. [Reference: COMAR 26.11.09.08K(3)] 2. The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing with the annual emissions certification. [Reference: COMAR 26.11.09.08G(1)(e)] <p>D. <u>Control of Hazardous Air Pollutants</u> See Table IV-5a.</p>

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	<p>E. <u>Operational Limits</u> The Permittee shall report the type and quantity of fuel used in the engines, and the monthly NO_x emissions from EU-14 and EU-15 to the Department in the annual emissions certification report due on April 1 of each year. [Reference: COMAR 26.11.02.19C]</p>

“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”

Table IV – 5a NESHAP REQUIREMENTS – 40 CFR PART 63, SUBPART ZZZZ EXISTING PEAK SHAVING GENERATORS	
5a.0	<p><u>Emissions Unit Number(s)</u> EU-14 – EU-19 Peak Shaving Generators</p> <p><u>EU-14 and EU-15:</u> Two (2) Caterpillar 3516-B diesel generators, each rated at 2520 bHP. Used for emergency backup power and peak shaving. Located in the South Energy Plant. (MDE Registration Nos. 510-0001-9-0949 and 9-0950)</p> <p><u>EU-16 and EU-17:</u> Two (2) Caterpillar 3516-B diesel generators, each rated at 2520 bHP. Used for emergency backup power and peak shaving. Located in the North Energy Plant. (MDE Registration Nos. 510-0001-9-0988 and 9-0989)</p> <p><u>EU-18 and EU-19:</u> Two (2) Caterpillar 3516-B diesel generators, each rated at 2520 bHP. Used for emergency backup power and peak shaving. Located in the South Energy Plant. (MDE Registration Nos. 510-0001-9-1015 and 9-1016)</p>
5a.1	<p><u>Applicable Standards/Limits:</u></p> <p><u>Control of Hazardous Air Pollutants</u></p> <ol style="list-style-type: none"> 1. The Permittee shall: <ol style="list-style-type: none"> a. Limit the concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O₂; or b. Reduce CO emissions by 70 percent or more. <p>[Reference: 40 CFR §63.6603(a) and 40 CFR Part 63, Subpart ZZZZ, Table 2d, Item 3]</p>

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<p style="text-align: center;">Table IV – 5a NESHAP REQUIREMENTS – 40 CFR PART 63, SUBPART ZZZZ EXISTING PEAK SHAVING GENERATORS</p>	
	<p>2. If the Permittee is using a catalyst to reduce or limit CO emissions, the Permittee shall:</p> <ul style="list-style-type: none"> a. Maintain the catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test; and b. Maintain the temperature of the stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450°F and less than or equal to 1350°F. <p>[Reference: 40 CFR §63.6603(a) and 40 CFR Part 63, Subpart ZZZZ, Table 2b, Item 2]</p> <p>3. If the Permittee is not using a catalyst to reduce or limit CO emissions, the Permittee shall comply with any operating limitations approved by the Administrator. [Reference: 40 CFR §63.6603(a) and 40 CFR Part 63, Subpart ZZZZ, Table 2b, Item 3]</p> <p>4. The Permittee shall:</p> <ul style="list-style-type: none"> a. Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or b. Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates and metals. <p>[Reference: 40 CFR §63.6625(g)]</p> <p><i><u>Note:</u> The Permittee must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters.</i></p> <p>5. The Permittee shall only use fuel that meets the following per-gallon standards:</p> <ul style="list-style-type: none"> a. Sulfur content. <ul style="list-style-type: none"> i. 15 ppm maximum for NR diesel fuel. ii. 500 ppm maximum for LM diesel fuel. b. Cetane index or aromatic content, as follows: <ul style="list-style-type: none"> i. A minimum cetane index of 40; or ii. A maximum aromatic content of 35 volume percent. <p>[Reference: 40 CFR §63.6604(a) and 40 CFR §1090.305]</p>

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	<p><i>Note: Compliance with 5. above will demonstrate compliance with COMAR 26.11.09.07A(2)(b) discussed in Table IV – 5, Section 5.1B.</i></p>
5a.2	<p><u>Testing Requirements:</u></p> <p><u>Control of Hazardous Air Pollutants</u></p> <ol style="list-style-type: none"> 1. The Permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in 40 CFR Part 63, Subpart ZZZZ, Table 2d. The oil analysis must be performed at the same frequency specified for changing the oil in 2d. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [Reference: 40 CFR §63.6625(i)] <p><u>Initial Performance Testing:</u></p> <p><u>Note:</u> The Permittee must conduct any initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in § 63.6595 and according to the provisions in § 63.7(a)(2). [Reference: 40 CFR §63.6620(a)]</p>

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NESHAP REQUIREMENTS – 40 CFR PART 63, SUBPART ZZZZ

EXISTING PEAK SHAVING GENERATORS

2.

The Permittee is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described below:

a.

The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

b.

The test must not be older than 2 years.

c.

The test must be reviewed and accepted by the Administrator.

d.

Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes. [Reference: 40 CFR §63.6612(b)]

3.

If the Permittee is reducing CO emissions, the Permittee must do the following:

The Permittee must...	Using...	According to the following requirements...
i. Measure the O ₂ at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522-00 (Reapproved 2005). ^{a c}	(a) Measurements to determine O ₂ must be made at the same time as the measurements for CO concentration.
ii. Measure the CO at the inlet and the outlet of the control device	(1) ASTM D6522-00 (Reapproved 2005) ^{a b c} or Method 10 of 40 CFR part 60, appendix A	(a) The CO concentration must be at 15 percent O ₂ , dry basis.

[Reference: 40 CFR §6612(a), §63.6620(a), and 40 CFR Part 63, Subpart ZZZZ, Table 4, Item 1]

Note:

The Permittee does not need to start up the engine solely to conduct the performance test. The Permittee can conduct the performance test when the engine is started up again. [Reference: 40 CFR §63.6620(b)]

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	4.	If the Permittee is limiting the concentration of CO, the Permittee must do the following:	
		The Permittee must...	Using... According to the following requirements...
		i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A § 63.7(d)(1)(i) (a) if using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O ₂ concentration of the stationary RICE exhaust at the sampling port location; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522-00 (Reapproved 2005). ^a (a) measurements to determine O ₂ concentration must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iii. Measure moisture content of the stationary RICE exhaust at the sampling port location; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03. ^a (a) measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iv. Measure formaldehyde at the exhaust of the stationary RICE; or	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03, ^a provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130 (a) Formaldehyde concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. measure CO at the exhaust of the stationary RICE.	(1) Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522-00 (a) CO concentration must be at 15 percent O ₂ , dry basis.

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		(2005), ^{a,c} Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03. ^a	Results of this test consist of the average of the three 1-hour or longer runs.
	[Reference: 40 CFR §6612(a), §63.6620(a), and 40 CFR Part 63, Subpart ZZZZ, Table 4, Item 3]		
	<p>5. The Permittee must conduct three separate test runs for each performance test, as specified in § 63.7(e)(3). Each test run must last at least 1 hour, unless otherwise specified in this subpart. [Reference: 40 CFR §63.6620(d)]</p>		
	<p>6. If the Permittee is using an oxidation catalyst to limit or reduce the CO emissions, during the initial performance test, the Permittee must establish the following operating limitations:</p> <ul style="list-style-type: none"> a. maintain the catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test; and b. maintain the temperature of the stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F <p>[Reference: 40 CFR §63.6603(a), §63.6630(b) and 40 CFR Part 63, Subpart ZZZZ, Table 2b, Item 2]</p>		
	<p>7. If the Permittee is reducing the CO emissions by 70% or more, the Permittee must determine compliance with the percent reduction requirement according to the calculations in 40 CFR §63.6620(e). [Reference: 40 CFR §63.6620(e)]</p>		
	<p>8. The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all</p>		

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	<p>assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided. [Reference: 40 CFR §63.6620(i)]</p> <p><u>Demonstration of Initial Compliance:</u></p> <p>9. The Permittee shall demonstrate compliance according to the following table:</p> <table> <tr> <td>1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP</td><td>a. Reduce CO emissions and using oxidation catalyst, and using a CPMS</td><td>i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.</td></tr> <tr> <td>2. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at</td><td>a. Limit the concentration of CO, using oxidation catalyst, and using a CPMS</td><td>i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and</td></tr> </table>		1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions and using oxidation catalyst, and using a CPMS	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.	2. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at	a. Limit the concentration of CO, using oxidation catalyst, and using a CPMS	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions and using oxidation catalyst, and using a CPMS	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.						
2. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at	a. Limit the concentration of CO, using oxidation catalyst, and using a CPMS	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and						

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		an area source of HAP		
				ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b); and
				iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test
		3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions and not using oxidation catalyst	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in § 63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.
		4. Non-emergency stationary CI RICE	a. Limit the concentration of	i. The average CO concentration

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		>500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	CO, and not using oxidation catalyst	determined from the initial performance test is less than or equal to the CO emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in § 63.6625(b); and
				iii. You have recorded the approved operating parameters (if any) during the initial performance test.
		5. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at	a. Reduce CO emissions, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O ₂ or CO ₂ at both the inlet and outlet of the oxidation catalyst according to the requirements in § 63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and

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<p style="text-align: center;">Table IV – 5a NESHAP REQUIREMENTS – 40 CFR PART 63, SUBPART ZZZZ EXISTING PEAK SHAVING GENERATORS</p>				
		an area source of HAP		
				iii. The average reduction of CO calculated using § 63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction achieved during the 4-hour period
		6. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O ₂ or CO ₂ at the outlet of the oxidation catalyst according to the requirements in § 63.6625(a); and
				ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and
				iii. The average concentration of CO calculated using § 63.6620 is less than or equal to the CO emission

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				limitation. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average concentration measured during the 4-hour period.
		[Reference: 40 CFR §63.6612(a), §63.6630(a), and 40 CFR Part 63, Subpart ZZZZ, Table 5, Items 1 - 6] <u>Note:</u> The Permittee is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted and meets the conditions of 40 CFR §63.6612(b). <u>Subsequent Performance Testing</u> 10. If the Permittee is not using CEMs to demonstrate compliance, the Permittee must conduct subsequent performance tests every 8,760 hours or 3 years, whichever comes first. [Reference: 40 CFR §63.6615, §63.6620(a), and 40 CFR Part 63, Subpart ZZZZ, Table 3, Item 4]		
5a.3	<u>Monitoring Requirements:</u> <u>Control of Hazardous Air Pollutants</u> 1. The Permittee must be in compliance with the emission limitations, operating limitations, and other requirements in this subpart that apply to you at all times. [Reference: 40 CFR §63.6605(a)] 2. At all times the Permittee 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			

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	<p>emissions if levels required by this standard have been achieved. [Reference: 40 CFR §63.6605(b)]</p> <ol style="list-style-type: none"> 3. The Permittee shall minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in 40 CFR Part 63, Subpart ZZZZ, Table 2d apply. [Reference: 40 CFR §63.6625(h)] 4. If the Permittee is meeting the CO limitations or reductions requirements according to 40 CFR Part 63, Subpart ZZZZ, Table 5, Items 5 or 6, the Permittee must install, operate, and maintain a CEMS to monitor CO and either O₂ or CO₂ according to the following requirements. If the Permittee is meeting the requirement to reduce CO emissions, the CEMS must be installed at both the inlet and outlet of the control device. If the Permittee is meeting the requirement to limit the concentration of CO, the CEMS must be installed at the outlet of the control device. <ol style="list-style-type: none"> a. Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of 40 CFR part 60, appendix B. b. You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in § 63.8 and according to the applicable performance specifications of 40 CFR part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1. c. As specified in § 63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data. d. The CEMS data must be reduced as specified in § 63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO₂ concentration.

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	<p style="text-align: center;">[Reference: 40 CFR §63.6625(a) and 40 CFR Part 63, Subpart ZZZZ, Table 5, Items 5 and 6]</p> <p>5. If the Permittee is meeting the CO limitations or reductions requirements according to 40 CFR Part 63, Subpart ZZZZ, Table 5, Items 1, 2, 3, or 4, the Permittee must install, operate, and maintain each CPMS according to the following requirements:</p> <ul style="list-style-type: none"> a. You must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined below and in § 63.8(d). As specified in § 63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in paragraphs (a)(i) through (v) of this section in your site-specific monitoring plan. <ul style="list-style-type: none"> i. The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations; ii. Sampling interface (e.g., thermocouple) location such that the monitoring system will provide representative measurements; iii. Equipment performance evaluations, system accuracy audits, or other audit procedures; iv. Ongoing operation and maintenance procedures in accordance with provisions in § 63.8(c)(1)(ii) and (c)(3); and v. Ongoing reporting and recordkeeping procedures in accordance with provisions in § 63.10(c), (e)(1), and (e)(2)(i). b. You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan. c. The CPMS must collect data at least once every 15 minutes (see also § 63.6635). d. For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.

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	<p>e. You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually.</p> <p>f. You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan</p> <p>[Reference: 40 CFR §63.6625(b) and 40 CFR Part 63, Subpart ZZZZ, Table 5, Items 1, 2, 3, and 4]</p> <p>6. Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, the Permittee must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. The Permittee may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. The Permittee must, however, use all the valid data collected during all other periods. [Reference: 40 CFR §63.6635]</p> <p>7. If the Permittee is demonstrating continuous compliance through the use of CEMS, the Permittee must demonstrate continuous compliance with the emissions limits as follows:</p> <p>a. Collecting the monitoring data according to § 63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction or concentration of CO emissions according to § 63.6620; and</p> <p>b. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period, or that the emission remain at or below the CO concentration limit; and</p> <p>c. Conducting an annual RATA of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B, as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.</p>

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	<p>[Reference: 40 CFR §63.6640(a) and 40 CFR Part 63, Subpart ZZZZ, Table 6, Item 3]</p> <p>8. If the Permittee is demonstrating continuous compliance through the use of an oxidation catalyst, the Permittee must demonstrate continuous compliance with the emissions limits as follows:</p> <ul style="list-style-type: none"> a. Conduct performance tests every 8,760 hours or 3 years, whichever comes first, for CO to demonstrate that the required CO percent reduction is achieved or that your emissions remain at or below the CO concentration limit; and b. Collecting the catalyst inlet temperature data according to § 63.6625(b); and c. Reducing these data to 4-hour rolling averages; and d. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and e. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test. <p>[Reference: 40 CFR §63.6640(a) and 40 CFR Part 63, Subpart ZZZZ, Table 6, Item 10]</p> <p>9. If the Permittee is demonstrating compliance and is not using an oxidation catalyst, the Permittee must demonstrate continuous compliance with the emission limits as follows:</p> <ul style="list-style-type: none"> a. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and b. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and c. Reducing these data to 4-hour rolling averages; and d. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test. <p>[Reference: 40 CFR §63.6640(a) and 40 CFR Part 63, Subpart ZZZZ, Table 6, Item 11]</p>

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	<p>10. The Permittee must report each instance in which you did not meet each emission limitation in Tables 2b and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in § 63.6650. If the Permittee changes the catalyst, the Permittee must reestablish the values of the operating parameters measured during the initial performance test. When the Permittee reestablishes the values of the operating parameters, the Permittee must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE. [Reference: 40 CFR §63.6640(b)]</p>
5a.4	<p><u>Record Keeping Requirements:</u></p> <p><u>Control of Hazardous Air Pollutants</u></p> <ol style="list-style-type: none"> 1. The Permittee must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan. [Reference: 40 CFR §63.6655(e)(2)] 2. The Permittee must keep the following records: <ol style="list-style-type: none"> a. A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in § 63.10(b)(2)(xiv). b. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. c. Records of performance tests and performance evaluations as required in § 63.10(b)(2)(viii). d. Records of all required maintenance performed on the air pollution control and monitoring equipment. e. Records of actions taken during periods of malfunction to minimize emissions in accordance with § 63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment

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	<p>to its normal or usual manner of operation. [Reference: 40 CFR §63.6655(a)]</p> <p>3. If the Permittee is demonstrating compliance using a CEMS or CPMS, the Permittee must keep the following records:</p> <ul style="list-style-type: none"> a. Records described in § 63.10(b)(2)(vi) through (xi). b. Previous (<i>i.e.</i>, superseded) versions of the performance evaluation plan as required in § 63.8(d)(3). c. Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in § 63.8(f)(6)(i), if applicable. <p>[Reference: 40 CFR §63.6655(b)]</p> <p>4. If the Permittee is demonstrating continuous compliance by using CEMs, the Permittee must keep the following records to show continuous compliance with the emission limits:</p> <ul style="list-style-type: none"> a. Records of monitoring data (reduced to 1-hour averages); b. Records of calculations of the percent reduction or concentration of CO emissions according to §63.6620; c. Records of the annual RATA of the CEMs; and d. Records of daily and periodic data quality checks performed. <p>[Reference: 40 CFR §63.6655(d) and 40 CFR Part 63, Subpart ZZZZ, Table 6, Item 3]</p> <p>5. If the Permittee is demonstrating continuous compliance by using an oxidation catalyst, the Permittee must keep the following records to show continuous compliance with the emission limits:</p> <ul style="list-style-type: none"> a. Records of performance tests conducted; b. Records of catalyst inlet temperature data (reduced to 4-hour rolling averages); c. Records of the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the established operating limit. <p>[Reference: 40 CFR §63.6655(d) and 40 CFR Part 63, Subpart ZZZZ, Table 6, Item 10]</p> <p>6. If the Permittee is demonstrating continuous compliance without using an oxidation catalyst, the Permittee must keep the following records to show continuous compliance with the emissions limits:</p>

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	<ol style="list-style-type: none"> a. Records of performance tests; and b. Records of approved operating parameter (if any) data according to 40 CFR §63.6625(b) (reduced to 4-hour rolling averages). [Reference: 40 CFR §63.6655(d) and 40 CFR Part 63, Subpart ZZZZ, Table 6, Item 11] <p>7. All records must be kept for five (5) years, in a form suitable and readily available for expeditious review and accessible in hard copy or electronic form. [Reference: 40 CFR §63.6660]</p>
5a.5	<p><u>Reporting Requirements:</u></p> <p><u>Control of Hazardous Air Pollutants</u></p> <ol style="list-style-type: none"> 1. The Permittee must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in § 63.6645. [Reference: 40 CFR §63.6630(c)] 2. The Permittee must submit all of the notifications in §§ 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified. [Reference: 40 CFR §63.6645(a)(2)] 3. The Permittee must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in § 63.7(b)(1). [Reference: 40 CFR §63.6645(g)] 4. The Permittee must submit a Notification of Compliance Status according to § 63.9(h)(2)(ii). [Reference: 40 CFR §63.6645(h)] 5. The Permittee must submit semiannual Compliance Report which includes the following information: <ol style="list-style-type: none"> a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in § 63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or

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	<p>b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in § 63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in § 63.8(c)(7), the information in § 63.6650(e); or</p> <p>c. If you had a malfunction during the reporting period, the information in § 63.6650(c)(4).</p> <p>[Reference: 40 CFR §63.6650(a) and 40 CFR Part 63, Subpart ZZZZ, Table 7, Item 1]</p> <p>6. The Permittee must submit the semiannual Compliance Reports according to the following schedule:</p> <p>a. For semiannual Compliance reports, the first Compliance report must cover the period beginning on May 3, 2013 and ending on June 30, 2013.</p> <p>b. For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31, 2013</p> <p>c. For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.</p> <p>d. For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.</p> <p>e. For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (b)(4) of this section.</p> <p>[Reference: 40 CFR §63.66650(b)(1) through (5)]</p> <p><u>Note:</u> <i>On August 8, 2013, the Department issued the Permittee an extension of one year from the initial compliance date to</i></p>

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<p style="text-align: center;">Table IV – 5a NESHAP REQUIREMENTS – 40 CFR PART 63, SUBPART ZZZZ EXISTING PEAK SHAVING GENERATORS</p>	
	<p><i>meet the compliance requirements of 40 CFR Part 63, Subpart ZZZZ.</i></p> <ol style="list-style-type: none"> 7. The Compliance Report must contain the following information: <ol style="list-style-type: none"> a. Company name and address. b. Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report. c. Date of report and beginning and ending dates of the reporting period. d. If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with § 63.6605(b), including actions taken to correct a malfunction. e. If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period. f. If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in § 63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period. [Reference: 40 CFR §63.6650(c)] 8. If the Permittee is demonstrating compliance with the emissions limits without using a CEMS or CPMS, for each deviation from an emission or operating limitation that occurs the Compliance report must contain the information in paragraphs (c)(1) through (4) of this section and the information in paragraphs (d)(1) and (2) of this section. <ol style="list-style-type: none"> a. The total operating time of the stationary RICE at which the deviation occurred during the reporting period. b. Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as

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	<p>applicable, and the corrective action taken. [Reference: 40 CFR §63.6650(d)]</p> <p>9. If the Permittee is demonstrating compliance with the emissions limits by using CEMS or CPMS, for each deviation from an emission or operating limitation occurring you must include the information in Table IV-5a (7)(a) – (d) and the following:</p> <ul style="list-style-type: none"> a. The date and time that each malfunction started and stopped. b. The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks. c. The date, time, and duration that each CMS was out-of-control, including the information in § 63.8(c)(8). d. The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period. e. A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period. f. A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes. g. A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period. h. An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE. i. A brief description of the stationary RICE. j. A brief description of the CMS. k. The date of the latest CMS certification or audit. l. A description of any changes in CMS, processes, or controls since the last reporting period. [Reference: 40 CFR §63.6650(e)]

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	<p>10. Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority. [Reference: 40 CFR §63.6650(f)]</p>

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6.0	<p><u>Emissions Unit Number(s)</u> EU-20 and EU-21 – Combined Heat and Power System EU-20 and EU-21 (MDE Registration Nos. 510-0001-5-2073 and 5-2074) One (1) Combined Heat and Power system (CHP) consisting of two (2) identical units, each comprised of one (1) 7.5 MW combustion turbine and one (1) heat recovery steam generator (HRSG) and a 42 million Btu per hour duct burner.</p>
6.1	<p><u>Applicable Standards/Limits:</u></p> <p>A. <u>Control of Visible Emissions</u></p> <p>1. COMAR 26.11.09.05A(2), <u>Fuel Burning Equipment</u>. “In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.”</p>

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	<p>2. COMAR 26.11.09.05A(3), <u>Exceptions</u>. “Section (A)(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or <u>adjustments</u> or occasional cleaning of control equipment if:</p> <ul style="list-style-type: none"> a. The visible emissions are not greater than 40 percent opacity ; and b. The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period.” <p>B. <u>Control of Sulfur Oxides</u></p> <p>1. COMAR 26.11.09.07A, <u>Sulfur Content Limitations for Fuel</u>. “A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: (2) In Areas III and IV: (b) Distillate fuel oils, 0.3 percent.”</p> <p>2. The Permittee must meet either of the following emission limits for SO₂:</p> <ul style="list-style-type: none"> a. You must not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain SO₂ in excess of 110 nanograms per Joule (ng/J) (0.90 pounds per megawatt-hour (lb/MWh)) gross output; or b. You must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO₂ /J (0.060 lb SO₂ /MMBtu) heat input. If your turbine simultaneously fires multiple fuels, each fuel must meet this requirement. [Authority: 40 CFR §60.4330(a)(1) and (2)] <p><i><u>Note:</u> Heat recovery steam generators and duct burners regulated under this subpart are exempted from the requirements of 40 CFR Part 60 subparts Da, Db, and Dc per 40 CFR §60.4305(b).</i></p> <p>C. <u>Control of Nitrogen Oxides</u></p> <p>1. COMAR 26.11.09.08G, <u>Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 Percent or Less, and Combustion Turbines with a Capacity Factor Greater than 15 Percent.</u></p>

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- a. “A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:
 - i. Provide certification of the capacity factor of the equipment to the Department in writing;
 - ii. For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually;
 - iii. Maintain the results of the combustion analysis at the site for at least 2 years and make these results available to the Department and the EPA upon request;”
 - iv. Not applicable.
 - v. Not applicable.
 - b. “A person who owns or operates a combustion turbine with a capacity factor greater than 15 percent shall meet an hourly average NO_x emission rate of not more than 42 ppm when burning gas or 65 ppm when burning fuel oil (dry volume at 15 percent oxygen) or meet applicable Prevention of Significant Deterioration limits, whichever is more restrictive.”
2. The Permittee must meet the NO_x emissions limits specified in the following Table:

Combustion turbine type	Combustion turbine heat input at peak load (HHV)	NO_x emission standard
New turbine firing natural gas	> 50 MMBtu/h and ≤ 850 MMBtu/h	25 ppm at 15 percent O ₂ or 150 ng/J of useful output (1.2 lb/MWh).
New turbine firing fuels other than natural gas	> 50 MMBtu/h and ≤ 850 MMBtu/h	74 ppm at 15 percent O ₂ or 460 ng/J of useful output (3.6 lb/MWh).
Heat recovery units operating independent of the combustion turbine	All sizes	54 ppm at 15 percent O ₂ or 110 ng/J of useful output (0.86 lb/MWh).

[Authority: 40 CFR §60.4320 and 40 CFR Part 60, Table 1]

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	<p>D. <u>Operational Limit</u></p> <ol style="list-style-type: none"> 1. The CHP Project consisting of two (2) identical units comprising of a 7.5 MW combustion turbine and HRSG and a 42 million Btu per hour duct burner shall fire on natural gas as a primary fuel and No. 2 fuel oil as backup fuel except for the duct burner which is fired on natural gas only. [Authority: Permit to Construct 510-0001-5-2073, 5-2074, and 5-2075 issued on June 17, 2011, Part C, Condition 3] 2. The Permittee must operate and maintain the stationary combustion turbines, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction. [Authority: 40 CFR §60.4333(a)]
6.2	<p><u>Testing Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> The Permittee shall submit a notification of the anticipated date for conducting the opacity observations required by 40 CFR §60.11(e)(1). This notification shall also include, if appropriate, a request for the Administrator to provide a visible emissions reader during the performance test. The notification shall be postmarked not less than 30 days prior to such date. [Authority: 40 CFR §60.7(a)(6)]</p> <p>B. <u>Control of Sulfur Oxides</u> The Permittee shall conduct performance test for SO_x in accordance with the methodologies specified in 40 CFR §60.4415 and §60.8.</p> <p>C. <u>Control of Nitrogen Oxides</u> (1) The Permittee shall conduct performance test for NO_x in accordance with the methodologies specified in 40 CFR §60.4340, §60.4400, and §60.8. If you are not using water or steam injection to control NO_x emissions, you must perform annual performance tests in accordance with §60.4400 to demonstrate continuous compliance. If the NO_x emission result from the performance test is less than or equal to 75 percent of the NO_x emission limit for the turbine, you may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test). If the results of any subsequent performance</p>

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	<p>test exceed 75 percent of the NO_x emission limit for the turbine, you must resume annual performance tests. [Authority: 40 CFR §60.4340]</p> <p>(2) For fuel-burning equipment that operates more than 500 hours during a calendar year, the Permittee must perform a combustion analysis and optimize combustion at least once annually. [Authority: COMAR 26.11.09.08G(a)(ii)]</p> <p>D. <u>Operational Limit</u> See Section 6.3, Monitoring Requirements.</p>
6.3	<p><u>Monitoring Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u></p> <p>(1) The Permittee shall:</p> <ul style="list-style-type: none"> (a) Properly operate and maintain the boilers in a manner to prevent visible emissions; and (b) Verify no visible emissions when burning No. 2 fuel oil. The Permittee shall perform a visual observation for a 6-minute period once for every 168 hours that the boiler burns oil or at a minimum of once per year. <p>(2) The Permittee shall perform the following if emissions are visible:</p> <ul style="list-style-type: none"> (a) Inspect combustion control system and boiler operations; (b) Perform all necessary adjustments and/or repairs to the boiler within 48 hours, so that visible emissions are eliminated; (c) Document in writing the results of the inspections, adjustments, and/or repairs to the boilers; and (d) After 48 hours, if the required adjustments and/or repairs had not eliminated the visible emissions, perform Method 9 observations once daily for 18 minutes until corrective actions have eliminated the visible emissions. <p>[Authority: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Sulfur Oxides</u></p> <p>(1) The Permittee shall obtain a certification from the fuel supplier indicating that the oil complies with the limitation on the sulfur content of the fuel oil. [Authority: COMAR 26.11.03.06C]</p> <p>(2) The Permittee must monitor the total sulfur content of the fuel being fired in the turbine, except as provided in §60.4365. The sulfur content of the fuel must be determined using total sulfur methods described in §60.4415. Alternatively, if the total sulfur</p>

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	<p>content of the gaseous fuel during the most recent performance test was less than half the applicable limit, ASTM D4084, D4810, D5504, or D6228, or Gas Processors Association Standard 2377 (all of which are incorporated by Authority, see §60.17), which measure the major sulfur compounds, may be used. [Authority: 40 CFR §60.4360]</p> <p>(3) The Permittee may elect not to monitor the total sulfur content of the fuel combusted in the turbine, if the fuel is demonstrated not to exceed potential sulfur emissions of 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input. [Authority: 40 CFR §60.4365]</p> <p>(4) If the Permittee elects not to demonstrate sulfur content using options in §60.4365, and the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel must be determined and recorded once per unit operating day. [Authority: 40 CFR §60.4370]</p> <p>C. <u>Control of Nitrogen Oxides</u> The Permittee shall establish and document an appropriate parametric monitoring plan in accordance with 40 CFR §60.4355. The plan shall include, but not be limited to: selection of indicators to be monitored, ranges of indicators, process used to obtain representative data, quality assurance, frequency of monitoring, and justification for the proposed elements of monitoring. The parametric monitoring plan is due to the Department sixty days after completion of the performance testing. [Authority: 40 CFR §4355]</p> <p>D. <u>Operational Limit</u> The Permittee shall submit 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 information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator (Department) may request additional relevant information subsequent to this notice. [Authority: 40 CFR §60.7(a)(4)]</p>
6.4	<u>Record Keeping Requirements:</u>

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	<p>A. <u>Control of Visible Emissions</u> The Permittee shall maintain for a period of at least 5 years and shall make available to the Department upon request the following:</p> <ol style="list-style-type: none"> 1. An operation manual and prevention maintenance plan on site; 2. A record of the maintenance performed that relates to combustion performance; 3. A log of visible emissions observations performed; and 4. A record of the hours that No. 2 fuel oil is burned. <p>[Authority: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Sulfur Oxides</u> The Permittee shall maintain for at least five years and shall make available to the Department upon request the following:</p> <ol style="list-style-type: none"> 1. Records of fuel supplier's certification. [Authority: COMAR 26.11.03.06C] 2. Records and results of any tests performed in compliance with the initial testing as required under 40 CFR §60.8 and 40 CFR Part 60, Subpart KKKK. 3. Records and results of fuel sulfur content monitoring. <p>C. <u>Control of Nitrogen Oxides</u> The Permittee shall maintain for at least five (5) years, and shall make available to the Department upon request, records of the following information:</p> <ol style="list-style-type: none"> 1. Records and results of any tests performed in compliance with the initial testing as required under 40 CFR §60.8 and 40 CFR 60, Subpart KKKK. 2. Parametric monitoring plan in accordance with 40 CFR §60.4355 and submit a copy of the plan to the Department upon completion. 3. Results of the combustion analysis at the site for at least 2 years and make these results available to the Department and the EPA upon request; [Authority: COMAR 26.11.09.08G(a)(iii)] <p>D. <u>Operational Limit</u> The Permittee shall maintain for a period of at least 5 years copies of any notifications submitted to the Department regarding physical or operational changes to the existing facility. [Authority: 40 CFR §60.7(a)(4)]</p>
6.5	<u>Reporting Requirements:</u>

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	<p>A. <u>Control of Visible Emissions</u> The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, “Report of Excess Emissions and Deviations.”</p> <p>B. <u>Control of Sulfur Oxides</u></p> <ol style="list-style-type: none"> 1. The Permittee shall report fuel supplier’s certification to the Department upon request. [Authority: COMAR 26.11.09.07C] 2. For each affected unit required to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content under this subpart, the Permittee must submit reports of excess emissions and monitor downtime, in accordance with §60.7(c). Excess emissions must be reported for all periods of unit operation, including start-up, shutdown, and malfunction. [Authority: 40 CFR §60.4375(a)] <p>C. <u>Control of Nitrogen Oxides</u></p> <ol style="list-style-type: none"> 1. For each affected unit required to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content under this subpart, the Permittee must submit reports of excess emissions and monitor downtime, in accordance with §60.7(c). Excess emissions must be reported for all periods of unit operation, including start-up, shutdown, and malfunction. [Authority: 40 CFR §60.4375(a)] 2. For each affected unit required to perform annual performance tests in accordance with 40 CFR §60.4340(a), the Permittee must submit a written report of the results of each performance test before the close of business on the 60th day following the completion of the performance test. [Authority: 40 CFR §60.4375(b)] <p>D. <u>Operational Limit</u> See Section 6.4, Record Keeping requirements.</p>

“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”

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7.0	<u>Emissions Unit Number(s)</u> EU-23 – Non- Emergency Generator

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	EU-23 – One (1) diesel-fired Caterpillar CAT3516C non-emergency generator rated at 2,695 horsepower.
7.1	<p><u>Applicable Standards/Limits:</u></p> <p>A. <u>Control of Visible Emissions</u></p> <ol style="list-style-type: none"> 1. COMAR 26.11.09.05E(2), <u>Emissions During Idle Mode</u>. “A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.” 2. COMAR 26.11.09.05E(3), <u>Emissions During Operating Mode</u>. “A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.” 3. COMAR 26.11.09.05E(4), <u>Exceptions</u>. <ol style="list-style-type: none"> a. “Section E(2) of this regulation does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system. b. Section E(2) of this regulation does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods: <ol style="list-style-type: none"> i. Engines that are idled continuously when not in service: 30 minutes; ii. All other engines: 15 minutes. <ol style="list-style-type: none"> a. Section E(2) and (3) of this regulation do not apply while maintenance, repair, or testing is being performed by qualified mechanics.” <p>B. <u>Control of Sulfur Oxides</u></p> <ol style="list-style-type: none"> 1. COMAR 26.11.09.07A(2)(b), <u>Sulfur Content Limitations for Fuel</u>. “A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: (2) In Areas III and IV: (b) Distillate fuel oils, 0.3 percent.” <p>C. <u>Control of Nitrogen Oxides</u></p> <ol style="list-style-type: none"> 1. COMAR 26.11.09.08B(5), <u>Operator Training</u>. <ol style="list-style-type: none"> a. “For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.

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	<p>b. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.”</p> <p>2. COMAR 26.11.09.08G(1), <u>Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 Percent or Less, and Combustion Turbines with a Capacity Factor Greater than 15 Percent</u>. “A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:</p> <ul style="list-style-type: none"> a. Provide certification of the capacity factor of the equipment to the Department in writing; b. For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually; c. Maintain the results of the combustion analysis at the site for at least 2 years and make these results available to the Department and the EPA upon request; d. Require each operator of an installation, except combustion turbines, to attend operator training programs at least once every 3 years, on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and e. Maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request.” <p>D. <u>NSPS Requirements</u></p> <p>1. The Permittee must meet the following emissions standards:</p> <ul style="list-style-type: none"> a. Particulate matter (PM): 0.03 grams per kilowatt hour (g/kW hr); b. Nitrogen Oxides (NO_x): 0.67 g/kW hr; c. Non-Methane Hydrocarbons (NMHC): 0.19 g/kW hr; and d. Carbon Monoxide (CO): 3.5 g/kW hr. <p>[Reference: 40 CFR §60.4204(b), 40 CFR §60.4201(a), and 40 CFR §1039.101, Table 1]</p> <p><u>Note:</u> <i>Compliance with this condition will be demonstrated by the purchase of a certified engine and operating that engine as required under 40 CFR§60.4211(c).</i></p>
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	<p>2. The Permittee must not exceed the following opacity emission standards:</p> <ul style="list-style-type: none"> a. 20 percent during the acceleration mode; b. 15 percent during the lugging mode; and c. 50 percent during the peaks in either the acceleration or lugging modes. [Reference: 40 CFR §60.4205(b), §60.4201(a), and §1039.105(b)] <p><i>Note:</i> <i>Compliance with this condition will be demonstrated by the purchase of a certified engine and operating that engine as required under 40 CFR§60.4211(c).</i></p> <p>3. The Permittee must meet the non-road diesel fuel sulfur requirements of 40 CFR §1090.305 as follows:</p> <ul style="list-style-type: none"> a. Sulfur content – 15 ppm maximum and b. Cetane index or aromatic content as follows: <ul style="list-style-type: none"> i. A minimum cetane index of 40; or ii. A maximum aromatic content of 35 volume percent. [Reference: 40 CFR §60.4207(b) and 40 CFR §1090.305] <p>4. The Permittee must purchase an engine certified to the emissions standards in 40 CFR §60.4204(b). [Reference: 40 CFR§60.4211(c)]</p> <p>5. Except as provided in 40 CFR §60.4211(g), the Permittee shall do all of the following:</p> <ul style="list-style-type: none"> a. Operate and maintain the generator 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 Part 1068, as applicable. [Reference: 40 CFR §60.4211(a)] <p>6. The Permittee must operate and maintain the generator so that the emission standards are achieved over the entire life of the engines. [Reference: 40 CFR §60.4206]</p>
7.2	<p><u>Testing Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> See Monitoring, Record Keeping, and Reporting Requirements.</p>

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	<p>B. <u>Control of Sulfur Oxides</u> See Monitoring, Record Keeping, and Reporting Requirements.</p> <p>C. <u>Control of Nitrogen Oxides</u> The Permittee shall perform a combustion analysis and optimize combustion at least once annually for any of the engines that operates more than 500 hours during a calendar year. [Reference: COMAR 26.11.09.08G(1)]</p> <p>D. <u>NSPS Requirements</u> See Monitoring, Record Keeping, and Reporting Requirements.</p>
7.3	<p><u>Monitoring Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> The Permittee shall perform preventive maintenance and optimize combustion performance. [Reference: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Sulfur Oxides</u> The Permittee shall obtain a certification from the fuel supplier that the fuel oil is in compliance with the sulfur in fuel limitation. [Reference: COMAR 26.11.03.06C]</p> <p>C. <u>Control of Nitrogen Oxides</u> For engines that operate more than 500 hours during a calendar year; perform a combustion analysis and optimize combustion. [Reference: COMAR 26.11.09.08G(1)(c)]</p> <p>D. <u>NSPS Requirements</u> If the non-emergency generator is equipped with a diesel particulate filter to comply with the emission standards in 40 CFR §60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached. [Reference: 40 CFR §60.4209(b)]</p>
7.4	<p><u>Record Keeping Requirements:</u></p> <p><u>Note:</u> All records must be maintained at the site for a period of at least five (5) years and made available to the Department upon request. [Reference: COMAR 26.11.03.06C(5)(g)]</p>

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	<p>A. <u>Control of Visible Emissions</u> The Permittee shall retain preventive maintenance records on site.</p> <p>B. <u>Control of Sulfur Oxides</u> The Permittee shall retain fuel supplier certifications stating that the fuel oil is in compliance with this regulation. [Reference: COMAR 26.11.09.07C]</p> <p>C. <u>Control of Nitrogen Oxides</u> The Permittee shall maintain the following:</p> <ol style="list-style-type: none"> 1. Records of the results of the combustion analysis. [Reference: COMAR 26.11.09.08G(1)(c) and COMAR 26.11.03.06C] 2. Records of training program attendance for each operator. [Reference: COMAR 26.11.09.08G(1)(e) and COMAR 26.11.03.06C] 3. Records of hours of operation and fuel usage on a monthly basis for all generators. At the end of each month, the Permittee shall calculate the total hours for the prior rolling 12-month period. [Reference: COMAR 26.11.03.06C] <p>D. <u>NSPS Requirements</u> The Permittee shall maintain the following:</p> <ol style="list-style-type: none"> 1. A log for the generator indicating the date of operation, hours of operation, and the reason for operation (i.e. maintenance, power outage, emergency demand response, etc.). 2. For each fuel delivery, obtain a fuel supplier certification that includes the name of the fuel supplier, the amount of fuel delivered, and a statement from the fuel supplier that the diesel fuel complies with the specifications of 40 CFR §1090.305. 3. The EPA Certificate of Conformity demonstrating that the non-emergency generator meets the applicable emissions standards of 40 CFR 60, Subpart IIII. If the non-emergency engine is equipped with a diesel particulate filter, the Permittee must keep records of any corrective action taken after the backpressure monitor has notified the Permittee that the high backpressure limit of the engine is approached. [Reference: 40 CFR §62.4214(c)]
7.5	<u>Reporting Requirements:</u>

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	<p>A. <u>Control of Visible Emissions</u> The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, “Report of Excess Emissions and Deviations.”</p> <p>B. <u>Control of Sulfur Oxides</u> The Permittee shall report fuel supplier certifications for sulfur content to the Department upon request. [Reference: COMAR 26.11.09.07C and COMAR 26.11.03.06C]</p> <p>C. <u>Control of Nitrogen Oxides</u></p> <ol style="list-style-type: none"> 1. The Permittee shall maintain annual fuel use records on site for not less than 3 years, and make these records available to the Department upon request. [Reference: COMAR 26.11.09.08K(3)] 2. The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing with the annual emissions certification. [Reference: COMAR 26.11.09.08G(1)(e)] <p>D. <u>NSPS Requirements</u> See Section 7.4, Record Keeping requirements.</p>

“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”

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SECTION V INSIGNIFICANT ACTIVITIES

This section provides a list of insignificant emissions units that were reported in the Title V permit application. The applicable Clean Air Act requirements, if any, are listed below the insignificant activity.

- (1) No. 3 Stationary internal combustion engines with an output less than 500 brake horsepower (373 kilowatts) and which are not used to generate electricity for sale or for peak or load shaving;

The engines are subject to the following requirements:

- (A) COMAR 26.11.09.05E(2), Emissions During Idle Mode:
The Permittee may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.
- (B) COMAR 26.11.09.05E(3), Emissions During Operating Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.
- (C) Exceptions:
 - (i) COMAR 26.11.09.05E(2) does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.
 - (ii) COMAR 26.11.09.05E(2) does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:
 - (a) Engines that are idled continuously when not in service: 30 minutes
 - (b) all other engines: 15 minutes.
 - (iii) COMAR 26.11.09.05E(2) & (3) do not apply while maintenance, repair or testing is being performed by qualified mechanics.

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(D) New Source Performance Standards: 40 CFR 60, Subpart III and 40 CFR 60, Subpart JJJJ as applicable.

(E) National Emission Standards for Hazardous Air Pollutants: 40 CFR 63, Subpart ZZZZ as applicable.

- (2) ✓ Space heaters utilizing direct heat transfer and used solely for comfort heat;
- (3) ✓ Water cooling towers and water cooling ponds unless used for evaporative cooling of water from barometric jets or barometric condensers, or used in conjunction with an installation requiring a permit to operate;
- (4) No. 4 Unheated VOC dispensing containers or unheated VOC rinsing containers of 60 gallons (227 liters) capacity or less;

The units are subject to COMAR 26.11.19.09D, which requires that the Permittee control emissions of volatile organic compounds (VOC) from cold degreasing operations by meeting the following requirements:

- (a) COMAR 26.11.19.09D(2)(b), which establishes that the Permittee shall not use any VOC degreasing material that exceeds a vapor pressure of 1 mm Hg at 20 ° C;
- (b) COMAR 26.11.19.09D(3)(a—d), which requires that the Permittee implement good operating practices designed to minimize spills and evaporation of VOC degreasing material. These practices, which shall be established in writing and displayed such that they are clearly visible to operators, shall include covers (including water covers), lids, or other methods of minimizing evaporative losses, and reducing the time and frequency during which parts are cleaned;
- (c) COMAR 26.11.19.09D(4), which prohibits the use of any halogenated VOC for cold degreasing.

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The Permittee shall maintain on site for at least five (5) years, and shall make available to the Department upon request, the following records of operating data:

- (a) Monthly records of the total VOC degreasing materials used; and
 - (b) Written descriptions of good operating practices designed to minimize spills and evaporation of VOC degreasing materials.
-
- (5) ✓ Commercial bakery ovens with a rated heat input capacity of less than 2,000,000 Btu per hour;
 - (6) ✓ Confection cookers where the products are edible and intended for human consumption;
 - (7) ✓ Photographic process equipment used to reproduce an image upon sensitized material through the use of radiant energy;
 - (8) ✓ Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding, or disc sanding of wood or wood products;
 - (9) ✓ Equipment for washing or drying products used exclusively for electrolytic plating work, or electrolytic polishing, or electrolytic stripping of brass, bronze, cadmium, copper, iron, lead, nickel, tin, zinc and precious metals;
 - (10) Containers, reservoirs, or tanks used exclusively for:
 - (a) ✓ Storage of butane, propane, or liquefied petroleum, or natural gas;
 - (b) ✓ Storage of lubricating oils;

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- (c) No. 16 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel;
- (d) ✓ The storage of VOC normally used as solvents, diluents, thinners, inks, colorants, paints, lacquers, enamels, varnishes, liquid resins, or other surface coatings and having individual capacities of 2,000 gallons (7.6 cubic meters) or less;
- (11) ✓ Charbroilers and pit barbecues as defined in COMAR 26.11.18.01 with a total cooking area of 5 square feet (0.46 square meter) or less;
- (12) ✓ First aid and emergency medical care provided at the facility, including related activities such as sterilization and medicine preparation used in support of a manufacturing or production process;
- (13) ✓ Potable water treatment equipment, not including air stripping equipment;
- (14) ✓ Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;
- (15) ✓ Laboratory fume hoods and vents;
- (16) any other emissions unit at the facility which is not subject to an applicable requirement of the Clean Air Act (list and describe):
- No. 2 Vulcan VCCB-47 Charbroiler equipped with an exhaust ventilator hood (ARA Registration No. 510-0001-8-0364 and 8-0365)

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No. 4 Ethylene Oxide (EO) sterilizers with add on catalytic oxidizers.

Unit	Sterilizer Description	Cycles/Yr	Sterilizer Size
1	Steris Amsco Eagle 3016 EO Sterilizer.	87	4.8 ft ³
2	Steris Amsco Eagle 3016 EO Sterilizer.	87	4.8 ft ³
3	Steris Amsco Eagle 3016 EO Sterilizer.	87	4.8 ft ³
4	Steris Amsco Eagle 3016 EO Sterilizer.	87	4.8 ft ³

The Air Pollution Control Device (APCD), consists of two (2) catalytic oxidizers. Each EO sterilizer vents to one of the two catalytic oxidizers. The catalytic oxidizers have a self-check for catalyst operation by verifying a temperature increase during the exhaust and an alarm if a minimum temperature is not detected. LHMI Utilities, LLC has a service contract for all sterilization related equipment.

The EO sterilizers are subject to 40 CFR Part 63 Subpart WWWW – National Emission Standards for Hospital Ethylene Oxide Sterilizers, which requires that the Permittee control emissions from the EO sterilizers by meeting the following requirements:

- a. The Permittee must sterilize full loads of items having a common aeration time, except under medically necessary circumstances as that term is defined in §63.10448.
- b. The Permittee must submit an Initial Notification of Compliance Status as specified in §63.10430(a). In the Initial Notification of Compliance Status, you must certify that you are venting the ethylene oxide emissions from each sterilization unit to an add-on air pollution control device. You must certify that you are operating the control device during all sterilization processes and in accordance with manufacturer's recommended procedures.

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- c. The Permittee shall maintain records in a form suitable and readily available for review for five (5) years following the date of each record. The records must be kept on site for at least two (2) years after the date of each record and may be kept offsite for the remaining three (3) years. The records shall include a copy of the Initial Notification of Compliance Status that was submitted to comply with this subpart.

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SECTION VI STATE-ONLY ENFORCEABLE CONDITIONS

The Permittee is subject to the following State-only enforceable requirements:

1. Applicable Regulations:
 - a. **COMAR 26.11.06.08, Nuisance.** “An installation or premises may not be operated or maintained in such a manner that a nuisance or air pollution is created. Nothing in this regulation relating to the control of emissions may in any manner be construed as authorizing or permitting the creation of, or maintenance of, nuisance or air pollution.”
 - b. **COMAR 26.11.06.09, Odors.** “A person may not cause or permit the discharge into the atmosphere of gases, vapors, or odors beyond the property line in such a manner that a nuisance or air pollution is created.”
2. Record Keeping and Reporting Requirements:
 - a. The Permittee shall submit to the Department, by April 1 of each year during the term of this permit, a written certification of the results of an analysis of emissions of toxic air pollutants from the Permittee’s facility during the previous calendar year. The analysis shall include either:
 - i. a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or
 - ii. a revised compliance demonstration, developed in accordance with requirements included under COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.

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APPENDIX A. – PLANTWIDE APPLICABILITY LIMIT (PAL)

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A.0	<u>Emissions Unit Number(s)</u> Plant Wide Applicability Limit (PAL)
A.1	<p><u>Applicable Standards/Limits:</u> [Authority: PAL issued on June 17, 2011]</p> <p>A. <u>General Requirements</u></p> <p>2. COMAR 26.11.03.14A, <u>Revisions of Part 70 Permits – General Requirements</u>. “The Permittee shall submit an application to the Department to revise a part 70 permit when required under Regulations .15-.17 of this chapter.”</p> <p>3. COMAR 26.11.17.08D, <u>Plant wide Applicability Limit: Permit - General Requirements</u>.</p> <p>a. “For each month during the PAL effective period after the first 12 months of establishing a PAL, the Permittee shall show that the sum of the monthly emissions from each emissions unit under the PAL for the previous 12 consecutive months is less than the PAL. For each month during the first 11 months from the PAL effective date, the Permittee shall show that the sum of the preceding monthly emissions from the PAL effective date for each emissions unit under the PAL is less than the PAL.”</p> <p>b. “The Permittee is subject to:</p> <p>i. All applicable existing State and federal requirements; and</p> <p>ii. Any future State or federal requirements that apply to an emissions unit under an approved PAL.”</p> <p>c. “During the PAL effective period, emission reductions of a PAL pollutant may not be creditable for use as ERCs unless the level of the PAL is reduced by the amount of the reduction and the reduction would be creditable in the absence of the PAL.”</p> <p>d. “This PAL shall be established, renewed, or increased through a public participation procedure that is consistent with 40 CFR §§51.160 and 51.161. The Department shall provide the public with notice of the proposed approval of the PAL permit and at least a 30-day period for submittal of public comment. All comments received by the Department shall be addressed before the Department takes final action on the permit.”</p>

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| | <p>4. COMAR 26.11.17.08E, <u>Expiration of a PAL.</u></p> <ul style="list-style-type: none">a. This PAL shall expire at the end of the PAL effective period unless it is renewed according to section G of this regulation and the requirements of (2) through (7) shall apply.”b. The Permittee shall submit a proposed allowable emission limitation for each emissions unit (or each group of emissions units, if this distribution is more appropriate, as determined by the Department) by distributing the PAL allowable emissions among each of the emissions units that existed under the PAL. If the PAL had not yet been adjusted for any applicable requirement that became effective during the PAL effective period, as required under §G of this regulation, the distribution shall be made as if the PAL had been adjusted.”c. “The Department shall decide whether and how the PAL allowable emissions will be distributed and issue a revised permit incorporating allowable limits for each emissions unit, or each group of emissions units, as the Department determines is appropriate.”d. “Each emissions unit shall comply with the allowable emission limitation on a 12-month rolling basis. The Department may approve the use of monitoring systems (for example, source testing or emission factors) other than CEMs, CERMes, PEMs, or CPMs to demonstrate compliance with the allowable emission limitation.”e. “Until the Department issues the revised permit incorporating allowable limits for each emissions unit, or each group of emissions units, the Permittee shall continue to comply with the source-wide, multi-unit emissions cap equivalent to the level of the PAL emission limitation.”f. “Any physical change or change in the method of operation at the facility is subject to the nonattainment major NSR requirements if the change meets the definition of a major modification.”g. The Permittee shall continue to comply with any State or federal applicable requirements (BACT, RACT, NSPS, etc.) that may have applied either during the PAL effective period or before the PAL effective period, except for those emission limitations that had been established pursuant to Regulation .02G of this chapter but were eliminated by the PAL in accordance with Regulation .07A(2)(c) of this chapter. |
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| | <p>5. COMAR 26.11.17.08F, <u>Reopening a PAL Permit.</u></p> <ul style="list-style-type: none">a. During the PAL effective period, the permit may be reopened to:<ul style="list-style-type: none">i. Correct any errors in setting the PAL or to reflect a more accurate determination of emissions used to establish the PAL;ii. Reduce the PAL if the source creates emission reduction credits; oriii. Reflect a necessary increase in the PAL level.b. The Department may reopen the PAL to:<ul style="list-style-type: none">i. Reflect a new federal or State requirement that would apply to an emissions unit after the effective date or for other reasons determined by the Department;ii. Reduce the PAL consistent with any other requirement that is enforceable as a practicable matter, and that the Department may impose on the major stationary source; oriii. Reduce the PAL if the Department determines that a reduction is necessary to avoid causing or contributing to:<ul style="list-style-type: none">1. A NAAQS or PSD increment violation; or2. An adverse impact on an air quality related value that has been identified for a Federal Class I Area by a federal land manager and for which information is available to the general public.c. Any adjustment to the PAL shall be made through the public participation procedures required when the PAL was first established. <p>6. COMAR 26.11.17.08G, <u>Renewal of a PAL.</u></p> <ul style="list-style-type: none">a. The Permittee shall request a renewal of the PAL by applying for the renewal not later than 6 months before the existing PAL permit expiration date. If the Permittee submits a complete application to renew the PAL within that time period, the PAL shall continue to be effective until a renewed permit is issued.b. The application to renew the PAL shall contain the following:<ul style="list-style-type: none">i. The information required in §A of this regulation;ii. A proposed PAL level;iii. The sum of potential to emit of all emissions units under the PAL and supporting documentation; and |
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	<ul style="list-style-type: none">iv. Any other information the Permittee wishes the Department to consider in determining the appropriate level for renewing the PAL.c. Adjustments at Renewal.<ul style="list-style-type: none">i. If the emissions level calculated in accordance with paragraph (f)(6) of this section is equal to or greater than 80 percent of the PAL level, the reviewing authority may renew the PAL at the same level without considering the factors set forth in paragraph (f)(10)(iv)(B) of this section (§51.165).ii. The Department may set the PAL at a level that it determines to be more representative of the source's baseline actual emissions, or that it determines to be appropriate considering air quality needs, advances in control technology, anticipated economic growth in the area, desire to reward or encourage the source's voluntary emissions reductions, or other factors as specifically identified by the Department in its written rationale.iii. If the potential to emit of the source is less than the PAL, the Department shall adjust the PAL to a level not greater than the potential to emit of the source, and the Department may not approve a renewed PAL level higher than the current PAL unless the Permittee has complied with the provisions of Regulation .09A of this chapter."d. If a compliance date for a State or federal requirement that applies to the PAL source occurs during the PAL effective period, and if the Department has not already adjusted for this requirement, that PAL shall be adjusted at the time of PAL renewal or Title V permit renewal, whichever occurs first.e. The Department shall provide both the proposed PAL level and a written rationale for the proposed PAL level to the public for review and comment. During the public review, any person may propose a PAL level for the source for consideration by the Department. <p>7. COMAR 26.11.17.08H, <u>Increasing a PAL</u>.</p> <ul style="list-style-type: none">a. Requirements for Increasing a PAL.<ul style="list-style-type: none">i. A PAL may be increased during the PAL effective period if the requirements of this subsection are met.

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	<ul style="list-style-type: none"> ii. The Permittee shall submit a complete application to request an increase in the PAL limit for a PAL major modification. The application shall identify the emissions units contributing to the increase in emissions so as to cause the major stationary source's emissions to equal or exceed its PAL. iii. As part of this application, the Permittee shall demonstrate that the sum of the baseline actual emissions of the small emissions units, plus the sum of the baseline actual emissions of the significant and major emissions units assuming application of BACT equivalent controls, plus the sum of the allowable emissions of the new or modified emissions units, exceeds the PAL. The level of control that would result from BACT equivalent controls on each significant or major emissions unit shall be determined by conducting a new BACT analysis at the time the application is submitted, unless the emissions unit is currently required to comply with a BACT or LAER requirement that was established within the preceding 10 years. In this case, the assumed control level for that emissions unit shall be equal to the level of BACT or LAER with which that emissions unit shall currently comply. iv. The Permittee shall obtain a major NSR permit for all emissions units identified in this subsection regardless of the magnitude of the emissions increase resulting from them (that is, no significant levels apply). These emissions units shall comply with any emissions requirements resulting from the nonattainment major NSR program processed (for example, LAER), even though they have also become subject to the PAL or continue to be subject to the PAL. v. The PAL permit shall require that the increased PAL level be effective on the day any emissions unit that is part of the PAL major modification becomes operational and begins to emit the PAL pollutant. <p>b. The Department shall calculate the new PAL as the sum of the allowable emissions for each modified or new emissions unit, plus the sum of the baseline actual emissions of the significant and major emissions units (assuming application of BACT equivalent controls as determined in accordance with §H(1)(c)</p>

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	<p>of this regulation), plus the sum of the baseline actual emissions of the small emissions units.</p> <p>c. The PAL permit shall be revised to reflect the increased PAL level pursuant to the public notice requirements of §D(6) of this regulation.</p> <p>B. <u>Control of Nitrogen Oxides</u> The Permittee is subject to a Plant wide Applicability Limit (PAL) of 104.9 tons of NO_x emissions in any 12-month rolling period. The baseline period of 2005-2006 was used to determine the baseline actual emissions for all existing emission units. [Authority: PAL issued on June 17, 2011]</p>
A.2	<p><u>Testing Requirements:</u></p> <p>A. <u>General Requirements</u> See Section A.3, Monitoring Requirements.</p> <p>B. <u>Control of Nitrogen Oxides</u> See Section A.3, Monitoring Requirements.</p>
A.3	<p><u>Monitoring Requirements:</u></p> <p>A. <u>General Requirements</u> The PAL permit shall remain in effect for a period not to exceed 5 years from the PAL effective date unless the Permittee applies to renew the PAL in accordance with COMAR 26.11.07.08G before the end of the PAL effective period, then the PAL does not expire at the end of the PAL effective period but remains in effect until a revised PAL permit is issued by the Department. [Authority: PAL issued on June 17, 2011]</p> <p>B. <u>Control of Nitrogen Oxides</u></p> <ol style="list-style-type: none"> For each month during the PAL effective period after the first 12 months of establishing a PAL, the Permittee shall show that the sum of the monthly emissions from each emissions unit under the PAL for the previous 12 consecutive months is less than the PAL. For each month during the first 11 months from the PAL effective date, the Permittee shall show that the sum of the preceding monthly emissions from the PAL effective date for each emissions unit under the PAL is less than the PAL. [Authority: COMAR 26.11.17.08D(3)]

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2. After the first twelve months of the effective date of the PAL period, the Permittee shall document the total NO_x emissions for each emissions unit identified in the PAL and demonstrate that the aggregate emissions have not exceeded the prescribed PAL. Additionally, for each month after the first year, the Permittee shall document NO_x emissions for each emissions unit identified in the PAL and continue to demonstrate that the aggregate emissions for the previous 12 months have not exceeded the PAL
3. The Permittee's NO_x emissions calculations shall include emissions from startup, shutdowns, and malfunctions. The Permittee shall state the calculation procedures used to convert the monitoring system data to a monthly emissions and annual emissions based on a 12-month rolling total for each month. **[Authority: COMAR 26.11.17.08C(2)(d) and (f)]**
4. The Permittee shall conduct monitoring and record keeping requirements in accordance with COMAR 26.11.17.09A, Monitoring and Record Keeping Requirements.
5. Emissions of NO_x from all of the emission units (EUs) at the facility will be calculated on a 12-month rolling annual basis using emission factors (EFs) and activity levels. EFs will have units of mass of NO_x generated per unit of activity. The primary unit of activity will be the amount of the fuel burned in each EU in MMBtu/hr. The fuel use activity level for each EU will be measured continuously using totalizing flow meters for both natural gas and fuel oil. The process control system will convert raw volumetric flow data from the meters to mass flow data. The mass flow data will then be converted using fuel energy content (e.g. Btu/cubic foot, Btu/lb, Btu/gal, etc.) to rates of energy input: MMBtu/hr. NO_x emissions for each EU will be calculated each month using the EF and activity level as follows:

$$M_{NOxEUi} = A_{LEUi} \times EF_{EUi}$$

Where: M_{NOxEUi} is the tons of NO_x emitted by the ith EU during the period

A_{LEUi} is the activity level (fuel burned) for the ith EU during the period.

EF_{EUi} is the emission factor for the ith emission unit.

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Total NO_x emission for a monthly period will be calculated by summing M_{NO_xEU_i} for all EUs, as shown in the following table, except as revised per footnote 3 to the table.

Significant/ Small	Device	Fuel Type	AL _{EU_i} Heat Input (MMBtu/m onth)	EF _{EU_i} NO _x Emission Factor (lb/MMBtu)	Emissions (lb/month)	Unit Conversion	M _{NO_xEU_i} Emission (tons/ Month)
Significant	EU-1 – EU-4 (Boiler Nos. 7- 10)	Gas		X 0.086 =		/2000 =	
Significant	EU-1 – EU-4 (Boiler Nos. 7- 10)	Oil		X 0.156 =		/2000 =	
Significant	EU-1 – EU-4 (Boiler Nos. 7- 10)	Gas		X 0.098 =		/2000 =	
Significant	EU-1 – EU-4 (Boiler Nos. 7- 10)	Oil		X 0.143 =		/2000 =	
Significant	EU-20 (NEP CT)	Gas		X 0.066 =		/2000 =	
Significant	EU-20 (NEP CT)	Oil		X 0.266 =		/2000 =	
Significant	EU-21 (SEP CT)	Gas		X 0.066 =		/2000 =	
Significant	EU-21 (SEP CT)	Oil		X 0.266 =		/2000 =	
Significant	EU-20 (NEP Duct Burner)	Gas		X 0.080 =		/2000 =	
Significant	EU-21 (SEP Duct Burner)	Gas		X 0.080 =		/2000 =	
Significant	EU-22 (SEP Boiler)	Gas		X 0.035 =		/2000 =	
Significant	EU-22 (SEP Boiler)	Oil		X 0.143 =		/2000 =	
Significant	EU-13; and EU-14 EU-19 (Engine Genera tors (3:	Oil		X 3.200 =		/2000 =	

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	750 kW; 1: 1750 kW and 6: 1825 kW))						
Small	Engine Generators (2: 250 kW & 275 kW)	Oil		X 4.410 =		/2000 =	
Small	Fire Pump (244 HP)	Oil		X 4.410 =		/2000 =	
Small	Gas-fired cooking equipment	Gas		X 0.137 =		/2000 =	
Significant	EU-23 (Engine Generator, 1,825 kW)	Oil		X 0.123		/2000	
						Total	

Notes: 1. EPA HHV oil = 140,000 Btu/gal; HHV Gas = 1,020 Btu/ccf
2. Final emission factors for new equipment will be submitted to MDE in the future.
3. Emission factors from the most recent, Department approved, stack tests will be used where applicable.

6. The Permittee shall revalidate the PAL pollutant through performance testing or other scientifically valid means approved by the Department. This testing shall occur at least once during the term of this permit. **[Authority: COMAR 26.11.17.09A(12)]**
7. The Permittee shall retain a copy of all records necessary to determine compliance with any requirement of Regulations .07—.09 of this chapter and of the PAL, including a determination of each emissions unit's 12-month rolling total emissions for 5 years from the date of that record. **[Authority: COMAR 26.11.17.09A(13)]**
8. The Permittee shall retain a copy of the following records for the duration of the PAL effective period plus 5 years:
 - a. A copy of the PAL permit application and any application for revisions to the PAL; and
 - b. Each annual certification of compliance pursuant to Title V and the data relied on in certifying the compliance. **[Authority: COMAR 26.11.17.09A(14)]**

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| | <p>9. <u>Monitoring Plan for the Facility</u>
12-month rolling annual NO_x emissions totals for the entire source will be complied by summing monthly NO_x emissions for each EU calculated in this manner. This tally will demonstrate that total NO_x emissions are below the PAL: 104.9 tons. [Authority: PAL issued on June 17, 2011]</p> <p>10. <u>Monitoring System for Emissions Units Added or Modified After Issuance of the PAL</u>
The monitoring system for emissions units added or modified after issuance of the PAL shall use one of the four general monitoring approaches in paragraphs (a) through (d) below.</p> <p>a. Mass balance calculations - The owner or operator using mass balance calculations to monitor PAL pollutant emissions shall meet the following requirements:</p> <ul style="list-style-type: none">i. Provide a demonstrated means of validating the published content of the PAL pollutant that is contained in or created by all materials used in or at the emissions unit;ii. Assume that the emissions unit emits all of the PAL pollutant that is contained in or created by any raw material or fuel used in or at the emissions unit, if it cannot otherwise be accounted for in the process; andiii. Where the vendor of a material or fuel, which is used in or at the emissions unit, publishes a range of pollutant content from such material, the owner or operator must use the highest value of the range to calculate the PAL pollutant emissions unless the Director determines there is site-specific data or a site-specific monitoring program to support another content within the range. [Authority: 40 CFR §52.21(aa)(12)(iii)] <p>b. CEMS - An owner or operator using CEMS to monitor PAL pollutant emissions shall meet the following requirements:</p> <ul style="list-style-type: none">i. CEMS must comply with applicable Performance Specifications found in 40 CFR part 60, appendix B; andii. CEMS must sample, analyze and record data at least every 15 minutes while the emissions unit is operating. [Authority: 40 CFR §52.21(aa)(12)(iv)] <p>c. CPMS or PEMS - An owner or operator using CPMS or PEMS to monitor PAL pollutant emissions shall meet the following requirements:</p> |
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	<ul style="list-style-type: none"> i. The CPMS or the PEMS must be based on current site-specific data demonstrating a correlation between the monitored parameter(s) and the PAL pollutant emissions across the range of operation of the emissions unit; and ii. Each CPMS or PEMS must sample, analyze, and record data at least every 15 minutes, or at another less frequent interval approved by the Director, while the emissions unit is operating. [Authority: 40 CFR §52.21(aa)(12)(v)] <p>d. Emissions Factors - An owner or operator using emission factors to monitor PAL pollutant emissions shall meet the following requirements:</p> <ul style="list-style-type: none"> i. All emission factors shall be adjusted, if appropriate, to account for the degree of uncertainty or limitations in the factors' development; ii. The emissions unit shall operate within the designated range of use for the emission factor, if applicable; and iii. If technically practicable, the owner or operator of a significant emissions unit that relies on an emission factor to calculate PAL pollutant emissions shall conduct validation testing to determine a site-specific emission factor within 6 months of PAL permit issuance, unless the Director determines that testing is not required. [Authority: 40 CFR §52.21(aa)(12)(vi)]
A.4	<p><u>Record Keeping Requirements:</u></p> <p><u>General Requirements</u> See Section A.3, Monitoring Requirements.</p> <p>B. <u>Control of Nitrogen Oxides</u></p> <ul style="list-style-type: none"> 1. The PAL shall remain in effect for a period not to exceed 5 years from the PAL effective. [Authority: COMAR 26.11.17.08C(1)] 2. The Permittee shall retain a copy of all records necessary to determine compliance with any requirement of COMAR 26.11.17.07 through .09 and of the PAL, including a determination of each emission unit's 12-month rolling total emissions for 5 years from the date of that record. [Authority: COMAR 26.11.17.09A(13)]

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	<p>3. The Permittee shall retain a copy of the following records for the duration of the PAL effective period plus 5 years:</p> <ul style="list-style-type: none"> a. A copy of the PAL permit application and any application for revisions to the PAL; and b. Each annual certification of compliance pursuant to Title V and the data relied on in certifying the compliance. [Authority: COMAR 26.11.17.09A(14)] <p>4. 12-month rolling annual NO_x emissions totals for the entire source will be compiled by summing month NO_x emissions for each EU calculated in this manner. This tally will demonstrate that total NO_x emissions are below the PAL.</p>
A.5	<p><u>Reporting Requirements:</u></p> <p>A. <u>General Requirements</u> See Section A.3, Monitoring Requirements.</p> <p>B. <u>Control of Nitrogen Oxides</u></p> <p>2. The Permittee shall conduct reporting requirements in accordance with COMAR 26.11.17.09B, <u>Reporting Requirements</u>.</p> <ul style="list-style-type: none"> a. "A semiannual report shall be submitted to the Department within 30 days of the end of each reporting period, beginning 6 months after the PAL effective date. This report shall contain the following information: <ul style="list-style-type: none"> i. The identification of the owner and operator and the permit number; ii. Total annual emissions in tons per year based on a 12-month rolling total for each month in the reporting period recorded pursuant to §A(13) of this regulation; iii. All data relied upon including any quality assurance or quality control data in calculating the monthly and annual PAL pollutant emissions; iv. A list of any emissions units modified or added to the major stationary source during the preceding 6-month period; v. The number, duration, and cause of any deviation or monitoring malfunction, other than the time associated with zero and span calibration checks, and any corrective actions taken; vi. A notification of a shutdown of any monitoring system, whether the shutdown was permanent or temporary, the

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	<p>reason for the shutdown, the anticipated date that the monitoring system will be fully operational or replaced with another monitoring system, and whether the emissions unit monitored by the system continued to operate and the calculation of the emissions of the pollutant or the number determined by methods included in the permit; and</p> <p>vii. A signed statement by the responsible official certifying the truth, accuracy, and completeness of the information provided in the report.</p> <p>b. The Permittee shall promptly submit reports of any deviation or exceedances of the PAL requirements including periods when no monitoring is available. A report submitted pursuant to COMAR 26.11.03.06C(7)(a)(i) shall satisfy this reporting requirement. The deviation reports shall be submitted within the time limits prescribed in the source's Title V permit. The report shall contain the following information:</p> <p>i. The identification of the owner or operator and the permit number;</p> <p>ii. The PAL requirement that experienced the deviation or that was exceeded;</p> <p>iii. The emissions resulting from the deviation or the exceedances; and</p> <p>iv. A signed statement by the responsible official certifying the truth, accuracy, and completeness of the information provided in the report.</p> <p>c. The Permittee shall submit to the reviewing authority the results of any revalidation test or method within 3 months after completion of the test method.</p>

JHMI Utilities, LLC

Title V – Part 70 Operating Permit

Renewal Application

Prepared for:

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Appendix B: 2021 Annual Compliance Certification Report

VI. Application Completeness Checklist

The purpose of this part is to list the information required to achieve a Part 70 application shield.

Cover Page

- (✓) Name and address of owner or operator, including telephone number.
- (✓) Name and address of facility, including the plant manager's name and telephone number.
- (✓) A 24-hour emergency telephone number for air pollution matters.

Section 1 CERTIFICATION STATEMENTS

- (✓) The certification statement completed and signed by a responsible official.

Section 2 FACILITY DESCRIPTION SUMMARY

- (✓) A brief description of each of the source's process(es), including all applicable SIC codes and end products.
- () Flow diagrams indicating all emissions units, emission points, and control devices – No changes.
- () A plot plan of the entire facility.
- (✓) Emission Certification Report.
- (✓) General Emissions Information.

Section 3 EMISSIONS UNIT DESCRIPTIONS

This section must be completed for each emissions unit.

Part A

- (✓) Emissions unit number.
- (✓) Detailed description of unit, including all emission points.
- (✓) Federally enforceable limit(s) on the operating schedule.

- (✓) Fuel consumption information for any emissions unit that consumes fuel including the type of fuel, percent sulfur, and annual usage of fuel.

Part B

- (✓) A citation and description of each federally enforceable requirement, including all emission standards, for each emissions unit.
- (✓) A statement of compliance demonstration techniques for each requirement, including a description of monitoring, record keeping, reporting requirements, and test methods.
- (✓) The frequency of submittal of the compliance demonstration during the permit term.

Part C – Not used

- () Emissions unit number.
- () Permit to construct number.
- () Emissions point number(s).
- () Date(s) the permit to construct was issued.
- () Condition number(s) as indicated on the permit to construct.
- () Description of the permit condition(s) and the reason(s) why they are believed to be obsolete, extraneous, or insignificant.

Part D – Not used

- () Description of all alternate operating scenarios that apply to an emissions unit.
- () Number assigned to each scenario.
- () Emissions unit number.
- () Description of the operating parameters for the emissions unit and other information which describes the how the operation of the unit will change under the different scenario.

Part E – Not used

- () A citation and description of each federally enforceable requirement triggered by an operating scenario, including all emission standards, for each emissions unit.
- () As an attachment, the date and results of the most recent compliance demonstration for each emission standard and/or emissions certification report with relevant supporting documentation.
- () A statement of compliance demonstration techniques for each requirement, including a description of monitoring, record keeping, reporting requirements, and test methods.
- () The frequency of submittal of the compliance demonstration during the permit term.

Section 4 CONTROL EQUIPMENT

- (✓) The type of each piece of air pollution control equipment
- (✓) The capture and control efficiencies of the control equipment.

Section 5 SUMMARY SHEET OF POTENTIAL EMISSIONS – Not used

- () Quantity of potential emissions for criteria pollutants and HAPs emitted in tons per year for each emissions unit.
- () Fugitive emission estimations for the entire facility for criteria pollutants and HAPs emitted in tons per year.
- () Basis for all emission calculations.

Section 6 AN EXPLANATION OF PROPOSED EXEMPTIONS FROM OTHERWISE APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS – Not Used

- () An explanation of the proposed exemption.

**Section 7 COMPLIANCE SCHEDULE FOR NONCOMPLYING
EMISSIONS UNITS – Not Used**

- () Identification of emissions unit(s) not in compliance, including the requirement being violated and the effective compliance date.
- () Detailed description of methods to be used to achieve compliance.
- () A schedule of remedial measures, including an enforceable sequence of actions with milestones.

Attachments

- (✓) Checklist of Insignificant Activities
- () CAM Plan (If Applicable) – **Not applicable**

MARYLAND DEPARTMENT OF THE ENVIRONMENT
1800 Washington Boulevard • Baltimore MD 21230
(410) 537-3000 • 1-800-633-6101 • <http://www.mde.state.md.us>

PART 70 PERMIT APPLICATION FOR RENEWAL
AIR AND RADIATION MANAGEMENT ADMINISTRATION

Facilities required to obtain a Part 70 permit under COMAR 26.11.03.01 must complete and return this form. Applications are incomplete unless all applicable information required by COMAR 26.11.03.03 and 26.11.03.13 is supplied. Failure to supply additional information required by the Department to enable it to act on the application may result in loss of the application shield and denial of this application.

Owner and Operator:

Name of Owner or Operator: JHMI Utilities, LLC		
Street Address: 600 N. Wolfe Street		
City: Baltimore	State: MD	Zip Code: 21289
Telephone Number (410) 955-8300	Fax Number (410) 502-6924	

Facility Information:

Name of Facility: Johns Hopkins Hospital		
Street Address: 600 N. Wolfe Street		
City: Baltimore	State: MD	Zip Code: 21289
Plant Manager: Phillip Kruer Assistant Director Energy Management, Facilities	Telephone Number: (410) 955-1599	Fax Number: (410) 502-0747
24-Hour Emergency Telephone Number for Air Pollution Matters: (410) 955-5000		

List, on a separate page, the names and telephone numbers of other facility owners and persons with titles.

SECTION 1. CERTIFICATION STATEMENTS**1. Compliance Status with Applicable Enhanced Monitoring and Compliance Certification Requirements**

The emissions units identified in this application are in compliance with applicable enhanced monitoring and compliance certification requirements.

2. Certification of Current Compliance with All Applicable Federally Enforceable Requirements

Except for the requirements identified in Section 7 of this application, for which compliance is not achieved, I hereby certify, based on information and belief formed after reasonable inquiry, that the facility is currently in compliance with all applicable federally enforceable requirements and agree that the facility will continue to comply with those requirements during the permit term.

You must complete a Section 7 form for each non-complying emissions unit.

3. Statement of Compliance with Respect to All New Applicable Requirements Effective During the Permit Term

I hereby state, based on information and belief formed after reasonable inquiry, that the facility agrees to meet, in a timely manner, all applicable federally enforceable requirements that become effective during the permit term, unless a more detailed schedule is expressly required by the applicable requirement.

4. Risk Management Plan Compliance

I hereby certify that, based on information and belief formed after reasonable inquiry, that a Risk Management Plan as required under §112(r) of the Clean Air Act:

☐ has been submitted;

☐ will be submitted at a future date; or

☒ does not need to be submitted.



5. Statement of Truth, Accuracy, and Completeness

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision and in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person(s) who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

DocuSigned by:
RESPONSIBLE OFFICIAL: 
X _____ 8/31/2022
B2DB30BB2962441...
SIGNATURE DATE

Anatoly Gimburg
PRINTED NAME

Vice President, Facilities
TITLE



SECTION 2. FACILITY DESCRIPTION SUMMARY**1. Major Activities of Facility**

Briefly describe the major activities, including the applicable SIC Code(s) and end product(s).

Johns Hopkins Hospital (the "Permittee") is a major medical facility that also provides an educational and research setting for undergraduate and graduate students.

The Permittee operates the following air emission units: four (4) boilers rated at 102.5 MMBtu/hr; one (1) boiler rated at 94 MMBtu/hr; one (1) boiler rated at 50.4 MMBtu/hr equipped with a low NOx burner and flue gas recirculation; seven (7) diesel generators rated at greater than 1,000 BHP; and two (2) Combined Heat and Power combustion turbines rated at 7.5 MW, each with a heat recovery steam generator equipped with a 42 MMBtu/hr duct burner. All six (6) boilers and the combustion turbines can be fired with distillate fuel oil or natural gas. The duct burners are fired only on natural gas. The diesel generators are fired with No. 2 fuel oil only.

The primary SIC code for the facility is 8221.

2. Facility-Wide Emissions

- A. This facility is required to obtain a Part 70 Operating Permit because it is:
Check appropriate box:

- ☒ Actual Major
☐ Potential Major
☐ Solid Waste Incineration Unit Requiring Permit Under § 129(e) of CAA

- B. List the actual facility-wide emissions (tons/yr) below*:

PM10 0.85 NOx 48.45 VOC 3.48 SOx 0.66 CO 54.31 HAPs 0.45

* As reported in the 2021 Emissions Certification Report.

3. Include With the Application:

Annual Emissions Certification Report (copy of the most recent submitted to the Department.) - **See Appendix A**

Annual Compliance Certification Report (copy of the most recent submitted to the Department.) - **See Appendix B**



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: EU-1 through EU-4 1a. Date of installation (month/year): 01/1963	2. MDE Registration No.:(if applicable) 5-0303 through 5-0306									
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <p>Four (4) Springfield (Cleaver-Brooks), model AO-24, boilers rated at 102.5 MMBtu/hr heat input. These boilers are fired by natural gas or distillate oil only. The boilers are located in the North Energy Plant.</p> <p>The boilers are used for steam generation to support hospital facilities. Each boiler has a design steam flow of 80,000 lb/hr.</p>										
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: <u> n/a </u> Continuous Processes: <u> n/a </u> hours/day <u> n/a </u> days/year Batch Processes: <u> n/a </u> hours/batch <u> n/a </u> batches/day <u> n/a </u> days/year										
5. Fuel Consumption: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type(s) of Fuel</th> <th style="text-align: left;">% Sulfur</th> <th style="text-align: left;">Annual Usage (specify units)</th> </tr> </thead> <tbody> <tr> <td>1. <u> Natural Gas </u></td> <td><u> neg. </u></td> <td><u> 178 MMCF </u></td> </tr> <tr> <td>2. <u> Distillate Oil </u></td> <td><u> <0.3% by weight </u></td> <td><u> 21.5 kGal </u></td> </tr> </tbody> </table>		Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	1. <u> Natural Gas </u>	<u> neg. </u>	<u> 178 MMCF </u>	2. <u> Distillate Oil </u>	<u> <0.3% by weight </u>	<u> 21.5 kGal </u>
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)								
1. <u> Natural Gas </u>	<u> neg. </u>	<u> 178 MMCF </u>								
2. <u> Distillate Oil </u>	<u> <0.3% by weight </u>	<u> 21.5 kGal </u>								
6. Emissions in Tons: A. Actual Major: <u> </u> Potential Major: <u> X </u> (note: before control device) B. Actual Emissions*: NOx <u> <5.28 </u> SOx <u> <0.04 </u> VOC <u> <0.36 </u> PM10 <u> <0.12 </u> HAPs <u> <4.94E-3 </u> * As reported in the 2021 Emissions Certification Report for each unit.										



MARYLAND DEPARTMENT OF THE ENVIRONMENT**SECTION 3A. EMISSIONS UNIT DESCRIPTIONS**

1. Emissions Unit No.: EU-5 1a. Date of installation (month/year): 05/1981	2. MDE Registration No.:(if applicable) 5-0734									
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <p>One (1) Cleaver-Brooks, model DLD-94E, boiler rated at 94 MMBtu/hr heat input. This boiler is fired by natural gas or distillate oil only. The boiler is located in the North Energy Plant.</p> <p>The boiler is used for steam generation to support hospital facilities. This boiler has a design steam flow of 80,000 lb/hr.</p>										
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: <u> n/a </u> Continuous Processes: <u> n/a </u> hours/day <u> n/a </u> days/year Batch Processes: <u> n/a </u> hours/batch <u> n/a </u> batches/day <u> n/a </u> days/year										
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Type(s) of Fuel	% Sulfur	Annual Usage (specify units)								
1. <u>Natural Gas</u>	<u>neg.</u>	<u>392 MMCF</u>								
2. <u>Distillate Oil</u>	<u><0.3% by weight</u>	<u>53.1 kGal</u>								
6. Emissions in Tons: A. Actual Major: <u> </u> Potential Major: <u> X </u> (note: before control device) B. Actual Emissions*: NOx <u>6.60</u> SOx <u>0.03</u> VOC <u>0.31</u> PM10 <u>0.11</u> HAPs <u>4.37E-3</u> * As reported in the 2021 Emissions Certification Report for each unit.										



1. Emissions Unit No.: EU-13 through EU-19		2. MDE Registration No.:(if applicable) see descriptions below	
1a. Date of installation (month/year): see descriptions below			
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): EU-13 (9-0951): One (1) Caterpillar 3516-D1 diesel generator rated at 2,520 BHP, installed in 1989, and used for emergency backup power. (Location: Johns Hopkins Outpatient Center - JHOPC) EU-14 & EU-15 (9-0949 & 9-0950): Two (2) Caterpillar 3516-B diesel generators rated at 2,520 BHP, installed in 1999, and used for emergency backup power and peak shaving. (Location: South Energy Plant) EU-16 & EU-17 (9-0988 & 9-0989): Two (2) Caterpillar 3516-B diesel generators rated at 2,520 BHP, installed in 2004, and used for emergency backup power and peak shaving. (Location: North Energy Plant) EU-18 & EU-19 (9-1015 & 9-1016): Two (2) Caterpillar 3516-B diesel generators rated at 2,520 BHP, installed in 2005, and used for emergency backup power and peak shaving. (Location: South Energy Plant)			
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: <u>40 CFR 63.6640(f)(2) (For EU-13 only)</u> Continuous Processes: <u>n/a</u> hours/day <u>52*</u> days/year Batch Processes: <u>n/a</u> hours/batch <u>n/a</u> batches/day <u>n/a</u> days/year <div style="margin-left: 400px;"> *For EU-13 only: The diesel generator shall not operate more than 100 hours per calendar year for non-emergency reasons. </div>			
5. Fuel Consumption:			
Type(s) of Fuel	% Sulfur	Annual Usage (specify units)	
1. <u>Distillate Oil</u>	<u><0.05% by weight*</u>	<u><9.5 kgal</u>	
2. _____			
*Sulfur content limit does not apply to EU-13. Sulfur content of fuel used for EU-13 shall be <0.3% by weight.			
6. Emissions in Tons:			
A. Actual Major: _____		Potential Major: <u>X</u> (note: before control device)	
B. Actual Emissions*: NO _x <u><1.38</u> SO _x <u>0.00</u> VOC <u><0.09</u> PM10 <u><0.05</u> HAPs <u><7.68E-5</u>			
* As reported in the 2021 Emissions Certification Report for each unit.			

MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: EU-20 & EU-21 1a. Date of installation (month/year): 06/2011	2. MDE Registration No.:(if applicable) 510-0001-5-2073 & 510-0001-5-2074									
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <p>One (1) Combined Heat and Power (CHP) system consisting of two (2) identical units, each comprised of one (1) 7.5 MW combustion turbine and one (1) heat recovery steam generator (HRSG) equipped with a 42 MMBtu/hr duct burner. The combustion turbines are fired by natural gas or distillate oil. The duct burners are fired on natural gas only.</p> <p>The combined heat and power system is used to meet increased utility demands from the Johns Hopkins Hospital's expansion. There is one combustion turbine located at the North Energy Plant and one at the South Energy Plant. All the electric power and steam generated will be utilized by JHH.</p>										
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: <u> n/a </u> Continuous Processes: <u> n/a </u> hours/day <u> n/a </u> days/year Batch Processes: <u> n/a </u> hours/batch <u> n/a </u> batches/day <u> n/a </u> days/year										
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Type(s) of Fuel	% Sulfur	Annual Usage (specify units)								
1. <u> Natural Gas </u>	<u> neg. </u>	<u> 1004 MMCF </u>								
2. <u> Distillate Oil </u>	<u> <0.3% by weight </u>	<u> 4.4 MGal </u>								
6. Emissions in Tons: A. Actual Major: <u> X </u> Potential Major: _____ (note: before control device) B. Potential Emissions*: NOx <u> <8.83 </u> SOx <u> <0.26 </u> VOC <u> <0.78 </u> PM10 <u> <0.03 </u> HAPs <u> <2.32E-1 </u> * As reported in the 2021 Emissions Certification Report for each unit.										



MARYLAND DEPARTMENT OF THE ENVIRONMENT

SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: EU-22 1a. Date of installation (month/year): 06/2011	2. MDE Registration No.:(if applicable) 510-0001-5-2075									
3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s): <p>One (1) Hurst boiler rated at 50.4 MMBtu/hr heat input and equipped with a low NOx burner and flue gas recirculation. This boiler is fired on natural gas or distillate oil.</p> <p>The boiler is used for steam generation to support hospital facilities. It is located in the South Energy Plant.</p>										
4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: General Reference: <u>n/a</u> Continuous Processes: <u>n/a</u> hours/day <u>n/a</u> days/year Batch Processes: <u>n/a</u> hours/batch <u>n/a</u> batches/day <u>n/a</u> days/year										
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Type(s) of Fuel	% Sulfur	Annual Usage (specify units)								
1. <u>Natural Gas</u>	<u>neg.</u>	<u>433 MMCF</u>								
2. <u>Distillate Oil</u>	<u><0.3% by weight</u>	<u>22.5 kGal</u>								
6. Emissions in Tons: A. Actual Major: <u>X</u> Potential Major: _____ (note: before control device) B. Actual Emissions*: NOx <u>3.31</u> SOx <u>0.02</u> VOC <u>0.19</u> PM10 <u>0.06</u> HAPs <u>2.57E-3</u> * As reported in the 2021 Emissions Certification Report for each unit.										



**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS****Emissions Unit No.:** Facility-wide**General Reference:** COMAR 26.11.01.05-1

Briefly describe the Emission Standard/Limit or Operational Limitation:

General Requirements and Content for Emissions Statements

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☒ Annual Compliance Certification:
- ☐ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance

Monitoring: Reference N.A.

Describe: None

Testing: Reference N.A.

Describe: None

Record Keeping: Reference N.A.

Describe: None

Reporting: Reference COMAR 26.11.09.07C

Describe: Submit an emissions statement by April 1st of each year.**Frequency of submittal of the compliance demonstration: Annual**

MARYLAND DEPARTMENT OF THE ENVIRONMENT**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS****Emissions Unit No.:** Facility-wide**General Reference:** COMAR 26.11.01.07C

Briefly describe the Emission Standard/Limit or Operational Limitation:

Report of Excess Emissions.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☒ Annual Compliance Certification:
- ☒ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance

Monitoring: Reference N.A.

Describe: None

Testing: Reference N.A.

Describe: None

Record Keeping: Reference N.A.

Describe: None

Reporting: Reference COMAR 26.11.09.07C

Describe: Report onset and termination by telephone of excess emissions that are expected to or actually last 1 hour or more.

Frequency of submittal of the compliance demonstration: Semiannual

MARYLAND DEPARTMENT OF THE ENVIRONMENT**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS****Emissions Unit No.:** Facility-wide**General Reference:** COMAR 26.11.03.14

Briefly describe the Emission Standard/Limit or Operational Limitation:

Revisions of Part 70 permits

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☒ Annual Compliance Certification:
- ☐ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance

Monitoring: Reference N.A.

Describe: None

Testing: Reference N.A.

Describe: None

Record Keeping: Reference N.A.

Describe: None

Reporting: Reference COMAR 26.11.09.07C

Describe: Submit an application to revise the operating permit if needed due to permit amendments or modification (minor or significant).

Frequency of submittal of the compliance demonstration: As required

MARYLAND DEPARTMENT OF THE ENVIRONMENT**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS****Emissions Unit No.:** EU-1 through EU-5,
EU-13 through EU-22**General Reference:** COMAR
26.11.09.07A(2)(b)

Briefly describe the Emission Standard/Limit or Operational Limitation:

Control of Sulfur Oxides from fuel burning equipment. "A person may not burn, sell or make available for sale any distillate fuel with a sulfur content by weight in excess of 0.3 percent."

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☒ Annual Compliance Certification:
- ☐ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance

Monitoring: Reference COMAR 26.11.03.06C

Describe: Obtain a certification from the fuel supplier indicating that the oil complies with the limitation on the sulfur content of the fuel oil.

Testing: Reference N.A.

Describe: None

Record Keeping: Reference COMAR 26.11.03.06C

Describe: Maintain records of the fuel supplier's certification for at least 5 years.

Reporting: Reference COMAR 26.11.09.07C

Describe: Report fuel supplier certifications to the Department upon request.

Frequency of submittal of the compliance demonstration: Annual

MARYLAND DEPARTMENT OF THE ENVIRONMENT**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS****Emissions Unit No.:** EU-1 through EU-4**General Reference:** COMAR26.11.09.08D(1)(b), 26.11.09.08B(1)(c),
26.11.09.08B(2)(a)(ii) and (e)

Briefly describe the Emission Standard/Limit or Operational Limitation:

NOx emission rates for fuel burning equipment with rated heat capacity between 100-250 MMBtu/hr. Emission limit is 0.25 lbs of NOx per MMBtu of heat input. Demonstrations for compliance if not equipped with CEMS are established by stack tests using Method 07 of test methods in COMAR 26.11.01.04C(1) or other test methods approved by the Department. Compliance shall be determined as averages of the stack test duration.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☒ Annual Compliance Certification:
- ☐ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance

Monitoring: Reference COMAR 26.11.03.06C

Describe: Using an analyzer, measure the NOx content of the flue gases from each boiler for a 5-minute period every 168 hours of operation on #2 fuel oil.

Testing: Reference COMAR 26.11.02.09A

Describe: Within the term of the issuance of this permit, perform a stack test both on oil and natural gas. Submit the test protocol for approval at least 30 days before the scheduled test date.

Record Keeping: Reference COMAR 26.11.03.06C

Describe: Maintain results of NOx stack test and NOx analyzer reading for at least 5 years and make available to the Department upon request.

Reporting: Reference COMAR 26.11.03.06C

Describe: Report results of NOx testing along with supporting data from the stack test within 45 days of the completion of the stack test.

Frequency of submittal of the compliance demonstration: Annual

MARYLAND DEPARTMENT OF THE ENVIRONMENT**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS****Emissions Unit No.:** EU-1 through EU-5,
EU-20 through EU-22**General Reference:** COMAR 26.11.09.05A(2)

Briefly describe the Emission Standard/Limit or Operational Limitation:

Prohibits discharge of visible emissions from any fuel burning equipment, other than water in an uncombined form, except during load changing, soot blowing, start-up, or occasional cleaning of control equipment.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☒ Annual Compliance Certification:
- ☐ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance

Monitoring: Reference COMAR 26.11.03.06C

Describe: Operate and maintain boilers, perform visual observation of stack emissions to verify there are no visible emissions when burning No. 2 oil. If emissions are visible

1. Inspect combustion control system and boiler operations;
2. Perform all necessary adjustments and/or repairs to boiler within 48 hours, so that emissions are eliminated;
3. Document in writing the result;
4. If adjustments and/or repairs have not eliminated visible emissions after 48 hours, perform Method 9 observations once daily until corrective actions have eliminated emissions

Testing: Reference N.A.

Describe: None

Record Keeping: Reference COMAR 26.11.03.06C

Describe: Maintain an operation manual and prevention maintenance plan on site; a record of maintenance performed that related to combustion performance; a log of the results of visible emissions observations performed and make it available to the department upon request; a record of the hours that No. 2 fuel is burned in each unit.

Reporting: Reference COMAR 26.11.01.07; COMAR 26.11.03.06C(7)

Describe: Orally report all occurrences of excess emissions that are expected to last more than one hour. When requested, provide a written report of excess emissions or deviations from permit conditions.

Frequency of submittal of the compliance demonstration: Annual

MARYLAND DEPARTMENT OF THE ENVIRONMENT**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS****Emissions Unit No.:** EU-1 through EU-5,
EU-20**General Reference:** COMAR 26.11.02.09A

Briefly describe the Emission Standard/Limit or Operational Limitation:

Only burn natural gas or No. 2 fuel oil unless the Permittee applies for and receives an approval or permit from the Department to burn alternate fuels.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☒ Annual Compliance Certification:
- ☐ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance	
Monitoring: Reference N.A.	Describe: None
Testing: Reference N.A.	Describe: None
Record Keeping: Reference N.A.	Describe: None
Reporting: Reference N.A.	Describe: None

Frequency of submittal of the compliance demonstration: Annual

MARYLAND DEPARTMENT OF THE ENVIRONMENT**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS****Emissions Unit No.:** EU-5 & EU-22**General Reference:** COMAR 26.11.09.08E

Briefly describe the Emission Standard/Limit or Operational Limitation:

Control of Nitrogen Oxides. Requirements for fuel burning equipment with a rated heat input capacity of 100 MMBtu/hr or less

1. Perform a combustion analysis at least once a year and optimize combustion based on the analysis.
2. Maintain the combustion analysis on site for at least 5 years.
3. Once every 3 years require each operator of the installation to attend operator training programs on combustion optimization that are sponsored by the Department, EPA, or equipment vendors.
4. Prepare and maintain a record of training program attendance for each operator at the site and make available to the Department upon request.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☒ Annual Compliance Certification:
- ☐ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance

Monitoring: Reference COMAR 26.11.09.08E(2)

Perform combustion analysis at least once each year and optimize combustion based on the analysis

Testing: Reference N.A.

Describe: None

Record Keeping: Reference COMAR 26.11.09.08E(3) and (5)

Describe: Maintain the results of the annual combustion analysis and a record of operator training program attendance on site and make available to the Department and EPA upon request.

Reporting: Reference N.A.

Describe: None

Frequency of submittal of the compliance demonstration: Annual

MARYLAND DEPARTMENT OF THE ENVIRONMENT**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS****Emissions Unit No.:** EU-13 through EU-19**General Reference:** COMAR 26.11.09.05E(2) through (4)

Briefly describe the Emission Standard/Limit or Operational Limitation:

Limits discharge of emissions from any engine, operating at idle to 10 percent opacity or less. Limits discharge of emissions from any engine, operating at other than idle conditions to 40 percent opacity or less. Idle conditions do not apply for a period of 2 consecutive minutes after a period of idling of 15 minutes for the purpose of cleaning the exhaust system or for emissions resulting directly from cold engine start-up and warm-up for maximum periods. Conditions do not apply while maintenance, repair, or testing is being performed by qualified mechanics.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☒ Annual Compliance Certification:
- ☐ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance

Monitoring: Reference COMAR 26.11.03.06C

Describe: Perform preventive maintenance once per month to optimize combustion performance.

Testing: Reference N.A.

Describe: None

Record Keeping: COMAR 26.11.03.06C

Describe: Retain records of preventative maintenance on site for at least five years and make available to the Department upon request.

Reporting: Reference N.A.

Describe: None

Frequency of submittal of the compliance demonstration: Annual

MARYLAND DEPARTMENT OF THE ENVIRONMENT**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS****Emissions Unit No.:** EU-13 through EU-19 **General Reference:** COMAR 26.11.09.08G

Briefly describe the Emission Standard/Limit or Operational Limitation:

Requirements for fuel-burning equipment with a capacity factor of 15 percent or less, and combustion turbines with a capacity factor of greater than 15 percent:

1. Maintain the results of the combustion analysis at the site for at least 2 years and make these results available to the Department and EPA upon request.
2. Require each operator of an installation to attend operator training programs at least once every 3 years, on combustion optimization that are sponsored by the Department, the EPA or equipment vendors.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☒ Annual Compliance Certification:
- ☐ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance

Monitoring: Reference COMAR 26.11.09.08G(1)(c)

Describe: For engines that operate more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion.

Testing: Reference COMAR 26.11.09.08G(1)(b)

Describe: Perform a combustion analysis and optimize combustion at least once annually for any of the engines that operates more than 500 hours during a calendar year.

Record Keeping: Reference COMAR 26.11.09.08G(1)(c) and (e), 26.11.03.06C

Describe: Maintain the results of the combustion analysis and a record of training program attendance for each operator at the site for at least 5 years and make these results available to the Department upon request. Retain records of hours of operation and fuel usage on a monthly basis for all generators. At the end of each month, calculate the total operating hours for the prior rolling 12-month period.

Reporting: Reference COMAR 26.11.09.08G(1)(a)

Describe: Provide certification of the capacity factor of the equipment to the Department in writing with the annual emissions certification report.

Frequency of submittal of the compliance demonstration: Annual

MARYLAND DEPARTMENT OF THE ENVIRONMENT**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS****Emissions Unit No.:** EU-14 and EU-15**General Reference:** PTC 510-9-0949 & 0950N

Briefly describe the Emission Standard/Limit or Operational Limitation:

Limits the combined NOx emissions from both generators to 25 tons in any rolling 12-month period to maintain synthetic minor status.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☒ Annual Compliance Certification:
- ☐ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance

Monitoring: Reference COMAR 26.11.03.06C

Describe: Calculate the monthly NOx emissions from both emission units combined at the end of each calendar month.

Testing: Reference N.A.

Describe: None

Record Keeping: Reference COMAR 26.11.03.06C

Describe: Maintain records of monthly NOx emission totals from both units combined for at least 5 years to demonstrate compliance with the requirement that the combined NOx emissions from both units do not exceed 25 tons in any 12-month rolling period.

Reporting: Reference COMAR 26.11.09.08

Describe: Submit to the Department results of stack tests required within 45 days after completion of the test.

Frequency of submittal of the compliance demonstration: Annual

MARYLAND DEPARTMENT OF THE ENVIRONMENT**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS****Emissions Unit No.:** EU-22**General Reference:** 40 CFR 60 Subpart Dc

Briefly describe the Emission Standard/Limit or Operational Limitation:

Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units for which construction, modification, or reconstruction is commenced after June 9, 1989 and that have a maximum design heat input capacity between 2.9 MW (10 MMBtu/hr) and 29 MW (100 MMBtu/hr).

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
☒ Annual Compliance Certification:
☐ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance

Monitoring: Reference §60.46c and 60.47c

Describe: Emission monitoring for SO₂ – N.A., since fuel supplier certification is used to demonstrate compliance

Testing: Reference §60.44c and 45c

Describe: Compliance and performance tests for SO₂ standards – the performance test shall consist of the fuel supplier certification.

Record Keeping: Reference §60.48c

Describe: Records of the amount of fuel combusted each calendar month. Maintain all records required for a period of two years.

Reporting: Reference §60.48c

Describe: Submit notification of the date of construction. Fuel supplier certification is to demonstrate compliance. A certified statement signed by the owner or operator stating that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

Frequency of submittal of the compliance demonstration: Annual

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: EU-20 and EU-21

General Reference: 40 CFR 60 Subpart KKKK

Briefly describe the Emission Standard/Limit or Operational Limitation:

Standards of Performance for Stationary Combustion Turbines – Emission Limits for NO_x and SO₂.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☒ Annual Compliance Certification:
- ☐ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance

Monitoring: Reference §60.4340 & 4355

Describe: Define parameters indicative of the unit's NO_x formation characteristics and monitor these parameters continuously. Follow the parametric monitoring plan. Sulfur content monitoring is not required if the fuel supplier certification specifies and maximum sulfur content for oil use is 0.05 weight percent.

Testing: Reference §60.4400 & 4415

Describe: Conduct initial performance test for NO_x. As an alternative to conduct subsequent performance tests, install, calibrate, maintain and operate the continuous parametric monitoring system.

Record Keeping: §60.4355

Describe: Maintain all records required, including the parametric monitoring plan, for at least five (5) years. Maintain fuel supplier certification for fuel oil only (by the federal definition of pipeline natural gas, its sulfur content [0.6 gr/100scf] is meeting the standard).

Reporting: Reference §60.4375.

Describe: Submit a written report of the results of initial performance test within 60 days of completing the performance test. Submit reports of excess emissions (including for periods of start-up, shutdown and malfunction) and monitor downtime.

Frequency of submittal of the compliance demonstration: Annual



**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS**

Emissions Unit No.: EU-16 through EU-19 **General Reference:** 40 CFR 63 Subpart ZZZZ

Briefly describe the Emission Standard/Limit or Operational Limitation:

National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

40 CFR 63.6606(a): Limit concentration of CO to 23 ppmvd at 15% O₂ or reduce CO emissions by 70% or more.

40 CFR 63.6604(a): Use fuel that has sulfur content less than 15 ppm for NR diesel fuel and 500 ppm for LM diesel fuel. Also, use fuel that has cetane index or at least 40 or aromatic content of 35% volume.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☒ Annual Compliance Certification:
- ☐ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance

Monitoring: Reference 40 CFR 63.6625(a), (b), and (h), 40 CFR 63.6640(a), Describe: Engine's time spent at idle and start-up time shall be minimized, not to exceed 30 minutes. If CEMS or CPMS is used to comply with CO limit, maintain CEMS or CPMS in accordance with 40 CFR 63.6225(a) or (b) respectively. If oxidation catalyst is used to comply with CO limit, compliance shall be demonstrated as indicated in 40 CFR 63.6640(a).

Testing: Reference CO Limit: 40 CFR 63.6612(a), 40 CFR 63.6620(a). and 40 CFR 63, ZZZZ, Table 4, Item 1 or 3. Sulfur Content: N.A.

Describe: CO Limit: The CO limit and O₂ content shall be measured and determined at the same time using the methods described in 40 CFR 63, Subpart ZZZZ, Table 4.

Sulfur Limit: None

Record Keeping: 40 CFR 63.6655(a), (b), and (d).

Describe: All records indicated in 40 CFR 63.6655(a), (b), or (d) pertaining to compliance demonstration must be kept for 5 years.

Reporting: Reference 40 CFR 63.6650(a)

Describe: Semiannual Compliance Report shall be submitted in accordance with 40 CFR 63.6650(b), (c), (d), (e), or (f).

Frequency of submittal of the compliance demonstration: Semiannual



MARYLAND DEPARTMENT OF THE ENVIRONMENT**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS**

Emissions Unit No.: EU-1 through EU-5, **General Reference:** 40 CFR 63 Subpart JJJJJ
EU-22

Briefly describe the Emission Standard/Limit or Operational Limitation:

National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☐ Annual Compliance Certification:
- ☐ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance

Monitoring: Reference §63.11205(a)

Describe: Operate and maintain any affected source, including monitoring equipment, in a manner consistent with safety and good control practices for minimizing emissions.

Testing: Reference §63.11223(a) & (b)

Describe: Biennial tune-up to demonstrate continuous compliance. Requirements for one-time energy assessment.

Record Keeping: §63.11225(c)(1)

Describe: Retain a copy of each notification and report submitted. Keep records to document conformance with work practices, emission reduction measures, and management practices. Keep records of equipment malfunction and actions taken to reduce emissions. All records are kept for five years after the date of the recorded action.

Reporting: Reference §63.11225(b)

Describe: Prepare by March 1 of every other year, and submit upon request, a biennial compliance certification report.

Frequency of submittal of the compliance demonstration: Biennial



MARYLAND DEPARTMENT OF THE ENVIRONMENT**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE
FEDERALLY ENFORCEABLE REQUIREMENTS****Emissions Unit No.:** Facility-wide**General Reference:** PAL #510-0001

Briefly describe the Emission Standard/Limit or Operational Limitation:

Authorizes a Plantwide Applicability Limit of 104.9 tons of NOx emissions per 12-month rolling period. Document the total NOx emissions for each emission unit and demonstrate that aggregate emissions have not exceeded the PAL.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☒ Annual Compliance Certification:
- ☒ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance

Monitoring: Reference COMAR 26.11.17.09A

Describe: Calculate emissions from all the emissions units on a 12-month rolling annual basis using emission factors and activity levels. Measure fuel use activity level for each EU continuously.

Testing: Reference COMAR 26.11.17.09A

Describe: Revalidate the PAL pollutant emission factors through performance testing at least once during the term of the permit.

Record Keeping: COMAR 26.11.17.09A

Describe: Retain a copy of all records necessary to determine compliance for at least 5 years. Retain a copy for at least 5 years after the PAL effective period of: the PAL permit application and any revisions; and each annual certification of compliance pursuant to Title V and data relied on in certifying the compliance.

Reporting: Reference COMAR 26.11.17.09B

Describe: Submit a semiannual report within 30 days of the end of each reporting period, beginning 6 months after the PAL effective date. Submit reports of any deviation or exceedances of the PAL requirements, including when no monitoring is available.

Frequency of submittal of the compliance demonstration: Semiannual



MARYLAND DEPARTMENT OF THE ENVIRONMENT**SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS****Emissions Unit No.:** Facility-wide**General Reference:** COMAR 26.11.06.03D

Briefly describe the Emission Standard/Limit or Operational Limitation:

Prohibits the Permittee to cause or permit any building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☒ Annual Compliance Certification:
- ☐ Semi-Annual Monitoring Report:

Methods used to demonstrate compliance

Monitoring: Reference N.A.

Describe: None

Testing: Reference N.A.

Describe: None

Record Keeping: Reference N.A.

Describe: None

Reporting: Reference N.A.

Describe: None

Frequency of submittal of the compliance demonstration: Annual

MARYLAND DEPARTMENT OF THE ENVIRONMENT**SECTION 4. CONTROL EQUIPMENT**

1. <u>Associated Emissions Units No. :</u> EU-14 through EU-19	2. <u>Emissions Point No.:</u> EP-14 through EP-19
3. <u>Type and Description of Control Equipment:</u>	
A diesel oxidation catalyst (DOC) unit	
4. <u>Pollutants Controlled:</u>	<u>Control Efficiency:</u>
CO	70%
5. <u>Capture Efficiency:</u> 100% assumed	



Checkoff List of Emissions Units and Activities Exempt from the Part 70 Permit Application**Insignificant Activities**

Place a check mark beside each type of emissions unit or activity that is located at the facility. Where noted, please indicate the number of that type of emissions unit or activity located at the facility.

- (1) No. ____ Fuel burning equipment using gaseous fuels or no. 1 or no. 2 fuel oil, and having a heat input less than 1,000,000 Btu (1.06 gigajoules) per hour;
- (2) No. ____ Fuel-burning equipment using solid fuel and having a heat input of less than 350,000 Btu (0.37 gigajoule) per hour;
- (3) No. 3 Stationary internal combustion engines with an output less than 500 brake horsepower (373 kilowatts) and which are not used to generate electricity for sale or for peak or load shaving;
- (4) ✓ Space heaters utilizing direct heat transfer and used solely for comfort heat;
- (5) ✓ Water cooling towers and water cooling ponds unless used for evaporative cooling of water from barometric jets or barometric condensers, or used in conjunction with an installation requiring a permit to operate;
- (6) No. 4 Unheated VOC dispensing containers or unheated VOC rinsing containers of 60 gallons (227 liters) capacity or less;
- (7) ✓ Commercial bakery ovens with a rated heat input capacity of less than 2,000,000 Btu per hour;
- (8) ____ Kilns used for firing ceramic ware, heated exclusively by natural gas, liquefied petroleum gas, electricity, or any combination of these;
- (9) ✓ Confection cookers where the products are edible and intended for human consumption;
- (10) ____ Die casting machines;
- (11) ✓ Photographic process equipment used to reproduce an image upon sensitized material through the use of radiant energy;
- (12) ✓ Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding, or disc sanding of wood or wood products;

- (13)____ Brazing, soldering, or welding equipment, and cutting torches related to manufacturing and construction activities that emit HAP metals and not directly related to plant maintenance, upkeep and repair or maintenance shop activities;
- (14) ✓ Equipment for washing or drying products fabricated from metal or glass, provided that no VOC is used in the process and that no oil or solid fuel is burned;
- (15)____ Containers, reservoirs, or tanks used exclusively for electrolytic plating work, or electrolytic polishing, or electrolytic stripping of brass, bronze, cadmium, copper, iron, lead, nickel, tin, zinc, and precious metals;
- (16) Containers, reservoirs, or tanks used exclusively for:
- (a) ____ Dipping operations for applying coatings of natural or synthetic resins that contain no VOC;
 - (b) ____ Dipping operations for coating objects with oils, waxes, or greases, and where no VOC is used;
 - (c) ✓ Storage of butane, propane, or liquefied petroleum, or natural gas;
 - (d) No. ✓ Storage of lubricating oils;
 - (e) No. ____ Unheated storage of VOC with an initial boiling point of 300 °F (149 °C) or greater;
 - (f) No. 16 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel,
 - (g) No. ____ Storage of motor vehicle gasoline and having individual tank capacities of 2,000 gallons (7.6 cubic meters) or less;
 - (h) No. ✓ The storage of VOC normally used as solvents, diluents, thinners, inks, colorants, paints, lacquers, enamels, varnishes, liquid resins, or other surface coatings and having individual capacities of 2,000 gallons (7.6 cubic meters) or less;
- (17) ____ Gaseous fuel-fired or electrically heated furnaces for heat treating glass or metals, the use of which does not involve molten materials;
- (18) ____ Crucible furnaces, pot furnaces, or induction furnaces, with individual capacities of 1,000 pounds (454 kilograms) or less each, in which no sweating or distilling is conducted, or any fluxing is conducted using chloride, fluoride,

or ammonium compounds, and from which only the following metals are poured or in which only the following metals are held in a molten state:

- (a) ____ Aluminum or any alloy containing over 50 percent aluminum, if no gaseous chloride compounds, chlorine, aluminum chloride, or aluminum fluoride is used;
- (b) ____ Magnesium or any alloy containing over 50 percent magnesium;
- (c) ____ Lead or any alloy containing over 50 percent lead;
- (d) ____ Tin or any alloy containing over 50 percent tin;
- (e) ____ Zinc or any alloy containing over 50 percent zinc;
- (f) ____ Copper;
- (g) ____ Precious metals;
- (19) ☒ Charbroilers and pit barbecues as defined in COMAR 26.11.18.01 with a total cooking area of 5 square feet (0.46 square meter) or less;
- (20) ☒ First aid and emergency medical care provided at the facility, including related activities such as sterilization and medicine preparation used in support of a manufacturing or production process;
- (21) ____ Certain recreational equipment and activities, such as fireplaces, barbecue pits and cookers, fireworks displays, and kerosene fuel use;
- (22) ☒ Potable water treatment equipment, not including air stripping equipment;
- (23) ____ Firing and testing of military weapons and explosives;
- (24) ____ Emissions resulting from the use of explosives for blasting at quarrying operations and from the required disposal of boxes used to ship the explosive;
- (25) ☒ Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;
- (26) ____ Grain, metal, or mineral extrusion presses;
- (27) ____ Breweries with an annual beer production less than 60,000 barrels;

(28)____ Natural draft hoods or natural draft ventilators that exhaust air pollutants into the ambient air from manufacturing/industrial or commercial processes;

(29) ✓ Laboratory fume hoods and vents;

(30) No. ____ Sheet-fed letter or lithographic printing press(es) with a cylinder width of less than 18 inches;

For the following, attach additional pages as necessary:

(31) any other emissions unit, not listed in this section, with a potential to emit less than the “de minimus” levels listed in COMAR 26.11.02.10X (list and describe units):

No. ____

No. ____

No. ____

No. ____

(32) any other emissions unit at the facility which is not subject to an applicable requirement of the Clean Air Act (list and describe):

No. 4 EO sterilizers with add on catalytic oxidizers (Steris Amsco Eagle 3016 EO Sterilizer, 87 Cycles/yr, 4.8 ft³ Sterilizer size)

No. 2 Vulcan VCCB-47 Charbroiler equipped with an exhaust ventilator hood (Registration no. 8-0364 and 8-0365)

No. ____

MARYLAND DEPARTMENT OF THE ENVIRONMENT**STATE-ONLY ENFORCEABLE REQUIREMENTS****Facility Information:**

Name of Facility: Johns Hopkins Hospital	County Baltimore City
Premises Number: 24-510	
Street Address: 600 N. Wolfe Street, Baltimore, Maryland 21289	
24-hour Emergency Telephone Number for Air Pollution Matters:	
Type of Equipment (List Significant Units):	
EU-1 through EU-4 – Four (4) boilers rated at 102.5 MMBtu/hr	
EU-5 – One (1) boiler rated at 94 MMBtu/hr	
EU-13 through EU-19 – Seven (7) Diesel Generators rated at >1,000 BHP	
EU-20 and EU-21 – Two (2) 7.5MW combustion turbines equipped with a heat recovery steam generator equipped with a 42 MMBtu/hr duct burner.	
EU22 – One (1) boiler rated at 50.4 MMBtu/hr	



**CITATION TO AND DESCRIPTION OF APPLICABLE STATE-ONLY
ENFORCEABLE REQUIREMENTS****Registration No.:** _____**Emissions Unit No.:** Facility-wide**General Reference:** COMAR 26.11.06.08

Briefly describe the requirement and the emissions limit (if applicable):

Nuisance. An installation or premises may not be operated or maintained in a manner that a nuisance or air pollution is created.

Methods used to demonstrate compliance:

N.A.

**CITATION TO AND DESCRIPTION OF APPLICABLE STATE-ONLY
ENFORCEABLE REQUIREMENTS****Registration No.:** _____**Emissions Unit No.:** Facility-wide**General Reference:** COMAR 26.11.06.09

Briefly describe the requirement and the emissions limit (if applicable):

Odors. Restricts the discharge into the atmosphere of gases, vapors, or odors beyond the property line in such a manner that a nuisance or air pollution is created.

Methods used to demonstrate compliance:

N.A.



**CITATION TO AND DESCRIPTION OF APPLICABLE STATE-ONLY
ENFORCEABLE REQUIREMENTS****Registration No.:** _____**Emissions Unit No.:** Facility-wide**General Reference:** COMAR 26.11.15 & 16

Briefly describe the requirement and the emissions limit (if applicable):

Prohibits the discharge of toxic air pollutants (TAPs) to the extent that such emissions will unreasonably endanger human health – TAPs regulations do not apply to fuel burning equipment, thus the facility is exempt from these regulations.

Methods used to demonstrate compliance:

N.A.



Appendix A

2021 Annual Emissions Certification Report

Form 2**CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Johns Hopkins HospitalFacility ID #: 510-00001Pollutant: Nitrogen Oxides (NOx)Calendar Year: 2021

Equipment Description/ Registration No.	SCC No.	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule			Estimation Method
				Tons/yr	lbs/dy	Hrs/dy	Dys/wk	Wk/yr	Dys/yr	lbs/dy	Hrs/dy	Start	End	
EU1 -Boiler 5-0303		NG	s	2.23	12.22		7	52	365	1.28				C1
			f											
EU1 -Boiler 5-0303		No.2 Oil	s	0.00	0.00		7	52	365	0.00				C1
			f											
EU2 -Boiler 5-0304		NG	s	3.96	21.68		7	52	365	2.38				C1
			f											
EU2 -Boiler 5-0304		No.2 Oil	s	0.02	0.09		7	52	365	0.00				C1
			f											
EU3 -Boiler 5-0305		NG	s	4.81	26.38		7	52	365	5.03				C1
			f											
EU3 -Boiler 5-0305		No.2 Oil	s	0.01	0.07		7	52	365	0.00				C1
			f											
EU4 -Boiler 5-0306		NG	s	5.27	28.89		7	52	365	20.40				C1
			f											
EU4 -Boiler 5-0306		No.2 Oil	s	0.01	0.05		7	52	365	0.00				C1
			f											
EU5 -Boiler 5-0734		NG	s	6.58	36.07		7	52	365	42.50				C1
			f											
EU5 -Boiler 5-0734		No.2 Oil	s	0.02	0.09		7	52	365	0.00				C1
			f											
EU13 -Generator 9-0951		No.2 Oil	s	0.21	8.21	as needed			52	8.30				C1
			f											
EU14 -Generator 9-0949		No.2 Oil	s	1.36	33.94	as needed			80	51.20				C1
			f											
EU15 -Generator 9-0950		No.2 Oil	s	1.35	32.94	as needed			82	49.72				C1
			f											
EU16 -Generator 9-0988		No.2 Oil	s	0.95	31.18	as needed			61	51.08				C1
			f											
EU17 -Generator 9-0989		No.2 Oil	s	0.94	30.94	as needed			61	50.24				C1
			f											
EU18 -Generator 9-1015		No.2 Oil	s	1.38	34.01	as needed			81	50.85				C1
			f											
EU19 -Generator 9-1016		No.2 Oil	s	1.35	33.38	as needed			81	49.42				C1
			f											
EU20 -CHP 5-2073		NG	s	8.76	48.03		7	52	365	46.89				C1
			f											
EU20 -CHP 5-2073		No.2 Oil	s	0.07	0.36		7	52	365	0.13				C1
			f											
EU21 -CHP 5-2074		NG	s	5.85	32.06		7	52	365	37.57				C1
			f											
EU21 -CHP 5-2074		No.2 Oil	s	0.01	0.03		7	52	365	0.04				C1
			f											
EU22 -Boiler 5-2075		NG	s	3.31	18.11		7	52	365	0.24				C1
			f											
EU22 -Boiler 5-2075		No.2 Oil	s	0.00	0.00		7	52	365	0.00				C1
			f											
Total				48.45	428.71					467.28				

Form 2

CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT

Facility Name: Johns Hopkins Hospital Facility ID #: 510-00001 Pollutant: Nitrogen Oxides (NOx) Calendar Year: 2021

Equipment Description/ Registration No.	SCC No.	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD lbs/dy	Operating Schedule			Estimation Method
				Tons/yr	lbs/dy	Hrs/dy	Dys/wk	Wk/yr	Dys/yr		Hrs/dy	Start	End	

s - Stack Emissions f - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source.

TOSD - Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April-September). This sections needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emission separately for each fuel.

- Emission Estimation Method
A1 - U.S. EPA Reference Method
A2 - Other Particulate Sampling Train
A3 - Liquid Absorption Technique
A4 - Solid Absorption Technique
A5 - Freezing-Out Technique
- C1 - User calculated based on source test or other measurements
C2 - User calculated based on material balance using engineering knowledge of the process
C3 - User calculated based on AP-42
C4 - User calculated by best guess/engineering judgement
- C5 - User calculated based on a State or local agency emission factor
C6 - New construction, not operational
C7 - Source closed, operation ceased
C8 - Computer calculated based on standard

Form 2

CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT

Facility Name: Johns Hopkins Hospital Facility ID #: 510-00001 Pollutant: Sulfur Oxides (as SO2) Calendar Year: 2021

Equipment Description/ Registration No.	SCC No.	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule			Estimation
				Tons/yr	lbs/dy	Hrs/dy	Dys/wk	Wk/yr	Dys/yr	lbs/dy	Hrs/dy	Start	End	Method

s - Stack Emissions f - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source.

TOSD - Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April-September). This sections needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emission separately for each fuel.

- Emission Estimation Method

 - A1 - U.S. EPA Reference Method
 - A2 - Other Particulate Sampling Train
 - A3 - Liquid Absorption Technique
 - A4 - Solid Absorption Technique
 - A5 - Freezing-Out Technique
- C1 - User calculated based on source test or other measurements
 - C2 - User calculated based on material balance using engineering knowledge of the process
 - C3 - User calculated based on AP-42
 - C4 - User calculated by best guess/engineering judgement
- C5 - User calculated based on a State or local agency emission factor
 - C6 - New construction, not operational
 - C7 - Source closed, operation ceased
 - C8 - Computer calculated based on standard

Equipment Description/ Registration No.	SCC No.	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule			Estimation Method
				Tons/yr	lbs/dy	Hrs/dy	Dys/wk	Wk/yr	Dys/yr	lbs/dy	Hrs/dy	Start	End	
EU1 -Boiler 5-0303		NG	s	0.15	0.84		7	52	365	0.09				C3
			f											
EU1 -Boiler 5-0303		No.2 Oil	s	0.00	0.00		7	52	365	0.00				C3
			f											
EU2 -Boiler 5-0304		NG	s	0.25	1.36		7	52	365	0.15				C3
			f											
EU2 -Boiler 5-0304		No.2 Oil	s	0.00	0.00		7	52	365	0.00				C3
			f											
EU3 -Boiler 5-0305		NG	s	0.30	1.64		7	52	365	0.32				C3
			f											
EU3 -Boiler 5-0305		No.2 Oil	s	0.00	0.00		7	52	365	0.00				C3
			f											
EU4 -Boiler 5-0306		NG	s	0.36	1.95		7	52	365	1.42				C3
			f											
EU4 -Boiler 5-0306		No.2 Oil	s	0.00	0.00		7	52	365	0.00				C3
			f											
EU5 -Boiler 5-0734		NG	s	0.31	1.72		7	52	365	2.07				C1
			f											
EU5 -Boiler 5-0734		No.2 Oil	s	0.00	0.00		7	52	365	0.00				C1
			f											
EU13 -Generator 9-0951		No.2 Oil	s	0.00	0.18	as needed			52	0.18				C3
			f											
EU14 -Generator 9-0949		No.2 Oil	s	0.08	2.05	as needed			80	3.10				C3
			f											
EU15 -Generator 9-0950		No.2 Oil	s	0.08	1.95	as needed			82	2.95				C3
			f											
EU16 -Generator 9-0988		No.2 Oil	s	0.07	2.25	as needed			61	3.69				C3
			f											
EU17 -Generator 9-0989		No.2 Oil	s	0.06	2.11	as needed			61	3.42				C3
			f											
EU18 -Generator 9-1015		No.2 Oil	s	0.09	2.14	as needed			81	3.21				C3
			f											
EU19 -Generator 9-1016		No.2 Oil	s	0.08	2.04	as needed			81	3.02				C3
			f											
EU20 -CHP 5-2073		NG	s	0.78	4.30		7	52	365	3.94				C3
			f											
EU20 -CHP 5-2073		No.2 Oil	s	0.00	0.00		7	52	365	0.00				C3
			f											
EU21 -CHP 5-2074		NG	s	0.66	3.64		7	52	365	3.94				C3
			f											
EU21 -CHP 5-2074		No.2 Oil	s	0.00	0.00		7	52	365	0.00				C3
			f											
EU22 -Boiler 5-2075		NG	s	0.19	1.02		7	52	365	0.01				C3
			f											
EU22 -Boiler 5-2075		No.2 Oil	s	0.00	0.00		7	52	365	0.00				C3
			f											

Form 2

CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT

Facility Name: Johns Hopkins Hospital Facility ID #: 510-00001 Pollutant: Volatile organic Compounds (VOC) Calendar Year: 2021

Equipment Description/ Registration No.	SCC No.	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule		Estimation Method
				Tons/yr	lbs/dy	Hrs/dy	Dys/wk	Wk/yr	Dys/yr	lbs/dy	Hrs/dy	Start	
Total				3.48	29.21					31.5			

s - Stack Emissions f - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source.

TOSD - Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April-September). This sections needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emission separately for each fuel.

- Emission Estimation Method

 - A1 - U.S. EPA Reference Method
 - A2 - Other Particulate Sampling Train
 - A3 - Liquid Absorption Technique
 - A4 - Solid Absorption Technique
 - A5 - Freezing-Out Technique
- C1 - User calculated based on source test or other measurements
 - C2 - User calculated based on material balance using engineering knowledge of the process
 - C3 - User calculated based on AP-42
 - C4 - User calculated by best guess/engineering judgement
- C5 - User calculated based on a State or local agency emission factor
 - C6 - New construction, not operational
 - C7 - Source closed, operation ceased
 - C8 - Computer calculated based on standard

Equipment Description/ Registration No.	SCC No.	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule		Estimation	
				Tons/yr	lbs/dy	Hrs/dy	Dys/wk	Wk/yr	Dys/yr	lbs/dy	Hrs/dy	Start	End	Method
EU1 -Boiler 5-0303		NG	s	2.33	12.78		7	52	365					C3
			f											
EU1 -Boiler 5-0303		No.2 Oil	s	0.00	0.00		7	52	365					C3
			f											
EU2 -Boiler 5-0304		NG	s	3.79	20.79		7	52	365					C3
			f											
EU2 -Boiler 5-0304		No.2 Oil	s	0.00	0.02		7	52	365					C3
			f											
EU3 -Boiler 5-0305		NG	s	4.57	25.05		7	52	365					C3
			f											
EU3 -Boiler 5-0305		No.2 Oil	s	0.00	0.02		7	52	365					C3
			f											
EU4 -Boiler 5-0306		NG	s	5.44	29.78		7	52	365					C3
			f											
EU4 -Boiler 5-0306		No.2 Oil	s	0.00	0.01		7	52	365					C3
			f											
EU5 -Boiler 5-0734		NG	s	4.79	26.26		7	52	365					C3
			f											
EU5 -Boiler 5-0734		No.2 Oil	s	0.01	0.03		7	52	365					C3
			f											
EU13 -Generator 9-0951		No.2 Oil	s	0.04	1.72	as needed			52					C3
			f											
EU14 -Generator 9-0949		No.2 Oil	s	0.11	2.87	as needed			80					C3
			f											
EU15 -Generator 9-0950		No.2 Oil	s	0.12	2.92	as needed			82					C3
			f											
EU16 -Generator 9-0988		No.2 Oil	s	0.10	3.30	as needed			61					C3
			f											
EU17 -Generator 9-0989		No.2 Oil	s	0.11	3.66	as needed			61					C3
			f											
EU18 -Generator 9-1015		No.2 Oil	s	0.15	3.66	as needed			81					C3
			f											
EU19 -Generator 9-1016		No.2 Oil	s	0.15	3.63	as needed			81					C3
			f											
EU20 -CHP 5-2073		NG	s	28.76	157.57		7	52	365					C3
			f											
EU20 -CHP 5-2073		No.2 Oil	s	0.00	0.01		7	52	365					C3
			f											
EU21 -CHP 5-2074		NG	s	0.99	5.41		7	52	365					C3
			f											
EU21 -CHP 5-2074		No.2 Oil	s	0.00	0.00		7	52	365					C3
			f											
EU22 -Boiler 5-2075		NG	s	2.84	15.55		7	52	365					C3
			f											
EU22 -Boiler 5-2075		No.2 Oil	s	0.00	0.00		7	52	365					C3
			f											
Total				54.31	315.03									

Form 2

CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT

Facility Name: Johns Hopkins Hospital Facility ID #: 510-00001 Pollutant: Carbon Monoxide (CO) Calendar Year: 2021

Equipment Description/ Registration No.	SCC No.	Fuel	Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule			Estimation Method
			Tons/yr	lbs/dy	Hrs/dy	Dys/wk	Wk/yr	Dys/yr	lbs/dy	Hrs/dy	Start	End	

s - Stack Emissions f - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source.

TOSD - Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April-September). This sections needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emission separately for each fuel.

Emission Estimation Method

- A1 - U.S. EPA Reference Method

A2 - Other Particulate Sampling Train

A3 - Liquid Absorption Technique

A4 - Solid Absorption Technique

A5 - Freezing-Out Technique
- C1 - User calculated based on source test or other measurements

C2 - User calculated based on material balance using engineering knowledge of the process

C3 - User calculated based on AP-42

C4 - User calculated by best guess/engineering judgement
- C5 - User calculated based on a State or local agency emission factor

C6 - New construction, not operational

C7 - Source closed, operation ceased

C8 - Computer calculated based on standard

Form 3: PM

EMISSIONS CERTIFICATION REPORT
Particulate Matter

Calendar Year: 2021Facility Name: Johns Hopkins HospitalFacility ID #: 510-00001Pollutant: PM

Equipment Description/ Registration No.	SCC No.	Fuel		PM Filterable		PM 10- Filterable		PM 2.5-Filterable		PM Condensable		Operations	Emissions Methods
				Tons/yr	Lbs/dy	Tons/yr	Lbs/dy	Tons/yr	Lbs/dy	Tons/yr	Lbs/dy	Days/yr	
EU1 -Boiler 5-0303		NG	s	0.05	0.29	0.05	0.29	0.05	0.29	0.16	0.87	365	C3
			f										
EU1 -Boiler 5-0303		No.2 Oil	s	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	365	C3
			f										
EU2 -Boiler 5-0304		NG	s	0.09	0.47	0.09	0.47	0.09	0.47	0.26	1.41	365	C3
			f										
EU2 -Boiler 5-0304		No.2 Oil	s	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.01	365	C3
			f										
EU3 -Boiler 5-0305		NG	s	0.10	0.57	0.10	0.57	0.10	0.57	0.31	1.70	365	C3
			f										
EU3 -Boiler 5-0305		No.2 Oil	s	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	365	
			f										
EU4 -Boiler 5-0306		NG	s	0.12	0.67	0.12	0.67	0.12	0.67	0.37	2.02	365	
			f										
EU4 -Boiler 5-0306		No.2 Oil	s	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	365	
			f										
EU5 -Boiler 5-0734		NG	s	0.11	0.59	0.11	0.59	0.11	0.59	0.33	1.78	365	
			f										
EU5 -Boiler 5-0734		No.2 Oil	s	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.01	365	
			f										
EU13 -Generator 9-0951		No.2 Oil	s	0.00	0.13	0.00	0.10	0.00	0.10	0.00	0.02	52	
			f										
EU14 -Generator 9-0949		No.2 Oil	s	0.06	1.41	0.05	1.13	0.04	1.09	0.01	0.18	95	
			f										
EU15 -Generator 9-0950		No.2 Oil	s	0.06	1.35	0.04	1.08	0.04	1.04	0.01	0.17	99	
			f										
EU16 -Generator 9-0988		No.2 Oil	s	0.05	1.55	0.04	1.24	0.04	1.20	0.01	0.19	62	
			f										
EU17 -Generator 9-0989		No.2 Oil	s	0.04	1.45	0.04	1.16	0.03	1.12	0.01	0.18	60	
			f										
EU18 -Generator 9-1015		No.2 Oil	s	0.06	1.48	0.05	1.18	0.05	1.14	0.01	0.18	97	
			f										
EU19 -Generator 9-1016		No.2 Oil	s	0.06	1.41	0.05	1.13	0.04	1.09	0.01	0.17	95	
			f										
EU20 -CHP 5-2073		NG	s	0.67	3.65	0.03	0.15	0.03	0.15	1.66	9.10	365	
			f										
EU20 -CHP 5-2073		No.2 Oil	s	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.02	365	
			f										
EU21 -CHP 5-2074		NG	s	0.57	3.10	0.02	0.12	0.02	0.12	1.41	7.73	365	
			f										
EU21 -CHP 5-2074		No.2 Oil	s	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	365	
			f										
EU22 -Boiler 5-2075		NG	s	0.06	0.35	0.06	0.35	0.06	0.35	0.19	1.05	365	
			f										
EU22 -Boiler 5-2075		No.2 Oil	s	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	365	
			f										
Total				2.10	18.51	0.85	10.26	0.84	10.01	4.73	26.80		

Form 3: PM

EMISSIONS CERTIFICATION REPORT
Particulate Matter

Calendar Year: 2021

Facility Name: Johns Hopkins Hospital

Facility ID #: 510-00001

Pollutant: PM

Equipment Description/ Registration No.	SCC No.	Fuel		PM Filterable		PM 10- Filterable		PM 2.5-Filterable		PM Condensable		Operations	Emissions Methods
				Tons/yr	Lbs/dy	Tons/yr	Lbs/dy	Tons/yr	Lbs/dy	Tons/yr	Lbs/dy	Days/yr	

S - Stack Emissions F - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emission separately for each fuel.

Emission Estimation Method

- A1 - U.S. EPA Reference Method
- A2 - Other Particulate Sampling Train
- A3 - Liquid Absorption Technique
- A4 - Solid Absorption Technique
- A5 - Freezing-Out Technique
- A9-Other, Specify

- C1 - User calculated based on source test or other measurements
- C2 - User calculated based on material balance using engineering knowledge of the process
- C3 - User calculated based on AP-42
- C4 - User calculated by best guess/engineering Judgment

- C5 - User calculated based on a State or local agency emission factor
- C6 - New construction, not operational
- C7 - Source closed, operation ceased
- C8 - Computer calculated based on standard

Form 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Johns Hopkins HospitalFacility ID #: 510-00001Pollutant: FormaldehydeCalendar Year: 2021

Equipment Description/ Registration No.	Actual Emissions		
	Tons/year	Lbs/day	Lbs/hr
EU1 -Boiler 5-0303	2.08E-03	1.14E-02	4.76E-04
EU2 -Boiler 5-0304	3.42E-03	1.87E-02	7.80E-04
EU3 -Boiler 5-0305	4.11E-03	2.25E-02	9.38E-04
EU4 -Boiler 5-0306	4.87E-03	2.67E-02	1.11E-03
EU5 -Boiler 5-0734	4.31E-03	2.36E-02	9.84E-04
EU13 -Generator 9-0951	4.20E-06	1.61E-04	6.73E-06
EU14 -Generator 9-0949	7.27E-05	1.53E-03	6.38E-05
EU15 -Generator 9-0950	7.09E-05	1.43E-03	5.97E-05
EU16 -Generator 9-0988	6.09E-05	1.96E-03	8.18E-05
EU17 -Generator 9-0989	5.69E-05	1.90E-03	7.90E-05
EU18 -Generator 9-1015	7.68E-05	1.58E-03	6.60E-05
EU19 -Generator 9-1016	7.32E-05	1.54E-03	6.42E-05
EU20 -CHP 5-2073	2.32E-01	1.27E+00	5.29E-02
EU21 -CHP 5-2074	1.97E-01	1.08E+00	4.49E-02
EU22 -Boiler 5-2075	2.53E-03	1.39E-02	5.78E-04
Total	4.50E-01	2.48E+00	1.03E-01

Form 4**HAZARDOUS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Johns Hopkins HospitalFacility ID #: 510-00001Pollutant: CadmiumCalendar Year: 2021

Equipment Description/ Registration No.	Actual Emissions		
	Tons/year	Lbs/day	Lbs/hr
EU1 -Boiler 5-0303	3.05E-05	1.67E-04	6.97E-06
EU2 -Boiler 5-0304	5.00E-05	2.74E-04	1.14E-05
EU3 -Boiler 5-0305	6.02E-05	3.30E-04	1.37E-05
EU4 -Boiler 5-0306	7.13E-05	3.91E-04	1.63E-05
EU5 -Boiler 5-0734	6.32E-05	3.46E-04	1.44E-05
EU13 -Generator 9-0951	0.00E+00	0.00E+00	0.00E+00
EU14 -Generator 9-0949	0.00E+00	0.00E+00	0.00E+00
EU15 -Generator 9-0950	0.00E+00	0.00E+00	0.00E+00
EU16 -Generator 9-0988	0.00E+00	0.00E+00	0.00E+00
EU17 -Generator 9-0989	0.00E+00	0.00E+00	0.00E+00
EU18 -Generator 9-1015	0.00E+00	0.00E+00	0.00E+00
EU19 -Generator 9-1016	0.00E+00	0.00E+00	0.00E+00
EU20 -CHP 5-2073	1.79E-05	9.81E-05	4.09E-06
EU21 -CHP 5-2074	1.29E-05	7.09E-05	2.95E-06
EU22 -Boiler 5-2075	3.72E-05	2.04E-04	8.48E-06
Total	3.43E-04	1.88E-03	7.84E-05

Form 5**BILLABLE TOXIC AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Facility Name: Johns Hopkins HospitalFacility ID #: 510-00001Calendar Year: 2021

Chemical Name	CAS Number		Actual Emissions		Estimation Method
			Tons/yr	lbs/dy	
Carbon Disulfide	75-15-0	s	0.00E+00	0.00E+00	
		f			
Carbonyl Sulfide	463-58-1	s	0.00E+00	0.00E+00	
		f			
Chlorine	7782-50-5	s	0.00E+00	0.00E+00	
		f			
Cyanide Compounds	57-12-5	s	0.00E+00	0.00E+00	
		f			
Hydrochloric Acid	7647-01-0	s	0.00E+00	0.00E+00	
		f			
Hydrogen Fluoride	7664-39-3	s	0.00E+00	0.00E+00	
		f			
Methyl Chloroform	71-55-6	s	0.00E+00	0.00E+00	
		f			
Methylene Chloride	74-87-3	s	0.00E+00	0.00E+00	
		f			
Perchloroethylene	127-18-4	s	0.00E+00	0.00E+00	
		f			
Phosphine	7803-51-2	s	0.00E+00	0.00E+00	
		f			
Titanium Tetrachloride	7550-45-0	s	0.00E+00	0.00E+00	
		f			
Totals			0.00	0.00	

Emission Estimation Method

- A1 - U.S. EPA Reference Method
A2 - Other Particulate Sampling Train
A3 - Liquid Absorption Technique
A4 - Solid Absorption Technique
A5 - Freezing-Out Technique
A9 - Other, Specify
- C1 - User calculated based on source test or other measurement.
C2 - User calculated based on material balance using
engineering knowledge of the process.
C3 - User calculated based on AP-42.
C4 - User calculated by best guess / engineering judgement.
C5 - User calculated based on a State or local agency factor.
C6 - New Construction, not operational.
C7 - Source closed, operation ceased.
C8 - Computer calculated based on standard.

This form to include only the eleven chemicals identified

s - Stack Emissions f - Fugitive Emissions Daily emissions (lbs/day) are lbs/operating day of the source.

PLEASE NOTE: Be sure to attach all data and calculations necessary to support the emissions figures shown above.

See Attachment 1 for minimum reporting values

03/09/09

Form 6 - Greenhouse Gases**GREENHOUSE GAS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Calendar Year: 2021Facility Name: Johns Hopkins HospitalFacility ID #: 510-00001Pollutant: CO₂

Equipment Description/ Registration No.	Actual Emissions		
	Tons/year	Lbs/day	Lbs/hr
EU1 -Boiler 5-0303	3,332.55	18,260.52	760.86
EU2 -Boiler 5-0304	5,439.16	29,803.61	1,241.82
EU3 -Boiler 5-0305	6,547.34	35,875.86	1,494.83
EU4 -Boiler 5-0306	7,773.83	42,596.32	1,774.85
EU5 -Boiler 5-0734	6,867.65	37,630.95	1,567.96
EU13 -Generator 9-0951	8.69	334.34	668.67
EU14 -Generator 9-0949	150.53	3,763.37	2,672.21
EU15 -Generator 9-0950	146.88	3,582.44	2,605.41
EU16 -Generator 9-0988	126.04	4,132.51	2,677.47
EU17 -Generator 9-0989	117.85	3,864.03	2,503.51
EU18 -Generator 9-1015	159.14	3,929.39	2,798.07
EU19 -Generator 9-1016	151.64	3,744.12	2,660.30
EU20 -CHP 5-2073	38,680.16	211,946.11	8,831.09
EU21 -CHP 5-2074	32,861.83	180,064.83	7,502.70
EU22 -Boiler 5-2075	4,052.81	22,207.19	925.30
Totals	106,416.11	601,735.58	40,685.03

Form 6 - Greenhouse Gases**GREENHOUSE GAS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Calendar Year: 2021Facility Name: Johns Hopkins HospitalFacility ID #: 510-00001Pollutant: CH₄

Equipment Description/ Registration No.	Actual Emissions		
	Tons/year	Lbs/day	Lbs/hr
EU1 -Boiler 5-0303	6.39E-02	3.50E-01	1.46E-02
EU2 -Boiler 5-0304	1.04E-01	5.70E-01	2.38E-02
EU3 -Boiler 5-0305	1.25E-01	6.87E-01	2.86E-02
EU4 -Boiler 5-0306	1.49E-01	8.16E-01	3.40E-02
EU5 -Boiler 5-0734	1.31E-01	7.20E-01	3.00E-02
EU13 -Generator 9-0951	0.00E+00	0.00E+00	0.00E+00
EU14 -Generator 9-0949	0.00E+00	0.00E+00	0.00E+00
EU15 -Generator 9-0950	0.00E+00	0.00E+00	0.00E+00
EU16 -Generator 9-0988	0.00E+00	0.00E+00	0.00E+00
EU17 -Generator 9-0989	0.00E+00	0.00E+00	0.00E+00
EU18 -Generator 9-1015	0.00E+00	0.00E+00	0.00E+00
EU19 -Generator 9-1016	0.00E+00	0.00E+00	0.00E+00
EU20 -CHP 5-2073	2.92E+00	1.60E+01	6.67E-01
EU21 -CHP 5-2074	2.49E+00	1.36E+01	5.68E-01
EU22 -Boiler 5-2075	7.77E-02	4.26E-01	1.77E-02
Totals	6.06	33.22	1.38

Form 6 - Greenhouse Gases**GREENHOUSE GAS AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT**Calendar Year: 2021Facility Name: Johns Hopkins HospitalFacility ID #: 510-00001Pollutant: N₂O

Equipment Description/ Registration No.	Actual Emissions		
	Tons/year	Lbs/day	Lbs/hr
EU1 -Boiler 5-0303	6.11E-02	3.35E-01	1.39E-02
EU2 -Boiler 5-0304	9.95E-02	5.45E-01	2.27E-02
EU3 -Boiler 5-0305	1.20E-01	6.56E-01	2.74E-02
EU4 -Boiler 5-0306	1.42E-01	7.80E-01	3.25E-02
EU5 -Boiler 5-0734	1.26E-01	6.88E-01	2.87E-02
EU13 -Generator 9-0951	0.00E+00	0.00E+00	0.00E+00
EU14 -Generator 9-0949	0.00E+00	0.00E+00	0.00E+00
EU15 -Generator 9-0950	0.00E+00	0.00E+00	0.00E+00
EU16 -Generator 9-0988	0.00E+00	0.00E+00	0.00E+00
EU17 -Generator 9-0989	0.00E+00	0.00E+00	0.00E+00
EU18 -Generator 9-1015	0.00E+00	0.00E+00	0.00E+00
EU19 -Generator 9-1016	0.00E+00	0.00E+00	0.00E+00
EU20 -CHP 5-2073	1.04E+00	5.70E+00	2.37E-01
EU21 -CHP 5-2074	8.84E-01	4.84E+00	2.02E-01
EU22 -Boiler 5-2075	7.43E-02	4.07E-01	1.70E-02
Totals	2.55E+00	1.40E+01	5.81E-01

SUPPORTING CALCULATIONS

2021 Hazardous Air Pollutants

		Gas Used	Oil Used	Benzene	Toluene	Hexane	PAH	Formaldehyde	Acetaldehyde	1,3,butadiene	HCl	As	Be	Cd	Cr	Cu	Pb	Mn	Hg	Ni	Se	Zn
		kscf	gal	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs
5-0303 (EU-1)	Boiler 07	55,542	4	0.117	0.189	99.975	0.000	4.166	0.000	0.000	0.000	0.011	0.001	0.061	0.078	0.004	0.000	0.021	0.014	0.117	0.001	1.611
5-0304 (EU-2)	Boiler 08	90,328	1,748	0.190	0.318	162.590	0.000	6.832	0.000	0.000	0.000	0.019	0.002	0.100	0.127	0.009	0.002	0.036	0.024	0.190	0.006	2.620
5-0305 (EU-3)	Boiler 09	108,827	1,591	0.229	0.380	195.888	0.000	8.215	0.000	0.000	0.000	0.023	0.002	0.120	0.153	0.010	0.002	0.043	0.029	0.229	0.006	3.157
5-0306 (EU-4)	Boiler 10	129,412	816	0.272	0.445	232.942	0.000	9.733	0.000	0.000	0.000	0.026	0.002	0.143	0.182	0.011	0.001	0.050	0.034	0.272	0.005	3.753
5-0734 (EU-5)	Boiler 11	114,089	2,003	0.240	0.400	205.360	0.000	8.623	0.000	0.000	0.000	0.024	0.002	0.126	0.161	0.011	0.003	0.045	0.031	0.240	0.007	3.310
5-2075 (EU-22)	Boiler 12	67,547	1	0.142	0.230	121.584	0.000	5.066	0.000	0.000	0.000	0.014	0.001	0.074	0.095	0.005	0.000	0.026	0.018	0.142	0.002	1.959
5-2073 (EU-20)	NEP CT	636,991	6,583	7.847	84.465	0.000	1.336	461.567	25.989	0.294	0.000	0.010	0.000	0.004	0.010	0.000	0.013	0.724	0.001	0.004	0.023	0.000
5-2073 (EU-20)	NEP DB	28,576	0	0.060	0.097	51.438	0.000	2.143	0.000	0.000	0.000	0.006	0.000	0.031	0.040	0.002	0.000	0.011	0.007	0.060	0.001	0.829
5-2074 (EU-21)	SEP CT	540,927	880	6.628	71.727	0.000	1.108	391.774	22.070	0.239	0.000	0.001	0.000	0.001	0.001	0.000	0.002	0.097	0.000	0.001	0.003	0.000
5-2074 (EU-21)	SEP DB	22,977	0	0.048	0.078	41.359	0.000	1.723	0.000	0.000	0.000	0.005	0.000	0.025	0.032	0.002	0.000	0.009	0.006	0.048	0.001	0.666
9-0988 (EU-16)	Gen 3		11,020	1.197	0.434	0.000	0.327	0.122	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9-0989 (EU-17)	Gen 4		10,304	1.119	0.405	0.000	0.306	0.114	0.036	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9-0949 (EU-14)	Gen 5		13,161	1.430	0.518	0.000	0.391	0.145	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9-0950 (EU-15)	Gen 6		12,842	1.395	0.505	0.000	0.381	0.142	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9-1015 (EU-18)	Gen 7		13,914	1.512	0.547	0.000	0.413	0.154	0.049	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9-1016 (EU-19)	Gen 8		13,258	1.440	0.522	0.000	0.393	0.146	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9-0951 (EU-13)	JHOC Gen 1		760	0.083	0.030	0.000	0.023	0.008	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Reporting threshold		(pounds)		200.0	20000.0	20000.0		20.0	200.0	2.0	200.0	0.2	0.2	0.2	20.0	2.0	2.0	20.0	2.0	2.0	20.0	200.0
Totals		Lbs/year		23.9	161.3	1111.1	4.7	900.7	48.3	0.5	0.0	0.1	0.0	0.7	0.9	0.1	0.0	1.1	0.2	1.3	0.1	17.9

HAPs above reporting threshold:

Formaldehyde

Cd

AP 42 Emissions Factors			Benzene	Toluene	Hexane	PAH	Formaldehyde	Acetaldehyde	1,3,butadiene	HCl	As	Be	Cd	Cr	Cu	Pb	Mn	Hg	Ni	Se	Zn
>100 MMBTU/hr	Gas	lb / MM ft3	0.0021	0.0034	1.8	N/A	0.075	N/A	N/A	N/A	0.0002	0.00001	0.0011	0.0014	0.00008	N/A	0.00038	0.00026	0.0021	0.000024	0.029
	Oil	lb / Kgal	0.000214	0.0062	N/A	N/A	0.033	N/A	N/A	N/A	0.00056	0.00042	0.00042	0.00042	0.00084	0.00126	0.00084	0.00042	0.0004	0.00021	0.00056
10-100 MMBTU/hr	Gas	lb / MM ft3	0.0021	0.0034	1.8	N/A	0.075	N/A	N/A	N/A	0.0002	0.00001	0.0011	0.0014	0.00008	N/A	0.00038	0.00026	0.0021	0.000024	0.029
	Oil	lb / Kgal	0.000214	0.0062	N/A	N/A	0.033	N/A	N/A	N/A	0.00056	0.00042	0.00042	0.00042	0.00084	0.00126	0.00084	0.00042	0.0004	0.00021	0.00056
<10 MMBTU/hr	Gas	lb / MM ft3	0.0021	0.0034	1.8	N/A	0.075	N/A	N/A	N/A	0.0002	0.00001	0.0011	0.0014	0.00008	N/A	0.00038	0.00026	0.0021	0.000024	0.029
EGs	Oil	lb / MMBTU	0.000776	0.00028	N/A	0.000212	0.0000789	0.0000252	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Turbine	Gas	lb / MMBTU	0.000012	0.00013	N/A	0.000002	0.00071	0.00004	0.00000043	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Oil	lb / Kgal	0.00762	N/A	N/A	0.00561	0.0392	N/A	0.0022	N/A	0.00147	0.0000427	0.000667	1.51E-03	N/A	1.97E-03	0.11	0.000167	0.0006	0.0035	N/A

2021	Yearly SO2	Fuel Type	Natural Gas k scf / year	Diesel gal / yr	Run Hours Hours	Days Active	ALEUI Input MMBTU / year	Emission Factor AP-42	Emissions lbs / year	Unit Conversion	Emissions tons / year	Emissions lbs / day	Sums tons / year	Sums lbs / day	Hrs / day
5-0303 (EU-1)	Boiler 07	Gas	55,542		1,634	365	60,295	x 0.6 =	lb/10^6 scf	33	/ 2000 =	0.0167	0.091		
5-0303 (EU-1)	Boiler 07	Oil		4	0	365	1	x 0.213 =	lb/10^3 gal	0	/ 2000 =	0.0000	0.000		
5-0304 (EU-2)	Boiler 08	Gas	90,328		2,767	365	97,687	x 0.6 =	lb/10^6 scf	54	/ 2000 =	0.0271	0.148		
5-0304 (EU-2)	Boiler 08	Oil		1,748	5	365	242	x 0.213 =	lb/10^3 gal	0	/ 2000 =	0.0002	0.001		
5-0305 (EU-3)	Boiler 09	Gas	108,827		3,047	365	116,000	x 0.6 =	lb/10^6 scf	65	/ 2000 =	0.0326	0.179		
5-0305 (EU-3)	Boiler 09	Oil		1,591	5	365	221	x 0.213 =	lb/10^3 gal	0	/ 2000 =	0.0002	0.001		
5-0306 (EU-4)	Boiler 10	Gas	129,412		3,611	365	136,943	x 0.6 =	lb/10^6 scf	78	/ 2000 =	0.0388	0.213		
5-0306 (EU-4)	Boiler 10	Oil		816	4	365	113	x 0.213 =	lb/10^3 gal	0	/ 2000 =	0.0001	0.000		
5-0734 (EU-5)	Boiler 11	Gas	114,089		5,170	365	119,679	x 0.6 =	lb/10^6 scf	68	/ 2000 =	0.0342	0.188		
5-0734 (EU-5)	Boiler 11	Oil		2,003	7	365	278	x 0.213 =	lb/10^3 gal	0	/ 2000 =	0.0002	0.001	0.150	0.823
5-2075 (EU-22)	Boiler 12	Gas	67,547		2,208	365	74,284	x 0.6 =	lb/10^6 scf	41	/ 2000 =	0.0203	0.111		
5-2075 (EU-22)	Boiler 12	Oil		1	0	365	0	x 0.213 =	lb/10^3 gal	0	/ 2000 =	0.0000	0.000		
5-2073 (EU-20)	NEP CT	Gas	636,991		8,009	365	672,101	x 0.000752 =	lb/MMBtu	505	/ 2000 =	0.2527	1.385		
5-2073 (EU-20)	NEP CT	Oil		6,583	12	365	936	x 0.001515 =	lb/MMBtu	1	/ 2000 =	0.0007	0.004		
5-2073 (EU-20)	NEP Duct Burner	Gas	28,576		938	365	31,621	x 0.6 =	lb/10^6 scf	17	/ 2000 =	0.0086	0.047		
5-2074 (EU-21)	SEP CT	Gas	540,927		6,848	365	572,422	x 0.000752 =	lb/MMBtu	430	/ 2000 =	0.2152	1.179		
5-2074 (EU-21)	SEP CT	Oil		880	2	365	125	x 0.001515 =	lb/MMBtu	0	/ 2000 =	0.0001	0.001		
5-2074 (EU-21)	SEP Duct Burner	Gas	22,977		752	365	25,346	x 0.6 =	lb/10^6 scf	14	/ 2000 =	0.0069	0.038	0.504	2.764
9-0988 (EU-16)	Gen 3	Oil		11,020	94	61	1,528	x 0.001515 =	lb/MMBtu	2	/ 2000 =	0.0012	0.038		1.543
9-0989 (EU-17)	Gen 4	Oil		10,304	94	61	1,429	x 0.001515 =	lb/MMBtu	2	/ 2000 =	0.0011	0.035		1.543
9-0949 (EU-14)	Gen 5	Oil		13,161	113	80	1,825	x 0.001515 =	lb/MMBtu	3	/ 2000 =	0.0014	0.035		1.408
9-0950 (EU-15)	Gen 6	Oil		12,842	113	82	1,780	x 0.001515 =	lb/MMBtu	3	/ 2000 =	0.0013	0.033		1.375
9-1015 (EU-18)	Gen 7	Oil		13,914	114	81	1,929	x 0.001515 =	lb/MMBtu	3	/ 2000 =	0.0015	0.036		1.404
9-1016 (EU-19)	Gen 8	Oil		13,258	114	81	1,838	x 0.001515 =	lb/MMBtu	3	/ 2000 =	0.0014	0.034		1.407
9-0951 (EU-13)	JHOC Gen 1	Oil		760	26	52	105	x 0.001515 =	lb/MMBtu	0	/ 2000 =	0.0001	0.003	0.008	0.214
Total Tons Emitted											0.6625				
Sulfur content	fuel oil	15 ppm													
	natural gas	8 ppm													

2021	Yearly CO	Fuel Type	Natural Gas k scf / year	Diesel gal / yr	Run Hours Hours	Days Active	ALEUi Input MMBTU / year	Emission Factor AP-42	Unit	Emissions lbs / year	Unit Conversion	Emissions tons / year	Emissions lbs / day	Sums tons / year	Sums lbs / day	Hrs / day
5-0303 (EU-1)	Boiler 07	Gas	55,542		1,634	365	60,295	x 84 =	lb/10^6 scf	4,665	/ 2000 =	2.333	12.782			
5-0303 (EU-1)	Boiler 07	Oil		4	0	365	1	x 5 =	lb/10^3 gal	0	/ 2000 =	0.000	0.000			
5-0304 (EU-2)	Boiler 08	Gas	90,328		2,767	365	97,687	x 84 =	lb/10^6 scf	7,588	/ 2000 =	3.794	20.788			
5-0304 (EU-2)	Boiler 08	Oil		1,748	5	365	242	x 5 =	lb/10^3 gal	9	/ 2000 =	0.004	0.024			
5-0305 (EU-3)	Boiler 09	Gas	108,827		3,047	365	116,000	x 84 =	lb/10^6 scf	9,141	/ 2000 =	4.571	25.045			
5-0305 (EU-3)	Boiler 09	Oil		1,591	5	365	221	x 5 =	lb/10^3 gal	8	/ 2000 =	0.004	0.022			
5-0306 (EU-4)	Boiler 10	Gas	129,412		3,611	365	136,943	x 84 =	lb/10^6 scf	10,871	/ 2000 =	5.435	29.783			
5-0306 (EU-4)	Boiler 10	Oil		816	4	365	113	x 5 =	lb/10^3 gal	4	/ 2000 =	0.002	0.011			
5-0734 (EU-5)	Boiler 11	Gas	114,089		5,170	365	119,679	x 84 =	lb/10^6 scf	9,583	/ 2000 =	4.792	26.256			
5-0734 (EU-5)	Boiler 11	Oil		2,003	7	365	278	x 5 =	lb/10^3 gal	10	/ 2000 =	0.005	0.027	20.940	114.738	
5-2075 (EU-22)	Boiler 12	Gas	67,547		2,208	365	74,284	x 84 =	lb/10^6 scf	5,674	/ 2000 =	2.837	15.545			
5-2075 (EU-22)	Boiler 12	Oil		1	0	365	0	x 5 =	lb/10^3 gal	0	/ 2000 =	0.000	0.000			
5-2073 (EU-20)	NEP CT	Gas	636,991		8,009	365	672,101	x 0.082 =	lb/MMBtu	55,112	/ 2000 =	27.556	150.993			
5-2073 (EU-20)	NEP CT	Oil		6,583	12	365	936	x 0.0033 =	lb/MMBtu	3	/ 2000 =	0.002	0.008			
5-2073 (EU-20)	NEP Duct Burner	Gas	28,576		938	365	31,621	x 84 =	lb/10^6 scf	2,400	/ 2000 =	1.200	6.577			
5-2074 (EU-21)	SEP CT	Gas	540,927		6,848	365	572,422	x 0.082 =	lb/MMBtu	44	/ 2000 =	0.022	0.122			
5-2074 (EU-21)	SEP CT	Oil		880	2	365	125	x 0.0033 =	lb/MMBtu	0	/ 2000 =	0.000	0.001			
5-2074 (EU-21)	SEP Duct Burner	Gas	22,977		752	365	25,346	x 84 =	lb/10^6 scf	1,930	/ 2000 =	0.965	5.288	32.582	178.533	
9-0988 (EU-16)	Gen 3	Oil		11,020	94	61	1,528	x 0.85 x 0.155 =	lb/MMBtu	201	/ 2000 =	0.101	3.300			1.543
9-0989 (EU-17)	Gen 4	Oil		10,304	94	61	1,429	x 0.85 x 0.184 =	lb/MMBtu	223	/ 2000 =	0.112	3.663			1.543
9-0949 (EU-14)	Gen 5	Oil		13,161	113	80	1,825	x 0.85 x 0.148 =	lb/MMBtu	230	/ 2000 =	0.115	2.869			1.408
9-0950 (EU-15)	Gen 6	Oil		12,842	113	82	1,780	x 0.85 x 0.158 =	lb/MMBtu	239	/ 2000 =	0.120	2.916			1.375
9-1015 (EU-18)	Gen 7	Oil		13,914	114	81	1,929	x 0.85 x 0.181 =	lb/MMBtu	297	/ 2000 =	0.148	3.664			1.404
9-1016 (EU-19)	Gen 8	Oil		13,258	114	81	1,838	x 0.85 x 0.188 =	lb/MMBtu	294	/ 2000 =	0.147	3.626			1.407
9-0951 (EU-13)	JHOC Gen 1	Oil		760	26	52	105	x 0.85 =	lb/MMBtu	90	/ 2000 =	0.045	1.722	0.787	21.760	0.500
Total Tons Emitted												54.3087				

2021	Yearly NOx	Fuel Type					ALEUi Input MMBTU / year	EFEUi Nox		Unit Conversion	Emissions tons / year	Emissions lbs / day
			Natural Gas k scf / year	Diesel gal / yr	Run Hours Hours	Days Active		Emission Factor lbs/MMBTU	Emissions lbs / year			
5-0303 (EU-1)	Boiler 07	Gas	55,542		1,634	365	60,295	x 0.074 =	4,462	/ 2000 =	2.2309	12.224
5-0303 (EU-1)	Boiler 07	Oil		4	0	365	1	x 0.125 =	0	/ 2000 =	0.0000	0.000
5-0304 (EU-2)	Boiler 08	Gas	90,328		2,767	365	97,687	x 0.081 =	7,913	/ 2000 =	3.9563	21.679
5-0304 (EU-2)	Boiler 08	Oil		1,748	5	365	242	x 0.14 =	34	/ 2000 =	0.0170	0.093
5-0305 (EU-3)	Boiler 09	Gas	108,827		3,047	365	116,000	x 0.083 =	9,628	/ 2000 =	4.8140	26.378
5-0305 (EU-3)	Boiler 09	Oil		1,591	5	365	221	x 0.112 =	25	/ 2000 =	0.0124	0.068
5-0306 (EU-4)	Boiler 10	Gas	129,412		3,611	365	136,943	x 0.077 =	10,545	/ 2000 =	5.2723	28.889
5-0306 (EU-4)	Boiler 10	Oil		816	4	365	113	x 0.168 =	19	/ 2000 =	0.0095	0.052
5-0734 (EU-5)	Boiler 11	Gas	114,089		5,170	365	119,679	x 0.111 =	13,165	/ 2000 =	6.5823	36.068
5-0734 (EU-5)	Boiler 11	Oil		2,003	7	365	278	x 0.117 =	32	/ 2000 =	0.0162	0.089
5-2075 (EU-22)	Boiler 12	Gas	67,547		2,208	365	74,284	x 0.089 =	6,611	/ 2000 =	3.3056	18.113
5-2075 (EU-22)	Boiler 12	Oil		1	0	365	0	x 0.094 =	0	/ 2000 =	0.0000	0.000
5-2073 (EU-20)	NEP CT	Gas	636,991		8,009	365	672,101	x 0.025 =	16,803	/ 2000 =	8.4013	46.034
5-2073 (EU-20)	NEP CT	Oil		6,583	12	365	936	x 0.139 =	130	/ 2000 =	0.0650	0.356
5-2073 (EU-20)	NEP Duct Burner	Gas	28,576		938	365	31,621	x 0.023 =	727	/ 2000 =	0.3636	1.993
5-2074 (EU-21)	SEP CT	Gas	540,927		6,848	365	572,422	x 0.02 =	11,448	/ 2000 =	5.7242	31.366
5-2074 (EU-21)	SEP CT	Oil		880	2	365	125	x 0.082 =	10	/ 2000 =	0.0051	0.028
5-2074 (EU-21)	SEP Duct Burner	Gas	22,977		752	365	25,346	x 0.01 =	253	/ 2000 =	0.1267	0.694
9-0988 (EU-16)	Gen 3	Oil		11,020	94	61	1,528	x 1.245 =	1,902	/ 2000 =	0.9510	31.182
9-0989 (EU-17)	Gen 4	Oil		10,304	94	61	1,429	x 1.321 =	1,887	/ 2000 =	0.9435	30.936
9-0949 (EU-14)	Gen 5	Oil		13,161	113	80	1,825	x 1.488 =	2,715	/ 2000 =	1.3575	33.939
9-0950 (EU-15)	Gen 6	Oil		12,842	113	82	1,780	x 1.517 =	2,701	/ 2000 =	1.3504	32.937
9-1015 (EU-18)	Gen 7	Oil		13,914	114	81	1,929	x 1.428 =	2,755	/ 2000 =	1.3773	34.007
9-1016 (EU-19)	Gen 8	Oil		13,258	114	81	1,838	x 1.471 =	2,704	/ 2000 =	1.3519	33.379
9-0951 (EU-13)	JHOC Gen 1	Oil		760	26	52	105	x 4.052 =	427	/ 2000 =	0.2135	8.210
Total Tons Emitted											48.4478	

Emission factors were based on the performance stack testings on March 2017. (Note: Emission factors for EU21 was based on stack testing performed on March 2013)

2021	Ozone NOx	Fuel Type					EFEUi Nox		Emissions lbs / year	Unit Conversion	Emissions tons / year	Emissions lbs / day	Hrs / day
			Natural Gas k scf / year	Diesel gal / yr	Run Hours Hours	Days Active	ALEUi Input MMBTU / year	Emission Factor lbs/MMBTU					
5-0303 (EU-1)	Boiler 07	Gas	2,552		140	153	2,651	x 0.074 =	196	/ 2000 =	0.0981	1.3	0.912
5-0303 (EU-1)	Boiler 07	Oil		1	0	153	0	x 0.125 =	0	/ 2000 =	0.0000	0.0	0.0
5-0304 (EU-2)	Boiler 08	Gas	4,299		246	153	4,488	x 0.081 =	363	/ 2000 =	0.1817	2.4	1.608
5-0304 (EU-2)	Boiler 08	Oil		0	0	153	0	x 0.14 =	0	/ 2000 =	0.0000	0.0	0.0
5-0305 (EU-3)	Boiler 09	Gas	9,023		390	153	9,273	x 0.083 =	770	/ 2000 =	0.3848	5.0	2.546
5-0305 (EU-3)	Boiler 09	Oil		0	0	153	0	x 0.112 =	0	/ 2000 =	0.0000	0.0	0.0
5-0306 (EU-4)	Boiler 10	Gas	39,386		1,326	153	40,536	x 0.077 =	3,121	/ 2000 =	1.5606	20.4	8.665
5-0306 (EU-4)	Boiler 10	Oil		0	0	153	0	x 0.168 =	0	/ 2000 =	0.0000	0.0	0.0
5-0734 (EU-5)	Boiler 11	Gas	57,632		2,394	153	59,115	x 0.111 =	6,503	/ 2000 =	3.2513	42.5	15.649
5-0734 (EU-5)	Boiler 11	Oil		0	0	153	0	x 0.117 =	0	/ 2000 =	0.0000	0.0	0.0
5-2075 (EU-22)	Boiler 12	Gas	400		0	153	415	x 0.089 =	37	/ 2000 =	0.0185	0.2	0.003
5-2075 (EU-22)	Boiler 12	Oil		0	0	153	0	x 0.094 =	0	/ 2000 =	0.0000	0.0	0.0
5-2073 (EU-20)	NEP CT	Gas	279,422		3,550	153	286,967	x 0.025 =	7,174	/ 2000 =	3.5871	46.9	23.202
5-2073 (EU-20)	NEP CT	Oil		1,006	2	153	143	x 0.139 =	20	/ 2000 =	0.0099	0.1	0.012
5-2073 (EU-20)	NEP Duct Burner	Gas	0		0	153	0	x 0.023 =	0	/ 2000 =	0.0000	0.0	0.0
5-2074 (EU-21)	SEP CT	Gas	327,589		3,610	153	287,415	x 0.02 =	5,748	/ 2000 =	2.8742	37.6	23.592
5-2074 (EU-21)	SEP CT	Oil		560	1	153	80	x 0.082 =	7	/ 2000 =	0.0033	0.0	0.0
5-2074 (EU-21)	SEP Duct Burner	Gas	0		0	153	0	x 0.01 =	0	/ 2000 =	0.0000	0.0	0.0
9-0988 (EU-16)	Gen 3	Oil		8,878	75	30	1,231	x 1.245 =	1,532	/ 2000 =	0.7662	51.1	2.492
9-0989 (EU-17)	Gen 4	Oil		8,458	75	30	1,141	x 1.321 =	1,507	/ 2000 =	0.7536	50.2	2.492
9-0949 (EU-14)	Gen 5	Oil		9,183	79	37	1,273	x 1.488 =	1,895	/ 2000 =	0.9473	51.2	2.133
9-0950 (EU-15)	Gen 6	Oil		8,983	79	38	1,245	x 1.517 =	1,889	/ 2000 =	0.9447	49.7	2.070
9-1015 (EU-18)	Gen 7	Oil		9,761	79	38	1,353	x 1.428 =	1,932	/ 2000 =	0.9662	50.9	2.086
9-1016 (EU-19)	Gen 8	Oil		9,208	79	38	1,277	x 1.471 =	1,878	/ 2000 =	0.9389	49.4	2.086
9-0951 (EU-13)	JHOC Gen 1	Oil		323	11	22	45	x 4.052 =	181	/ 2000 =	0.0907	8.3	0.500
Total Tons Emitted											17.3772	467.2845	

	2021	Yearly VOC	Fuel Type	Natural Gas	Diesel	Run Hours	Days	ALEUI Input	Emission Factor		Emissions	Unit	Emissions	Emissions	Sums	Sums	
				k scf / year	gal / yr	Hours	Active	MMBTU / year	AP-42	Unit	lbs / year	Conversion	tons / year	lbs / day	tons / year	lbs / day	Hrs / day
Significant	5-0303 (EU-1)	Boiler 07	Gas	55,542		1,634	365	60,295	x 5.5 =	lb/10^6 scf	305	/ 2000 =	0.1527	0.837			
Significant	5-0303 (EU-1)	Boiler 07	Oil		4	0	365	1	x 0.556 =	lb/10^3 gal	0	/ 2000 =	0.0000	0.000			
Significant	5-0304 (EU-2)	Boiler 08	Gas	90,328		2,767	365	97,687	x 5.5 =	lb/10^6 scf	497	/ 2000 =	0.2484	1.361			
Significant	5-0304 (EU-2)	Boiler 08	Oil		1,748	5	365	242	x 0.556 =	lb/10^3 gal	1	/ 2000 =	0.0005	0.003			
Significant	5-0305 (EU-3)	Boiler 09	Gas	108,827		3,047	365	116,000	x 5.5 =	lb/10^6 scf	599	/ 2000 =	0.2993	1.640			
Significant	5-0305 (EU-3)	Boiler 09	Oil		1,591	5	365	221	x 0.556 =	lb/10^3 gal	1	/ 2000 =	0.0004	0.002			
Significant	5-0306 (EU-4)	Boiler 10	Gas	129,412		3,611	365	136,943	x 5.5 =	lb/10^6 scf	712	/ 2000 =	0.3559	1.950			
Significant	5-0306 (EU-4)	Boiler 10	Oil		816	4	365	113	x 0.556 =	lb/10^3 gal	0	/ 2000 =	0.0002	0.001			
Significant	5-0734 (EU-5)	Boiler 11	Gas	114,089		5,170	365	119,679	x 5.5 =	lb/10^6 scf	627	/ 2000 =	0.3137	1.719			
Significant	5-0734 (EU-5)	Boiler 11	Oil		2,003	7	365	278	x 0.556 =	lb/10^3 gal	1	/ 2000 =	0.0006	0.003	1.372	7.516	
Significant	5-2075 (EU-22)	Boiler 12	Gas	67,547		2,208	365	74,284	x 5.5 =	lb/10^6 scf	372	/ 2000 =	0.1858	1.018			
Significant	5-2075 (EU-22)	Boiler 12	Oil		1	0	365	0	x 0.556 =	lb/10^3 gal	0	/ 2000 =	0.0000	0.000			
Significant	5-2073 (EU-20)	NEP CT	Gas	636,991		8,009	365	672,101	x 0.0021 =	lb/MMBtu	1,411	/ 2000 =	0.7057	3.867			
Significant	5-2073 (EU-20)	NEP CT	Oil		6,583	12	365	936	x 0.00041 =	lb/MMBtu	0	/ 2000 =	0.0002	0.001			
Significant	5-2073 (EU-20)	NEP Duct Burner	Gas	28,576		938	365	31,621	x 5.5 =	lb/10^6 scf	157	/ 2000 =	0.0786	0.431			
Significant	5-2074 (EU-21)	SEP CT	Gas	540,927		6,848	365	572,422	x 0.0021 =	lb/MMBtu	1,202	/ 2000 =	0.6010	3.293			
Significant	5-2074 (EU-21)	SEP CT	Oil		880	2	365	125	x 0.00041 =	lb/MMBtu	0	/ 2000 =	0.0000	0.000			
Significant	5-2074 (EU-21)	SEP Duct Burner	Gas	22,977		752	365	25,346	x 5.5 =	lb/10^6 scf	126	/ 2000 =	0.0632	0.346	1.634	8.956	
Significant	9-0988 (EU-16)	Gen 3	Oil		11,020	94	61	1,528	x 0.09 =	lb/MMBtu	138	/ 2000 =	0.0688	2.254			1.543
Significant	9-0989 (EU-17)	Gen 4	Oil		10,304	94	61	1,429	x 0.09 =	lb/MMBtu	129	/ 2000 =	0.0643	2.108			1.543
Significant	9-0949 (EU-14)	Gen 5	Oil		13,161	113	80	1,825	x 0.09 =	lb/MMBtu	164	/ 2000 =	0.0821	2.053			1.408
Significant	9-0950 (EU-15)	Gen 6	Oil		12,842	113	82	1,780	x 0.09 =	lb/MMBtu	160	/ 2000 =	0.0801	1.954			1.375
Significant	9-1015 (EU-18)	Gen 7	Oil		13,914	114	81	1,929	x 0.09 =	lb/MMBtu	174	/ 2000 =	0.0868	2.143			1.404
Significant	9-1016 (EU-19)	Gen 8	Oil		13,258	114	81	1,838	x 0.09 =	lb/MMBtu	165	/ 2000 =	0.0827	2.042			1.407
Significant	9-0951 (EU-13)	JHOC Gen 1	Oil		760	26	52	105	x 0.09 =	lb/MMBtu	9	/ 2000 =	0.0047	0.182	0.470	12.736	0.500
											Total Tons Emitted		3.4758				

2021	Yearly VOC	Fuel Type	Natural Gas k scf / year	Diesel gal / yr	Run Hours Hours	Days Active	ALEUI Input MMBTU / year	Emission Factor AP-42	Unit	Emissions lbs / year	Unit Conversion	Emissions tons / year	Emissions lbs / day	Hrs / day
5-0303 (EU-1)	Boiler 07	Gas	2,552		140	153	2,651	x 5.5 =	lb/10^6 scf	14	/ 2000 =	0.0070	0.09	0.912
5-0303 (EU-1)	Boiler 07	Oil		1	0	153	0	x 0.556 =	lb/10^3 gal	0	/ 2000 =	0.0000	0.00	0.0
5-0304 (EU-2)	Boiler 08	Gas	4,299		246	153	4,488	x 5.5 =	lb/10^6 scf	24	/ 2000 =	0.0118	0.15	1.608
5-0304 (EU-2)	Boiler 08	Oil		0	0	153	0	x 0.556 =	lb/10^3 gal	0	/ 2000 =	0.0000	0.00	0.0
5-0305 (EU-3)	Boiler 09	Gas	9,023		390	153	9,273	x 5.5 =	lb/10^6 scf	50	/ 2000 =	0.0248	0.32	2.546
5-0305 (EU-3)	Boiler 09	Oil		0	0	153	0	x 0.556 =	lb/10^3 gal	0	/ 2000 =	0.0000	0.00	0.0
5-0306 (EU-4)	Boiler 10	Gas	39,386		1,326	153	40,536	x 5.5 =	lb/10^6 scf	217	/ 2000 =	0.1083	1.42	8.665
5-0306 (EU-4)	Boiler 10	Oil		0	0	153	0	x 0.556 =	lb/10^3 gal	0	/ 2000 =	0.0000	0.00	0.0
5-0734 (EU-5)	Boiler 11	Gas	57,632		2,394	153	59,115	x 5.5 =	lb/10^6 scf	317	/ 2000 =	0.1585	2.07	15.649
5-0734 (EU-5)	Boiler 11	Oil		0	0	153	0	x 0.556 =	lb/10^3 gal	0	/ 2000 =	0.0000	0.00	0.0
5-2075 (EU-22)	Boiler 12	Gas	400		0	153	415	x 5.5 =	lb/10^6 scf	2	/ 2000 =	0.0011	0.01	0.003
5-2075 (EU-22)	Boiler 12	Oil		0	0	153	0	x 0.556 =	lb/10^3 gal	0	/ 2000 =	0.0000	0.00	0.0
5-2073 (EU-20)	NEP CT	Gas	279,422		3,550	153	286,967	x 0.0021 =	lb/MMBtu	603	/ 2000 =	0.3013	3.94	23.202
5-2073 (EU-20)	NEP CT	Oil		1,006	2	153	143	x 0.00041 =	lb/MMBtu	0	/ 2000 =	0.0000	0.00	0.012
5-2073 (EU-20)	NEP Duct Burner	Gas	0		0	153	0	x 5.5 =	lb/10^6 scf	0	/ 2000 =	0.0000	0.00	0.0
5-2074 (EU-21)	SEP CT	Gas	279,938		3,610	153	287,415	x 0.0021 =	lb/MMBtu	604	/ 2000 =	0.3018	3.94	23.592
5-2074 (EU-21)	SEP CT	Oil		560	1	153	80	x 0.00041 =	lb/MMBtu	0	/ 2000 =	0.0000	0.00	0.0
5-2074 (EU-21)	SEP Duct Burner	Gas	0		0	153	0	x 5.5 =	lb/10^6 scf	0	/ 2000 =	0.0000	0.00	0.0
9-0988 (EU-16)	Gen 3	Oil		8,878	75	30	1,231	x 0.09 =	lb/MMBtu	111	/ 2000 =	0.0554	3.69	2.492
9-0989 (EU-17)	Gen 4	Oil		8,458	75	30	1,141	x 0.09 =	lb/MMBtu	103	/ 2000 =	0.0513	3.42	2.492
9-0949 (EU-14)	Gen 5	Oil		9,183	79	37	1,273	x 0.09 =	lb/MMBtu	115	/ 2000 =	0.0573	3.10	2.133
9-0950 (EU-15)	Gen 6	Oil		8,983	79	38	1,245	x 0.09 =	lb/MMBtu	112	/ 2000 =	0.0560	2.95	2.070
9-1015 (EU-18)	Gen 7	Oil		9,761	79	38	1,353	x 0.09 =	lb/MMBtu	122	/ 2000 =	0.0609	3.21	2.086
9-1016 (EU-19)	Gen 8	Oil		9,208	79	38	1,277	x 0.09 =	lb/MMBtu	115	/ 2000 =	0.0574	3.02	2.086
9-0951 (EU-13)	JHOC Gen 1	Oil		323	11	22	45	x 0.09 =	lb/MMBtu	4	/ 2000 =	0.0020	0.18	0.500
										Total Tons Emitted		1.2551	31.5322	

2021	Yearly PM Filt	Fuel Type	Natural Gas k scf / year	Diesel gal / yr	Run Hours Hours	Days Active	ALEUi Input MMBTU / year	Emission Factor AP-42	Unit	Emissions lbs / year	Unit Conversion	Emissions tons / year	Emissions lbs / day	Sums tons / year	Sums lbs / day
5-0303 (EU-1)	Boiler 07	Gas	55,542		1,634	365	60,295	x 1.9 =	lb/10^6 scf	106	/ 2000 =	0.0528	0.289		
5-0303 (EU-1)	Boiler 07	Oil		4	0	365	1	x 2 =	lb/10^3 gal	0	/ 2000 =	0.0000	0.000		
5-0304 (EU-2)	Boiler 08	Gas	90,328		2,767	365	97,687	x 1.9 =	lb/10^6 scf	172	/ 2000 =	0.0858	0.470		
5-0304 (EU-2)	Boiler 08	Oil		1,748	5	365	242	x 2 =	lb/10^3 gal	3	/ 2000 =	0.0017	0.010		
5-0305 (EU-3)	Boiler 09	Gas	108,827		3,047	365	116,000	x 1.9 =	lb/10^6 scf	207	/ 2000 =	0.1034	0.566		
5-0305 (EU-3)	Boiler 09	Oil		1,591	5	365	221	x 2 =	lb/10^3 gal	3	/ 2000 =	0.0016	0.009		
5-0306 (EU-4)	Boiler 10	Gas	129,412		3,611	365	136,943	x 1.9 =	lb/10^6 scf	246	/ 2000 =	0.1229	0.674		
5-0306 (EU-4)	Boiler 10	Oil		816	4	365	113	x 2 =	lb/10^3 gal	2	/ 2000 =	0.0008	0.004		
5-0734 (EU-5)	Boiler 11	Gas	114,089		5,170	365	119,679	x 1.9 =	lb/10^6 scf	217	/ 2000 =	0.1084	0.594		
5-0734 (EU-5)	Boiler 11	Oil		2,003	7	365	278	x 2 =	lb/10^3 gal	4	/ 2000 =	0.0020	0.011	0.479	2.627
5-2075 (EU-22)	Boiler 12	Gas	67,547		2,208	365	74,284	x 1.9 =	lb/10^6 scf	128	/ 2000 =	0.0642	0.352		
5-2075 (EU-22)	Boiler 12	Oil		1	0	365	0	x 2 =	lb/10^3 gal	0	/ 2000 =	0.0000	0.000		
5-2073 (EU-20)	NEP CT	Gas	636,991		8,009	365	672,101	x 0.0019 =	lb/MMBtu	1,277	/ 2000 =	0.6385	3.499		
5-2073 (EU-20)	NEP CT	Oil		6,583	12	365	936	x 0.0043 =	lb/MMBtu	4	/ 2000 =	0.0020	0.011		
5-2073 (EU-20)	NEP Duct Burner	Gas	28,576		938	365	31,621	x 1.9 =	lb/10^6 scf	54	/ 2000 =	0.0271	0.149		
5-2074 (EU-21)	SEP CT	Gas	540,927		6,848	365	572,422	x 0.0019 =	lb/MMBtu	1,088	/ 2000 =	0.5438	2.980		
5-2074 (EU-21)	SEP CT	Oil		880	2	365	125	x 0.0043 =	lb/MMBtu	1	/ 2000 =	0.0003	0.001		
5-2074 (EU-21)	SEP Duct Burner	Gas	22,977		752	365	25,346	x 1.9 =	lb/10^6 scf	44	/ 2000 =	0.0218	0.120	1.298	7.111
9-0988 (EU-16)	Gen 3	Oil		11,020	94	61	1,528	x 0.062 =	lb/MMBtu	94.722	/ 2000 =	0.0474	1.553		
9-0989 (EU-17)	Gen 4	Oil		10,304	94	61	1,429	x 0.062 =	lb/MMBtu	88.568	/ 2000 =	0.0443	1.452		
9-0949 (EU-14)	Gen 5	Oil		13,161	113	80	1,825	x 0.062 =	lb/MMBtu	113.129	/ 2000 =	0.0566	1.414		
9-0950 (EU-15)	Gen 6	Oil		12,842	113	82	1,780	x 0.062 =	lb/MMBtu	110.382	/ 2000 =	0.0552	1.346		
9-1015 (EU-18)	Gen 7	Oil		13,914	114	81	1,929	x 0.062 =	lb/MMBtu	119.596	/ 2000 =	0.0598	1.476		
9-1016 (EU-19)	Gen 8	Oil		13,258	114	81	1,838	x 0.062 =	lb/MMBtu	113.957	/ 2000 =	0.0570	1.407		
9-0951 (EU-13)	JHOC Gen 1	Oil		760	26	52	105	x 0.062 =	lb/MMBtu	6.533	/ 2000 =	0.0033	0.126	0.323	8.774
										Total Tons Emitted		2.1006	18.5119		

2021	Yearly PM 10 Filt	Fuel Type	Natural Gas k scf / year	Diesel gal / yr	Run Hours Hours	Days Active	ALEUI Input MMBTU / year	Emission Factor AP-42	Unit	Emissions lbs / year	Unit Conversion	Emissions tons / year	Emissions lbs / day	Sums tons / year	Sums lbs / day
5-0303 (EU-1)	Boiler 07	Gas	55,542		1,634	365	60,295	x 1.9 =	lb/10 ⁶ scf	106	/ 2000 =	0.0528	0.289		
5-0303 (EU-1)	Boiler 07	Oil		4	0	365	1	x 1.08 =	lb/10 ³ gal	0	/ 2000 =	0.0000	0.000		
5-0304 (EU-2)	Boiler 08	Gas	90,328		2,767	365	97,687	x 1.9 =	lb/10 ⁶ scf	172	/ 2000 =	0.0858	0.470		
5-0304 (EU-2)	Boiler 08	Oil		1,748	5	365	242	x 1.08 =	lb/10 ³ gal	2	/ 2000 =	0.0009	0.005		
5-0305 (EU-3)	Boiler 09	Gas	108,827		3,047	365	116,000	x 1.9 =	lb/10 ⁶ scf	207	/ 2000 =	0.1034	0.566		
5-0305 (EU-3)	Boiler 09	Oil		1,591	5	365	221	x 1.08 =	lb/10 ³ gal	2	/ 2000 =	0.0009	0.005		
5-0306 (EU-4)	Boiler 10	Gas	129,412		3,611	365	136,943	x 1.9 =	lb/10 ⁶ scf	246	/ 2000 =	0.1229	0.674		
5-0306 (EU-4)	Boiler 10	Oil		816	4	365	113	x 1.08 =	lb/10 ³ gal	1	/ 2000 =	0.0004	0.002		
5-0734 (EU-5)	Boiler 11	Gas	114,089		5,170	365	119,679	x 1.9 =	lb/10 ⁶ scf	217	/ 2000 =	0.1084	0.594		
5-0734 (EU-5)	Boiler 11	Oil		2,003	7	365	278	x 1.08 =	lb/10 ³ gal	2	/ 2000 =	0.0011	0.006	0.477	2.612
5-2075 (EU-22)	Boiler 12	Gas	67,547		2,208	365	74,284	x 1.9 =	lb/10 ⁶ scf	128	/ 2000 =	0.0642	0.352		
5-2075 (EU-22)	Boiler 12	Oil		1	0	365	0	x 1.08 =	lb/10 ³ gal	0	/ 2000 =	0.0000	0.000		
5-2073 (EU-20)	NEP CT	Gas	636,991		8,009	365	672,101	x 0.0019 =	lb/MMBtu	1	/ 2000 =	0.0006	0.003		
5-2073 (EU-20)	NEP CT	Oil		6,583	12	365	936	x 0.0043 =	lb/MMBtu	0	/ 2000 =	0.0000	0.000		
5-2073 (EU-20)	NEP Duct Burner	Gas	28,576		938	365	31,621	x 1.9 =	lb/10 ⁶ scf	54	/ 2000 =	0.0271	0.149		
5-2074 (EU-21)	SEP CT	Gas	540,927		6,848	365	572,422	x 0.0019 =	lb/MMBtu	1	/ 2000 =	0.0005	0.003		
5-2074 (EU-21)	SEP CT	Oil		880	2	365	125	x 0.0043 =	lb/MMBtu	0	/ 2000 =	0.0000	0.000		
5-2074 (EU-21)	SEP Duct Burner	Gas	22,977		752	365	25,346	x 1.9 =	lb/10 ⁶ scf	44	/ 2000 =	0.0218	0.120	0.114	0.626
9-0988 (EU-16)	Gen 3	Oil		11,020	94	61	1,528	x 0.0496 =	lb/MMBtu	75.778	/ 2000 =	0.0379	1.242		
9-0989 (EU-17)	Gen 4	Oil		10,304	94	61	1,429	x 0.0496 =	lb/MMBtu	70.855	/ 2000 =	0.0354	1.162		
9-0949 (EU-14)	Gen 5	Oil		13,161	113	80	1,825	x 0.0496 =	lb/MMBtu	90.503	/ 2000 =	0.0453	1.131		
9-0950 (EU-15)	Gen 6	Oil		12,842	113	82	1,780	x 0.0496 =	lb/MMBtu	88.306	/ 2000 =	0.0442	1.077		
9-1015 (EU-18)	Gen 7	Oil		13,914	114	81	1,929	x 0.0496 =	lb/MMBtu	95.677	/ 2000 =	0.0478	1.181		
9-1016 (EU-19)	Gen 8	Oil		13,258	114	81	1,838	x 0.0496 =	lb/MMBtu	91.166	/ 2000 =	0.0456	1.126		
9-0951 (EU-13)	JHOC Gen 1	Oil		760	26	52	105	x 0.0496 =	lb/MMBtu	5.226	/ 2000 =	0.0026	0.101	0.259	7.019
Total Tons Emitted										0.8497					

2021	Yearly PM 2.5 Filter	Fuel Type	Natural Gas k scf / year	Diesel gal / yr	Run Hours Hours	Days Active	ALEUi Input MMBTU / year	Emission Factor AP-42	Unit	Emissions lbs / year	Unit Conversion	Emissions tons / year	Emissions lbs / day	Sums tons / year	Sums lbs / day
5-0303 (EU-1)	Boiler 07	Gas	55,542		1,634	365	60,295	x 1.9 =	lb/10^6 scf	106	/ 2000 =	0.0528	0.2891		
5-0303 (EU-1)	Boiler 07	Oil		4	0	365	1	x 0.83 =	lb/10^3 gal	0	/ 2000 =	0.0000	0.0000		
5-0304 (EU-2)	Boiler 08	Gas	90,328		2,767	365	97,687	x 1.9 =	lb/10^6 scf	172	/ 2000 =	0.0858	0.4702		
5-0304 (EU-2)	Boiler 08	Oil		1,748	5	365	242	x 0.83 =	lb/10^3 gal	1	/ 2000 =	0.0007	0.0040		
5-0305 (EU-3)	Boiler 09	Gas	108,827		3,047	365	116,000	x 1.9 =	lb/10^6 scf	207	/ 2000 =	0.1034	0.5665		
5-0305 (EU-3)	Boiler 09	Oil		1,591	5	365	221	x 0.83 =	lb/10^3 gal	1	/ 2000 =	0.0007	0.0036		
5-0306 (EU-4)	Boiler 10	Gas	129,412		3,611	365	136,943	x 1.9 =	lb/10^6 scf	246	/ 2000 =	0.1229	0.6737		
5-0306 (EU-4)	Boiler 10	Oil		816	4	365	113	x 0.83 =	lb/10^3 gal	1	/ 2000 =	0.0003	0.0019		
5-0734 (EU-5)	Boiler 11	Gas	114,089		5,170	365	119,679	x 1.9 =	lb/10^6 scf	217	/ 2000 =	0.1084	0.5939		
5-0734 (EU-5)	Boiler 11	Oil		2,003	7	365	278	x 0.83 =	lb/10^3 gal	2	/ 2000 =	0.0008	0.0046	0.476	2.607
5-2075 (EU-22)	Boiler 12	Gas	67,547		2,208	365	74,284	x 1.9 =	lb/10^6 scf	128	/ 2000 =	0.0642	0.3516		
5-2075 (EU-22)	Boiler 12	Oil		1	0	365	0	x 0.83 =	lb/10^3 gal	0	/ 2000 =	0.0000	0.0000		
5-2073 (EU-20)	NEP CT	Gas	636,991		8,009	365	672,101	x 0.0019 =	lb/MMBtu	1	/ 2000 =	0.0006	0.0033		
5-2073 (EU-20)	NEP CT	Oil		6,583	12	365	936	x 0.0043 =	lb/MMBtu	0	/ 2000 =	0.0000	0.0001		
5-2073 (EU-20)	NEP Duct Burner	Gas	28,576		938	365	31,621	x 1.9 =	lb/10^6 scf	54	/ 2000 =	0.0271	0.1488		
5-2074 (EU-21)	SEP CT	Gas	540,927		6,848	365	572,422	x 0.0019 =	lb/MMBtu	1	/ 2000 =	0.0005	0.0028		
5-2074 (EU-21)	SEP CT	Oil		880	2	365	125	x 0.0043 =	lb/MMBtu	0	/ 2000 =	0.0000	0.0000		
5-2074 (EU-21)	SEP Duct Burner	Gas	22,977		752	365	25,346	x 1.9 =	lb/10^6 scf	44	/ 2000 =	0.0218	0.1196	0.114	0.626
9-0988 (EU-16)	Gen 3	Oil		11,020	94	61	1,528	x 0.0479 =	lb/MMBtu	73.181	/ 2000 =	0.0366	1.1997		
9-0989 (EU-17)	Gen 4	Oil		10,304	94	61	1,429	x 0.0479 =	lb/MMBtu	68.426	/ 2000 =	0.0342	1.1217		
9-0949 (EU-14)	Gen 5	Oil		13,161	113	80	1,825	x 0.0479 =	lb/MMBtu	87.401	/ 2000 =	0.0437	1.0925		
9-0950 (EU-15)	Gen 6	Oil		12,842	113	82	1,780	x 0.0479 =	lb/MMBtu	85.279	/ 2000 =	0.0426	1.0400		
9-1015 (EU-18)	Gen 7	Oil		13,914	114	81	1,929	x 0.0479 =	lb/MMBtu	92.398	/ 2000 =	0.0462	1.1407		
9-1016 (EU-19)	Gen 8	Oil		13,258	114	81	1,838	x 0.0479 =	lb/MMBtu	88.041	/ 2000 =	0.0440	1.0869		
9-0951 (EU-13)	JHOC Gen 1	Oil		760	26	52	105	x 0.0479 =	lb/MMBtu	5.047	/ 2000 =	0.0025	0.0971	0.250	6.779
										Total Tons Emitted		0.8400			

2021	PM Cond	Fuel Type	Natural Gas k scf / year	Diesel gal / yr	Run Hours Hours	Days Active	ALEUI Input MMBTU / year	Emission Factor		Emissions lbs / year	Unit Conversion	Emissions tons / year	Emissions lbs / day
5-0303 (EU-1)	Boiler 07	Gas	55,542		1,634	365	60,295	x 5.7 =	lb/10^6 scf	317	/ 2000 =	0.1583	0.867
5-0303 (EU-1)	Boiler 07	Oil		4	0	365	1	x 1.3 =	lb/10^3 gal	0	/ 2000 =	0.0000	0.000
5-0304 (EU-2)	Boiler 08	Gas	90,328		2,767	365	97,687	x 5.7 =	lb/10^6 scf	515	/ 2000 =	0.2574	1.411
5-0304 (EU-2)	Boiler 08	Oil		1,748	5	365	242	x 1.3 =	lb/10^3 gal	2	/ 2000 =	0.0011	0.006
5-0305 (EU-3)	Boiler 09	Gas	108,827		3,047	365	116,000	x 5.7 =	lb/10^6 scf	620	/ 2000 =	0.3102	1.699
5-0305 (EU-3)	Boiler 09	Oil		1,591	5	365	221	x 1.3 =	lb/10^3 gal	2	/ 2000 =	0.0010	0.006
5-0306 (EU-4)	Boiler 10	Gas	129,412		3,611	365	136,943	x 5.7 =	lb/10^6 scf	738	/ 2000 =	0.3688	2.021
5-0306 (EU-4)	Boiler 10	Oil		816	4	365	113	x 1.3 =	lb/10^3 gal	1	/ 2000 =	0.0005	0.003
5-0734 (EU-5)	Boiler 11	Gas	114,089		5,170	365	119,679	x 5.7 =	lb/10^6 scf	650	/ 2000 =	0.3252	1.782
5-0734 (EU-5)	Boiler 11	Oil		2,003	7	365	278	x 1.3 =	lb/10^3 gal	3	/ 2000 =	0.0013	0.007
5-2075 (EU-22)	Boiler 12	Gas	67,547		2,208	365	74,284	x 5.7 =	lb/10^6 scf	385	/ 2000 =	0.1925	1.055
5-2075 (EU-22)	Boiler 12	Oil		1	0	365	0	x 1.3 =	lb/10^3 gal	0	/ 2000 =	0.0000	0.000
5-2073 (EU-20)	NEP CT	Gas	636,991		8,009	365	672,101	x 0.0047 =	lb/MMBtu	3,159	/ 2000 =	1.5794	8.654
5-2073 (EU-20)	NEP CT	Oil		6,583	12	365	936	x 0.0072 =	lb/MMBtu	7	/ 2000 =	0.0034	0.018
5-2073 (EU-20)	NEP Duct Burner	Gas	28,576		938	365	31,621	x 5.7 =	lb/10^6 scf	163	/ 2000 =	0.0814	0.446
5-2074 (EU-21)	SEP CT	Gas	540,927		6,848	365	572,422	x 0.0047 =	lb/MMBtu	2,690	/ 2000 =	1.3452	7.371
5-2074 (EU-21)	SEP CT	Oil		880	2	365	125	x 0.0072 =	lb/MMBtu	1	/ 2000 =	0.0005	0.002
5-2074 (EU-21)	SEP Duct Burner	Gas	22,977		752	365	25,346	x 5.7 =	lb/10^6 scf	131	/ 2000 =	0.0655	0.359
9-0988 (EU-16)	Gen 3	Oil		11,020	94	61	1,528	x 0.0077 =	lb/MMBtu	11.764	/ 2000 =	0.0059	0.193
9-0989 (EU-17)	Gen 4	Oil		10,304	94	61	1,429	x 0.0077 =	lb/MMBtu	11.000	/ 2000 =	0.0055	0.180
9-0949 (EU-14)	Gen 5	Oil		13,161	113	80	1,825	x 0.0077 =	lb/MMBtu	14.050	/ 2000 =	0.0070	0.176
9-0950 (EU-15)	Gen 6	Oil		12,842	113	82	1,780	x 0.0077 =	lb/MMBtu	13.709	/ 2000 =	0.0069	0.167
9-1015 (EU-18)	Gen 7	Oil		13,914	114	81	1,929	x 0.0077 =	lb/MMBtu	14.853	/ 2000 =	0.0074	0.183
9-1016 (EU-19)	Gen 8	Oil		13,258	114	81	1,838	x 0.0077 =	lb/MMBtu	14.153	/ 2000 =	0.0071	0.175
9-0951 (EU-13)	JHOC Gen 1	Oil		760	26	52	105	x 0.0077 =	lb/MMBtu	0.811	/ 2000 =	0.0004	0.016
										Total Tons Emitted		4.7319	

2021	Yearly CH4	Fuel Type	Natural Gas k scf / year	Diesel gal / yr	Run Hours Hours	Days Active	ALEUi Input MMBTU / year	Emission Factor AP-42	Unit	Emissions lbs / year	Unit Conversion	Emissions tons / year	Equipment Emissions tons / yr	lbs / day	lbs / hr
5-0303 (EU-1)	Boiler 07	Gas	55,542		1,634	365	60,295	x 2.3 =	lb/10^6 scf	128	/ 2000 =	0.0639	0.064	0.350	0.015
5-0303 (EU-1)	Boiler 07	Oil		4	0	365	1	x 0.216 =	lb/10^3 gal	0	/ 2000 =	0.0000			
5-0304 (EU-2)	Boiler 08	Gas	90,328		2,767	365	97,687	x 2.3 =	lb/10^6 scf	208	/ 2000 =	0.1039	0.104	0.570	0.024
5-0304 (EU-2)	Boiler 08	Oil		1,748	5	365	242	x 0.216 =	lb/10^3 gal	0	/ 2000 =	0.0002			
5-0305 (EU-3)	Boiler 09	Gas	108,827		3,047	365	116,000	x 2.3 =	lb/10^6 scf	250	/ 2000 =	0.1252	0.125	0.687	0.029
5-0305 (EU-3)	Boiler 09	Oil		1,591	5	365	221	x 0.216 =	lb/10^3 gal	0	/ 2000 =	0.0002			
5-0306 (EU-4)	Boiler 10	Gas	129,412		3,611	365	136,943	x 2.3 =	lb/10^6 scf	298	/ 2000 =	0.1488	0.149	0.816	0.034
5-0306 (EU-4)	Boiler 10	Oil		816	4	365	113	x 0.216 =	lb/10^3 gal	0	/ 2000 =	0.0001			
5-0734 (EU-5)	Boiler 11	Gas	114,089		5,170	365	119,679	x 2.3 =	lb/10^6 scf	262	/ 2000 =	0.1312	0.131	0.720	0.030
5-0734 (EU-5)	Boiler 11	Oil		2,003	7	365	278	x 0.216 =	lb/10^3 gal	0	/ 2000 =	0.0002			
5-2075 (EU-22)	Boiler 12	Gas	67,547		2,208	365	74,284	x 2.3 =	lb/10^6 scf	155	/ 2000 =	0.0777	0.078	0.426	0.018
5-2075 (EU-22)	Boiler 12	Oil		1	0	365	0	x 0.216 =	lb/10^3 gal	0	/ 2000 =	0.0000			
5-2073 (EU-20)	NEP CT	Gas	636,991		8,009	365	672,101	x 0.0086 =	lb/MMBtu	5,780	/ 2000 =	2.8900	2.890	15.836	0.660
5-2073 (EU-20)	NEP CT	Oil		6,583	12	365	936	x 0 =		0	/ 2000 =	0.0000			
5-2073 (EU-20)	NEP Duct Burner	Gas	28,576		938	365	31,621	x 2.3 =	lb/10^6 scf	66	/ 2000 =	0.0329	0.033	0.180	0.008
5-2074 (EU-21)	SEP CT	Gas	540,927		6,848	365	572,422	x 0.0086 =	lb/MMBtu	4,923	/ 2000 =	2.4614	2.461	13.487	0.562
5-2074 (EU-21)	SEP CT	Oil		880	2	365	125	x 0 =		0	/ 2000 =	0.0000			
5-2074 (EU-21)	SEP Duct Burner	Gas	22,977		752	365	25,346	x 2.3 =	lb/10^6 scf	53	/ 2000 =	0.0264	0.026	0.145	0.006
9-0988 (EU-16)	Gen 3	Oil		11,020	94	61	1,528	x 0.0081 =	lb/MMBtu	12	/ 2000 =	0.0062			
9-0989 (EU-17)	Gen 4	Oil		10,304	94	61	1,429	x 0.0081 =	lb/MMBtu	12	/ 2000 =	0.0058			
9-0949 (EU-14)	Gen 5	Oil		13,161	113	80	1,825	x 0.0081 =	lb/MMBtu	15	/ 2000 =	0.0074			
9-0950 (EU-15)	Gen 6	Oil		12,842	113	82	1,780	x 0.0081 =	lb/MMBtu	14	/ 2000 =	0.0072			
9-1015 (EU-18)	Gen 7	Oil		13,914	114	81	1,929	x 0.0081 =	lb/MMBtu	16	/ 2000 =	0.0078			
9-1016 (EU-19)	Gen 8	Oil		13,258	114	81	1,838	x 0.0081 =	lb/MMBtu	15	/ 2000 =	0.0074			
9-0951 (EU-13)	JHOC Gen 1	Oil		760	26	52	105	x 0.0081 =	lb/MMBtu	1	/ 2000 =	0.0004			
										Total Emitted		6.1043	6.062	33.216	
										EU 1 - 5 Emitted			0.574	3.143	

2021	Yearly N2O	Fuel Type	Natural Gas	Diesel	Run Hours	Days Active	ALEUI Input MMBTU / year	Emission Factor		Emissions lbs / year	Unit Conversion	Emissions		Equipment Emissions	
			k scf / year	gal / yr				AP-42	Unit			tons / year	tons / yr	lbs / day	lbs / hr
5-0303 (EU-1)	Boiler 07	Gas	55,542		1,634	365	60,295	x 2.2 =	lb/10^6 scf	122	/ 2000 =	0.0611	0.061	0.335	0.014
5-0303 (EU-1)	Boiler 07	Oil		4	0	365	1	x 0.26 =	lb/10^3 gal	0	/ 2000 =	0.0000			
5-0304 (EU-2)	Boiler 08	Gas	90,328		2,767	365	97,687	x 2.2 =	lb/10^6 scf	199	/ 2000 =	0.0994	0.099	0.545	0.023
5-0304 (EU-2)	Boiler 08	Oil		1,748	5	365	242	x 0.11 =	lb/10^3 gal	0	/ 2000 =	0.0001			
5-0305 (EU-3)	Boiler 09	Gas	108,827		3,047	365	116,000	x 2.2 =	lb/10^6 scf	239	/ 2000 =	0.1197	0.120	0.656	0.027
5-0305 (EU-3)	Boiler 09	Oil		1,591	5	365	221	x 0.11 =	lb/10^3 gal	0	/ 2000 =	0.0001			
5-0306 (EU-4)	Boiler 10	Gas	129,412		3,611	365	136,943	x 2.2 =	lb/10^6 scf	285	/ 2000 =	0.1424	0.142	0.780	0.033
5-0306 (EU-4)	Boiler 10	Oil		816	4	365	113	x 0.11 =	lb/10^3 gal	0	/ 2000 =	0.0000			
5-0734 (EU-5)	Boiler 11	Gas	114,089		5,170	365	119,679	x 2.2 =	lb/10^6 scf	251	/ 2000 =	0.1255	0.126	0.688	0.029
5-0734 (EU-5)	Boiler 11	Oil		2,003	7	365	278	x 0.11 =	lb/10^3 gal	0	/ 2000 =	0.0001			
5-2075 (EU-22)	Boiler 12	Gas	67,547		2,208	365	74,284	x 2.2 =	lb/10^6 scf	149	/ 2000 =	0.0743	0.074	0.407	0.017
5-2075 (EU-22)	Boiler 12	Oil		1	0	365	0	x 0.11 =	lb/10^3 gal	0	/ 2000 =	0.0000			
5-2073 (EU-20)	NEP CT	Gas	636,991		8,009	365	672,101	x 0.003 =	lb/MMBtu	2,016	/ 2000 =	1.0082	1.008	5.524	0.230
5-2073 (EU-20)	NEP CT	Oil		6,583	12	365	936	x 0 =		0	/ 2000 =	0.0000			
5-2073 (EU-20)	NEP Duct Burner	Gas	28,576		938	365	31,621	x 2.2 =	lb/10^6 scf	63	/ 2000 =	0.0314	0.031	0.172	0.007
5-2074 (EU-21)	SEP CT	Gas	540,927		6,848	365	572,422	x 0.003 =	lb/MMBtu	1,717	/ 2000 =	0.8586	0.859	4.705	0.196
5-2074 (EU-21)	SEP CT	Oil		880	2	365	125	x 0 =		0	/ 2000 =	0.0000			
5-2074 (EU-21)	SEP Duct Burner	Gas	22,977		752	365	25,346	x 2.2 =	lb/10^6 scf	51	/ 2000 =	0.0253	0.025	0.138	0.006
9-0988 (EU-16)	Gen 3	Oil		11,020	94	61	1,528	x 0 =		0	/ 2000 =	0.0000			
9-0989 (EU-17)	Gen 4	Oil		10,304	94	61	1,429	x 0 =		0	/ 2000 =	0.0000			
9-0949 (EU-14)	Gen 5	Oil		13,161	113	80	1,825	x 0 =		0	/ 2000 =	0.0000			
9-0950 (EU-15)	Gen 6	Oil		12,842	113	82	1,780	x 0 =		0	/ 2000 =	0.0000			
9-1015 (EU-18)	Gen 7	Oil		13,914	114	81	1,929	x 0 =		0	/ 2000 =	0.0000			
9-1016 (EU-19)	Gen 8	Oil		13,258	114	81	1,838	x 0 =		0	/ 2000 =	0.0000			
9-0951 (EU-13)	JHOC Gen 1	Oil		760			105	x 0 =		0	/ 2000 =	0.0000			
											Total Emitted	2.5462	2.546	13.952	
											EU 1 - 5 Emitted		0.548	3.005	

2021	Yearly CO2	Fuel Type	Natural Gas k scf / year	Diesel gal / yr	Run Hours Hours	Days Active	ALEUI Input MMBTU / year	Emission Factor AP-42	Unit	Emissions lbs / year	Unit Conversion	Emissions tons / year	Equipment Emissions		
													tons / yr	lbs / day	lbs / hr
5-0303 (EU-1)	Boiler 07	Gas	55,542		1,634		60,295	x 120,000 =	lb/10^6 scf	6,664,990	/ 2000 =	3,332.4952	3,333	18,261	761
5-0303 (EU-1)	Boiler 07	Oil		4	0		1	x 22,300 =	lb/10^3 gal	100	/ 2000 =	0.0500			
5-0304 (EU-2)	Boiler 08	Gas	90,328		2,767		97,687	x 120,000 =	lb/10^6 scf	10,839,334	/ 2000 =	5,419.6669	5,439	29,804	1,242
5-0304 (EU-2)	Boiler 08	Oil		1,748	5		242	x 22,300 =	lb/10^3 gal	38,982	/ 2000 =	19.4912			
5-0305 (EU-3)	Boiler 09	Gas	108,827		3,047		116,000	x 120,000 =	lb/10^6 scf	13,059,203	/ 2000 =	6,529.6013	6,547	35,876	1,495
5-0305 (EU-3)	Boiler 09	Oil		1,591	5		221	x 22,300 =	lb/10^3 gal	35,487	/ 2000 =	17.7437			
5-0306 (EU-4)	Boiler 10	Gas	129,412		3,611		136,943	x 120,000 =	lb/10^6 scf	15,529,463	/ 2000 =	7,764.7313	7,774	42,596	1,775
5-0306 (EU-4)	Boiler 10	Oil		816	4		113	x 22,300 =	lb/10^3 gal	18,194	/ 2000 =	9.0972			
5-0734 (EU-5)	Boiler 11	Gas	114,089		5,170		119,679	x 120,000 =	lb/10^6 scf	13,690,635	/ 2000 =	6,845.3175	6,868	37,631	1,568
5-0734 (EU-5)	Boiler 11	Oil		2,003	7		278	x 22,300 =	lb/10^3 gal	44,660	/ 2000 =	22.3301			
5-2075 (EU-22)	Boiler 12	Gas	67,547		2,208		74,284	x 120,000 =	lb/10^6 scf	8,105,614	/ 2000 =	4,052.8069	4,053	22,207	925
5-2075 (EU-22)	Boiler 12	Oil		1	0		0	x 22,300 =	lb/10^3 gal	12	/ 2000 =	0.0061			
5-2073 (EU-20)	NEP CT	Gas	636,991		8,009		672,101	x 110 =	lb/MMBtu	73,931,152	/ 2000 =	36,965.5762	36,966	202,551	8,440
5-2073 (EU-20)	NEP CT	Oil		6,583	12		936	x 157 =	lb/MMBtu	1,033	/ 2000 =	0.5167			
5-2073 (EU-20)	NEP Duct Burner	Gas	28,576		938		31,621	x 120,000 =	lb/10^6 scf	3,429,176	/ 2000 =	1,714.5881	1,715	9,395	391
5-2074 (EU-21)	SEP CT	Gas	540,927		6,848		572,422	x 110 =	lb/MMBtu	62,966,388	/ 2000 =	31,483.1939	31,483	172,511	7,188
5-2074 (EU-21)	SEP CT	Oil		880	2		125	x 157 =	lb/MMBtu	138	/ 2000 =	0.0691			
5-2074 (EU-21)	SEP Duct Burner	Gas	22,977		752		25,346	x 120,000 =	lb/10^6 scf	2,757,275	/ 2000 =	1,378.6373	1,379	7,554	315
9-0988 (EU-16)	Gen 3	Oil		11,020	94	61	1,528	x 165 =	lb/MMBtu	252,083	/ 2000 =	126.0417	126.04	4,133	2,677
9-0989 (EU-17)	Gen 4	Oil		10,304	94	61	1,429	x 165 =	lb/MMBtu	235,706	/ 2000 =	117.8528	117.85	3,864	2,504
9-0949 (EU-14)	Gen 5	Oil		13,161	113	80	1,825	x 165 =	lb/MMBtu	301,069	/ 2000 =	150.5347	150.53	3,763	2,672
9-0950 (EU-15)	Gen 6	Oil		12,842	113	82	1,780	x 165 =	lb/MMBtu	293,760	/ 2000 =	146.8799	146.88	3,582	2,605
9-1015 (EU-18)	Gen 7	Oil		13,914	114	81	1,929	x 165 =	lb/MMBtu	318,280	/ 2000 =	159.1402	159.14	3,929	2,798
9-1016 (EU-19)	Gen 8	Oil		13,258	114	81	1,838	x 165 =	lb/MMBtu	303,274	/ 2000 =	151.6370	151.64	3,744	2,660
9-0951 (EU-13)	JHOC Gen 1	Oil		760	26	52	105	x 165 =	lb/MMBtu	17,385	/ 2000 =	8.6927	8.69	334	669
										Total Emitted		106,416.6977	106,416	601,736	
										EU 1 - 5 Emitted			29,961	164,167	
										EU 13 - 19 Emitted			861	23,350	
										EU 20 & 21 Emitted			68,449	375,062	

Appendix B

2021 Annual Compliance Certification Report



OMB No. 2060-0336,
Approval Expires 05/31/2019

Federal Operating Permit Program (40 CFR Part 71)
CERTIFICATION OF TRUTH, ACCURACY, AND COMPLETENESS (CTAC)

This form must be completed, signed by the "Responsible Official" designated for the facility or emission unit, and sent with each submission of documents (e.g., application forms, updates to applications, reports, or any information required by a part 71 permit).

A. Responsible Official

Name: (Last) Gimburg (First) Anatoly (MI)

Title JHHS Vice President

Street or P.O. Box 600 N Wolfe St, Billings B-120

City Baltimore State MD ZIP 21287 -

Telephone (410) 955 - 7537 Ext. Facsimile () -

B. Certification of Truth, Accuracy and Completeness (to be signed by the responsible official)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name (signed)

Name (typed) Anatoly Gimburg Date: 03 / 28 / 2022



OMB No. 2060-0336,
Approval Expires 05/31/2019

Federal Operating Permit Program (40 CFR Part 71)
ANNUAL COMPLIANCE CERTIFICATION (A-COMP)

A. GENERAL INFORMATION

Permit No. 24-510-00001

Reporting Period: Beg. 01 / 01 / 2021 End. 12 / 31 / 2021

Source / Company Name JHMI Utilities, LLC

Mailing Address: Street or P.O. Box 600 N Wolfe St, Billings B-120

City Baltimore State MD ZIP 21287 -

Contact person Anatoly Gimburg Title Vice President, Facilities

Telephone (410) 955 - 7537 Ext.

Continued on next page

B. COMPLIANCE STATUS

Describe the compliance status of each permit term for the reporting period. Copy this page as many times as necessary to cover all permit terms and conditions.

Emission Unit ID(s): EU-01, EU-02, EU-03, EU-04

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-1.1 A. Visible Emissions Limitations

[COMAR 26.11.09.05A(2) –Visible Emissions – Areas III and IV.]

- (1) Areas III and IV. In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.

[COMAR 26.11.09.05A(3) –Exceptions]

- (2) Exceptions. Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if:
- (a) The visible emissions are not greater than 40 percent opacity; and
 - (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period.

Compliance Methods for the Above (Description and Citation):

JHMI employs good engineering, operational and preventative maintenance practices on EU-01, EU-02, EU-03 and EU-04, which minimizes visible emissions.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-01, EU-02, EU-03, EU-04

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-1.1 B. Control of Sulfur Oxides

[COMAR 26.11.09.07 – Sulfur Content Limitations for Fuel]

- (1) A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations:
- (2) In Areas III and IV: (b) Distillate fuel oils, 0.3 percent.

Compliance Methods for the Above (Description and Citation):

JHMI maintains certification from the fuel supplier that all fuel used is in compliance with the sulfur fuel content limitation. This certification is included in the SIXMON report and kept on site.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-01, EU-02, EU-03, EU-04

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-1.1 C. Control of Nitrogen Oxides

(1) [COMAR 26.11.09.08B(1)(a)] – Emission Standards and Requirements

A person who owns or operates an installation that causes NOx emissions subject to this regulation is in compliance with this regulation if the person establishes compliance with the emissions standards in §B(1)(c) of this regulation.

(2) COMAR 26.11.09.08B(1)(c) – Emission Standards in Pounds of NO_x per Million Btu of heat input.

Fuel	Tangential-Fired	Wall-Fired
Gas Only	0.20	0.20
Gas/Oil	0.25	0.25
Coal (dry bottom)	0.38	0.38
Coal (wet bottom)	1.00	1.00

Note: The four boilers burn natural gas and fuel oil and are wall-fired. The NO_x emissions limit for the boilers is 0.25 pounds of NO_x per million Btu of heat input.

- (3) [COMAR 26.11.09.08B(2) – Demonstration of Compliance A person subject to a NO_x emission standard in this regulation shall demonstrate compliance as follows: (ii) For all other installations, compliance with the NO_x emissions standards in this regulation shall be established by stack tests using Method 07 of the test methods referenced in COMAR 26.11.01.04C(1) or other test methods approved by the Department and the EPA.
- (4) [COMAR 26.11.09.08(2)(e) – Demonstration of Compliance For a person who establishes compliance using a stack test, compliance shall be determined as averages of the stack test duration
- (5) [COMAR 26.11.09.08B – Operator Training
- For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.
 - The operator training course sponsored by the Department shall include an in-house training course that is approved by the department

Compliance Methods for the Above (Description and Citation):

JHMI measures the NO_x as required and maintains the required records.
 JHMI performs the required stack testing and submits results to the department as required.
 Equipment operators and maintenance technicians were trained as required. Attendance records were maintained as part of the training program.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-01, EU-02, EU-03, EU-04

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-1.1 D. Operational Limitation:

The Permittee shall burn only natural gas or No. 2 fuel oil unless the Permittee applies for and receives an approval or permit from the Department to burn an alternative fuel. **[Reference: COMAR 26.11.02.09A]**

Compliance Methods for the Above (Description and Citation):

JHMI only uses natural gas or No. 2 fuel oil.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-01, EU-02, EU-03, EU-04

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-1.2 C. Testing Requirements - Control of Nitrogen Oxides:

Within the term of the issuance of this permit, the Permittee shall perform a stack test on the four (4) Cleaver-Brooks boilers both on oil and natural gas. The Permittee shall submit a test protocol to the Department for approval at least 30 days before the scheduled test date. The Permittee shall

submit all test results and supporting data from the stack tests to the Department within 45 days after the stack tests are conducted. [Reference: COMAR 26.11.03.06C]

Compliance Methods for the Above (Description and Citation):

JHMI performs the required stack testing and submits results to the department as required.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-01, EU-02, EU-03, EU-04

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-1.3A. Monitoring Requirements – Visible Emissions Limitations:

1. The Permittee shall:
 - a. Properly operate and maintain the boilers in a manner to prevent visible emissions; and
 - b. Verify no visible emissions when burning No. 2 fuel oil. The Permittee shall perform visual observation for a 6-minute period once for every 168 hours that the boiler burns oil or at a minimum of once per year.
2. The Permittee shall perform the following if emissions are visible:
 - a. Inspect combustion control system and boiler operations;
 - b. Perform all necessary adjustments and/or repairs to the boiler within 48 hours, so that visible emissions are eliminated;
 - c. Document in writing the results of the inspections, adjustments, and/or repairs to the boilers; and
 - d. After 48 hours, if the required adjustments and/or repairs had not eliminated the visible emissions, perform Method 9 observations once daily for 18 minutes until corrective actions have eliminated the visible emissions. [Reference: COMAR 26.11.03.06C]

Compliance Methods for the Above (Description and Citation):

JHMI employs good engineering, operational and preventative maintenance practices on EU-01, EU-02, EU-03 and EU-04 which minimizes visible emissions. Visual observations are performed as required.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-01, EU-02, EU-03, EU-04

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-1.3B. Monitoring Requirements - Control of Sulfur Oxides:

The Permittee shall obtain a certification from the fuel supplier indicating that the oil complies with the limitation on the sulfur content of the fuel oil. [Reference: COMAR 26.11.03.06C]

Compliance Methods for the Above (Description and Citation):

Fuel oil supplier's certifications kept on site.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-01, EU-02, EU-03, EU-04

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-1.3C. Monitoring Requirements - Control of Nitrogen Oxides:

The Permittee shall measure the NOx content of the flue gases from each boiler for a 5-minute period every 168 hours of operation. The Permittee shall use an analyzer that is properly calibrated and maintained in accordance with the vendor specification. The analyzer shall be the type approved by the Department.

[Reference: COMAR 26.11.03.06C]

Compliance Methods for the Above (Description and Citation):

JHMI measures the NOx as required and maintains the required records.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-01, EU-02, EU-03, EU-04

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-1. 1.4 Record Keeping Requirements

Note: All records must be maintained for a period of at least 5 years and shall be made available to the Department upon request. **[Reference: COMAR 26.11.03.06C]**

Compliance Methods for the Above (Description and Citation):

JHMI adheres to all record keeping requirements and all monitoring data and information that supports compliance is kept in hard copy or digital form for at least five (5) years.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-01, EU-02, EU-03, EU-04

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-1.4A. Recordkeeping Requirements – Control Visible Emissions

The Permittee shall:

1. Maintain an operation manual and prevention maintenance plan on site;
2. Maintain a record of the maintenance performed that relates to combustion performance;
3. Maintain a log of visible emissions observations performed; and
4. Maintain a record of the hours that No. 2 fuel oil is burned. **[Reference: COMAR 26.11.03.06C]**

Compliance Methods for the Above (Description and Citation):

JHMI maintains an operation manual and prevention maintenance plan on site. JHMI maintains a record of the maintenance performed that relates to combustion performance. A log of visible emissions observations and a log of hours that No. 2 fuel oil is burned are maintained and kept on site.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-01, EU-02, EU-03, EU-04

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-1.4B. Recordkeeping Requirements – Control of Sulfur Oxides

The Permittee shall maintain records of fuel supplier's certification. **[Reference: COMAR 26.11.03.06C].**

Compliance Methods for the Above (Description and Citation):

Fuel oil supplier's certifications kept on site.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-01, EU-02, EU-03

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-1.4C. Record Keeping Requirements – Control of Nitrogen Oxides:

1. The Permittee shall maintain annual fuel use records on site. **[Reference: COMAR 26.11.09.05K(3)]**
2. The Permittee shall maintain the results of NOx stack tests and the NOx analyzer readings. **[Reference: COMAR 26.11.03.06C]**
3. The Permittee shall maintain a record of training program attendance for each operator at the site. **[Reference: COMAR 26.11.09.08E(5)]**

Compliance Methods for the Above (Description and Citation):

JHMI maintains annual fuel use records on site. JHMI maintains the results of NOx stack tests and the NOx analyzer readings. JHMI maintains a log of training program attendance for each operator.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-01, EU-02, EU-03, EU-04

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-1.4D. Record Keeping Requirements – Operational Limit

The Permittee shall maintain records of the quantity and type of fuel burned. **[Reference: COMAR 26.11.02.19C(1)(c)]**

Compliance Methods for the Above (Description and Citation):

JHMI maintains records of the quantity and type of fuel burned.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-01, EU-02, EU-03, EU-04

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-1.5A. Reporting Requirements – Visible Emissions Limitations

The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, "Report of Excess Emissions and Deviations".

Compliance Methods for the Above (Description and Citation):

No incidents of visible emissions occurred during the reporting period.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-01, EU-02, EU-03, EU-04

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-1.5B. Reporting Requirements – Control of Sulfur Oxides

The Permittee shall report fuel supplier certification to the Department upon request. **[Reference: COMAR 26.11.09.07C]**

Compliance Methods for the Above (Description and Citation):

JHMI maintains certification from the fuel supplier that all fuel used is in compliance with the sulfur in fuel limitation.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-01, EU-02, EU-03, EU-04

Permit Term (Describe requirements and cross-reference)Section IV. Table IV-1.5C. Reporting Requirements – Control of Nitrogen Oxides

The Permittee shall report the results of NO_x testing on the four (4) Cleaver-Brooks boilers along with supporting data from the stack tests within 45 days of the completion of the stack test. **[Reference: COMAR 26.11.09.08K(2) and COMAR 26.11.03.06C]**

Compliance Methods for the Above (Description and Citation):

JHMI submits the results of NO_x testing along with supporting data from the stack tests within 45 days of the completion of the stack test.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-01, EU-02, EU-03, EU-04

Permit Term (Describe requirements and cross-reference)Section IV. Table IV-1.5D. Reporting Requirements – Operational Limitations:

The Permittee shall submit records of the quantity and type of fuels burned with the annual emissions certification report. See permit condition 8 of Section III.

Compliance Methods for the Above (Description and Citation):

This information is submitted within the JHMI Emission Certification Report.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-05

Permit Term (Describe requirements and cross-reference)Section IV. Table IV-2. 2.1A. Control of Visible Emissions

- (1) COMAR 26.11.09.05A, Fuel Burning Equipment. Areas III and IV. In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity
- (2) COMAR 26.11.09.05A(3), Exceptions. Section A (1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if: a. The visible emissions are not greater than 40 percent opacity; and b. The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period.

Compliance Methods for the Above (Description and Citation):

JHMI employs good engineering, operational and preventative maintenance practices on EU-05 which minimizes visible emissions.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-05

Permit Term (Describe requirements and cross-reference)Section IV. Table IV-2. 2.1B. Control of Sulfur Oxides

COMAR 26.11.09.07A, Sulfur Content Limitations for Fuel. "A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: (2) In areas III and IV: (b) Distillate fuel oils, 0.3 percent."

Compliance Methods for the Above (Description and Citation):

Certifications from fuel suppliers are kept on site.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-04

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-2. 2.1C. Control of Nitrogen Oxides

(1) COMAR 26.11.09.08E, Requirements for Fuel-Burning Equipment with a Rated Heat Input Capacity of 100 Million Btu Per Hour or Less

(a) Submit to the Department an identification of each affected installation, the rated heat input capacity of each installation, and the type of fuel burned in each;

(b) Perform a combustion analysis for each installation at least once each year and optimize combustion based on the analysis;

(c) Maintain the results of the combustion analysis at the site for at least 2 years and make this data available to the Department and the EPA upon request;

(d) Once every 3 years, require each operator of the installation to attend operator training programs on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and

(e) Prepare and maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request."

(2) COMAR 26.11.09.08(B)(5), Operator Training.

(a) For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustment for efficient operation.

(b) The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.

Compliance Methods for the Above (Description and Citation):

Combustion analysis and optimization are conducted at least once each year. Records are kept at least for 5 years on site. Equipment operators and maintenance technicians are trained as required. Attendance records are maintained as part of the training program.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-05

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-2. 2.1D. Control of Nitrogen Oxides

COMAR 26.11.09.08B(5), Operational Limit The Permittee shall burn only natural gas or No. 2 fuel oil unless the Permittee applies for and receives an approval or permit from the Department to burn an alternative fuel.

Compliance Methods for the Above (Description and Citation):

JHMI burns only natural gas or No. 2 fuel oil.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-05

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-2. 2.2.C. Testing Requirements - Control of Nitrogen Oxides:

The Permittee shall perform a combustion analysis on the boiler at least once a year. [Reference: COMAR 26.11.09.08E(2)]

Compliance Methods for the Above (Description and Citation):

Combustion analysis and optimization are conducted at least once each year.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-05

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-2. 2.3.A. Monitoring Requirements – Control of Visible Emissions:

1. The Permittee shall:
 - (a) Properly operate and maintain the boilers in a manner to prevent visible emissions; and
 - (b) Verify no visible emissions when burning No. 2 fuel oil. The Permittee shall perform a visual observation for a 6-minute period once for every 168 hours that the boiler burns oil or at a minimum of once per year.
2. The Permittee shall perform the following if emissions are visible:
 - (a) Inspect combustion control system and boiler operations;
 - (b) Perform all necessary adjustments and/or repairs to the boiler within 48 hours, so that visible emissions are eliminated;
 - (c) Document in writing the results of the inspections, adjustments, and/or repairs to the boilers; and
 - (d) After 48 hours, if the required adjustments and/or repairs has not eliminated the visible emissions, perform Method 9 observations once daily for 18 minutes until corrective actions have eliminated the visible emissions. [Reference: COMAR 26.11.03.06C]

Compliance Methods for the Above (Description and Citation):

JHMI employs good engineering, operational and preventative maintenance practices on EU-05 which minimizes visible emissions.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-05

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-2. 2.2.B. Monitoring Requirements - Control of Sulfur Oxides:

The Permittee shall obtain a certification from the fuel supplier indicating that the oil complies with the limitation on the sulfur content of the fuel oil. [Reference: COMAR 26.11.03.06C]

Compliance Methods for the Above (Description and Citation):

Compliance with fuel oil sulfur limit is demonstrated by certification from the supplier. Certification records are kept on file.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-05

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-2. 2.3.C. Monitoring Requirements - Control of Nitrogen Oxides:

The Permittee shall optimize combustion based on the annual combustion analysis. **[Reference: COMAR 26.11.09.08E(2)]**

Compliance Methods for the Above (Description and Citation):

Combustion analysis and optimization are conducted at least once each year. Records are kept at least for 5 years on site.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-05

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-2. 2.4 Record Keeping Requirements

Note: All records must be maintained for a period of at least 5 years and shall be made available to the Department upon request. **[Reference: COMAR 26.11.03.06C]**

Compliance Methods for the Above (Description and Citation):

JHMI adheres to all record keeping requirements and all monitoring data and information that supports compliance is kept in hard copy or digital form for at least five (5) years.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-05

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-2. 2.4.A. Recordkeeping Requirements – Visible Emissions Limitations

The Permittee shall:

1. Maintain an operation manual and prevention maintenance plan on site;
2. Maintain a record of the maintenance performed that relates to combustion performance;
3. Maintain a log of visible emissions observations performed; and
4. Maintain a record of the hours that No. 2 fuel oil is burned. **[Reference: COMAR 26.11.03.06C]**

Compliance Methods for the Above (Description and Citation):

All maintenance performed complies with the required record keeping. A procedure for the performance of maintenance is in the Operations and Maintenance Procedures.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-05

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-2. 2.4.B. Recordkeeping Requirements – Control of Sulfur Oxides

The Permittee shall maintain records of fuel supplier's certification. **[Reference: COMAR 26.11.03.06C]**

Compliance Methods for the Above (Description and Citation):

Compliance with fuel oil sulfur limit is demonstrated by certification from the supplier. Certification records are kept on file.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-05

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-2. 2.4.C. Recordkeeping Requirements – Control of Nitrogen Oxides

The Permittee shall maintain:

- (a) Maintain annual fuel use records on site. [Reference: COMAR 26.11.09.05K(3)]
- (b) Maintain records of the results of the annual combustion analysis. [Reference: COMAR 26.11.09.08E(5)]
- (c) Maintain a record of training program attendance for each operator at the site. [Reference: COMAR 26.11.09.08E(5)]

Compliance Methods for the Above (Description and Citation):

JHMI maintains records of combustion analysis performed and records of hours of operation and fuel usage. JHMI maintains a record of training program attendance. Records are available for the Department upon request.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-05

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-2. 2.4.C. Recordkeeping Requirements – Operational Limit

The Permittee shall maintain records of the quantity and types of fuel burned. [Reference: COMAR 26.11.02.19C(1)(c)]

Compliance Methods for the Above (Description and Citation):

JHMI maintains records of the quantity and types of fuel burned.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-05

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-2. 2.5.A. Reporting Requirements – Control of Visible Emissions

The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, Plant Wide Conditions, "Report of Excess Emissions and Deviations".

Compliance Methods for the Above (Description and Citation):

No incidents of visible emissions occurred during the reporting period.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-05

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-2. 2.5.B. Reporting Requirements – Control of Sulfur Oxides

The Permittee shall report fuel supplier certifications to the Department upon request.

[Reference: COMAR 26.11.03.06C]

Compliance Methods for the Above (Description and Citation):

Fuel supplier certification records are available to the Department upon request.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-05

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-2. 2.5.C. Reporting Requirements – Control of Nitrogen Oxides

The Permittee shall submit:

1. The results of the combustion analysis to the Department and the EPA upon request.
[Reference: COMAR 26.11.09.08E(3)]
2. A record of training program attendance for each operator to the Department upon request.
[Reference: COMAR 26.11.09.08E(5)]

Compliance Methods for the Above (Description and Citation):

The results of the combustion analysis or a record of training program attendance is available to the Department upon request.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-05

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-2. 2.5.D. Reporting Requirements – Operational Limit

The Permittee shall submit:

Records of the quantity and type of fuels burned with the annual emissions certification report. See permit condition 8 of Section III.

Compliance Methods for the Above (Description and Citation):

This information is provided with the annual emissions certification.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-22

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-3. 3.1 A. Applicable Standards/Limits- Control of Visible Emissions:

- (1) COMAR 26.11.09.05A(2), Fuel Burning Equipment. "In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity."
- (2) COMAR 26.11.09.05A(3), Exceptions. Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if:
 - a. The visible emissions are not greater than 40 percent opacity; and
 - b. The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period."

Compliance Methods for the Above (Description and Citation):

JHMI employs good engineering operational, and preventative maintenance practices on EU-22 which minimizes visible emissions during idle and other than idle operations.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-22

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-3. 3.1B. Applicable Standards/Limits- Control of Sulfur Oxides:

- (1) COMAR 26.11.09.07A, Sulfur Content Limitations for Fuel. "A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: (2) In Areas III and IV: (b) Distillate fuel oils, 0.3 percent."
- (2) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, the Permittee shall not cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of 215 ng/J (0.50 lb/MMBtu) heat input from oil; or, **as an alternative, 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.** The percent reduction requirements are not applicable to affected facilities under this paragraph. **[Reference: 40 CFR §60.42c(d)]**
- (3) The Permittee may combust oil that contains no more than 0.5 weight percent sulfur or a mixture of 0.50 weight percent sulfur with other fuel not subject to a PM standard under § 60.43c and not using a post-combustion technology (except a wet scrubber) to reduce PM or SO₂ emissions is not subject to the PM limit in this section. **[Reference: 40 CFR §60.42c(e)(4)]**
- (4) The Permittee may not use a post-combustion technology (except a wet scrubber) to reduce PM or SO₂ emissions. **[Reference: 40 CFR §60.42c(e)(4)]**
- (5) The Permittee shall demonstrate compliance with the SO₂ standards based on fuel supplier certification, the performance test shall consist of the certification from the fuel supplier, as described in § 60.48c(f), as applicable. **[Reference: 40 CFR §60.44c(h)]**

Compliance Methods for the Above (Description and Citation):

JHMI demonstrates compliance with the SO₂ standards based on fuel supplier certification which kept on site.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-22

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-3. 3.1C. Applicable Standards/Limits- Control of Nitrogen Oxides:

- (1) COMAR 26.11.09.08B(5), Operator Training.
 - a. For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.
 - b. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.
- (2) COMAR 26.11.09.08E, Requirements for Fuel-Burning Equipment with a Rated Heat Input Capacity of 100 Million Btu Per Hour or Less. "A person who owns or operates fuel-burning equipment with a rated heat input capacity of 100 Million Btu per hour or less shall:
 - a. Submit to the Department an identification of each affected installation, the rated heat input capacity of each installation, and the type of fuel burned in each;
 - b. Perform a combustion analysis for each installation at least once each year and optimize combustion based on the analysis;

- c. Maintain the results of the combustion analysis at the site for at least 2 years and make this data available to the Department and the EPA upon request;
 - d. Once every 3 years, require each operator of the installation to attend operator training programs on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and
 - e. Prepare and maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request.
- (3) COMAR 26.11.09.08K(3), Record Keeping Requirements. "A person subject to this regulation shall maintain annual fuel use records on site for not less than 3 years, and make these records available to the Department upon request."

Compliance Methods for the Above (Description and Citation):

Combustion analysis and optimization are conducted at least once each year. Records are kept at least for 5 years on site. Equipment operators and maintenance technicians are trained as required. Attendance records are maintained as part of the training program.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-22

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-3. 3.2B. Testing Requirements – Control of Sulfur Oxides:

The Permittee may demonstrate compliance with the emission limits or fuel oil sulfur limits under 40 CFR Part 60, Subpart Dc based on a certification from the fuel supplier, as described under 40 CFR § 60.48c(f), as applicable. **[Reference: 40 CFR §60.42c(h)(1)]**

Compliance Methods for the Above (Description and Citation):

JHMI demonstrates compliance with the SO₂ standards based on fuel supplier certification which kept on site.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-22

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-3. 3.3A. Monitoring Requirements – Control of Visible Emissions

(1) The Permittee shall:

- a. Properly operate and maintain the boilers in a manner to prevent visible emissions; and
- b. Verify no visible emissions when burning No. 2 fuel oil. The Permittee shall perform a visual observation for a 6-minute period once for every 168 hours that the boiler burns oil or at a minimum of once per year.

(2) The Permittee shall perform the following if emissions are visible:

- a. Inspect combustion control system and boiler operations;
- b. Perform all necessary adjustments and/or repairs to the boiler within 48 hours, so that visible emissions are eliminated;
- c. Document in writing the results of the inspections, adjustments, and/or repairs to the boilers; and
- d. After 48 hours, if the required adjustments and/or repairs had not eliminated the visible emissions, perform Method 9 observations once daily for 18 minutes until corrective actions have eliminated the visible emissions. **[Reference: COMAR 26.11.03.06C]**

Compliance Methods for the Above (Description and Citation):

JHMI employs good engineering operational, and preventative maintenance practices on EU-22 which minimizes visible emissions during idle and other than idle operations.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-22

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-3. 3.3B. Monitoring Requirements – Control of Sulfur Oxides

The Permittee shall obtain a certification from the fuel supplier indicating that the oil complies with the limitation on the sulfur content of the fuel oil. **[Reference: COMAR 26.11.03.06C]**

Compliance Methods for the Above (Description and Citation):

Compliance with fuel oil sulfur limit is demonstrated by certification from the supplier. Certification records are kept on file.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-22

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-3. 3.3C. Monitoring Requirements – Control of Nitrogen Oxides

The Permittee shall perform a combustion analysis for each affected installation at least once each year and optimize combustion based on the analysis. **[Reference: COMAR 26.11.09.08E(2)]**

Compliance Methods for the Above (Description and Citation):

Combustion analysis and optimization are conducted at least once each year

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-22

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-3. 3.4A. Record Keeping Requirements – Control of Visible Emissions

The Permittee shall:

- (1) Maintain an operation manual and prevention maintenance plan on site;
- (2) Maintain a record of the maintenance performed that relates to combustion performance;
- (3) Maintain a log of visible emissions observations performed; and
- (4) Maintain a record of the hours that No. 2 fuel oil is burned.

[Reference: COMAR 26.11.03.06C]

Compliance Methods for the Above (Description and Citation):

JHMI maintains an operation manual and prevention maintenance plan and all required records on site.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-22

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-3. 3.4B. Monitoring Requirements – Control of Sulfur Oxides

The Permittee shall maintain records of fuel supplier's certification. [Reference: COMAR 26.11.03.06C]

Compliance Methods for the Above (Description and Citation):

JHMI maintains records of fuel supplier's certification on site.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-22

Permit Term (Describe requirements and cross-reference)Section IV. Table IV-3. 3.4C. Recordkeeping Requirements – Control of Nitrogen Dioxide

The Permittee shall maintain the following records on site for at least five years and make them available to the Department upon request:

- Records of all notifications required under regulation COMAR 26.11.09.08 of the applicable section under the regulation that applies to the boilers;
- Results of any combustion analysis required under COMAR 26.11.09.08E and make this data available to the Department and the EPA upon request [Reference: COMAR 26.11.09.08E(3)];
- Prepare and maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request [Reference: COMAR 26.11.09.08F(1)(e) and COMAR 26.11.09.08E(5)]; and
- Annual fuel use records. [Reference: COMAR 26.11.09.08K(3)] [Reference: COMAR 26.11.03.06C]

Compliance Methods for the Above (Description and Citation):

JHMI maintains the required records and/or logs on site.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-22

Permit Term (Describe requirements and cross-reference)Section IV. Table IV-3. 3.5A. Reporting Requirements – Control of Visible Emissions

The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, "Report of Excess Emissions and Deviations."

Compliance Methods for the Above (Description and Citation):

No incidents of visible emissions occurred during the reporting period.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-22

Permit Term (Describe requirements and cross-reference)Section IV. Table IV-3. 3.5B. Reporting Requirements – Control of Sulfur Oxides

The Permittee shall report fuel supplier's certification to the Department upon request. [Reference: COMAR 26.11.09.07C]

Compliance Methods for the Above (Description and Citation):

JHMI maintains fuel certification from fuel oil supplier which is available to the Department upon request.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-22

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-3. 3.5C. Reporting Requirements – Control of Nitrogen Oxides

The Permittee shall submit to the Department an identification of the affected installation, the rated heat input capacity of the installation, and the type of fuel burned.

[Reference: COMAR 26.11.09.08E(1)]

Compliance Methods for the Above (Description and Citation):

JHMI submitted the required information to the Department.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-01, EU-02, EU-03, EU-04, EU-05, EU-22

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-3. 3a 1. Applicable Standards/Limits-Control of Hazardous Air Pollutants

- (1) By March 21, 2014, the Permittee shall conduct a tune-up of each boiler biennially, while burning the type of fuel that provided the majority of the heat input to the boiler over the 12 months prior to the tune up, as specified:
 - a. Inspect the burner and clean or replace any components of the burner as necessary. The Permittee may delay the burner inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection.
 - b. 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.
 - c. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly. The Permittee may delay the inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection.
 - d. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any nitrogen oxide requirement to which the unit is subject.
 - e. 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 bases, as long as it is the same basis before and after the adjustments are made).
 - f. Maintain on-site and submit, if requested by the Administrator, a report containing the following information:
 - i. 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.
 - ii. A description of any corrective actions taken as a part of the tune-up of the boiler.
 - iii. The type and amount of fuel used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.
 - g. 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. **[Reference: 40 CFR §63.11196(a)(1), §63.11201(b), 40 CFR Part 63, Subpart**

JJJJJJ, Table 2, Items 4 and 5, 40 CFR §63.11223(a) and (b)(1) through (7), and 40 CFR §63.11210(c)]

- (2) The standards apply at all times the affected boiler is operating, except during periods of startup and shutdown as defined in §63.11237, during which time the Permittee must comply only with 40 CFR Part 63, Subpart JJJJJJ, Table 2. **[Reference: 40 CFR 2163.11210(d)]**
- (3) The Permittee shall operate and maintain the boilers, 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 the Permittee to make any further efforts to reduce emission if levels required beyond this standard have been achieved. **[Reference: 40 CFR §63.11205(a)]**

Compliance Methods for the Above (Description and Citation):

JHMI conducts and documents biennial tune-ups as required.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-01, EU-02, EU-03, EU-04, EU-05

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-3. 3a 1. Applicable Standards/Limits-Control of Hazardous Air Pollutants

- (4) By March 21, 2014, The Permittee shall conduct a one-time energy assessment performed by a qualified energy assessor. The energy assessment must include the following:
 - a. A visual inspection of the boiler system;
 - b. An evaluation of operating characteristics of the affected boiler systems, specifications of energy use systems, operating and maintenance procedures, and unusual operating constraints;
 - c. An inventory of major energy use systems consuming energy from the affected boilers and which are under control of the Permittee;
 - d. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage;
 - e. A list of major energy conservation measures that are within the facility's control;
 - f. A list of the energy savings potential of the energy conservation measures identified; and
 - g. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.
- [Reference: 40 CFR §63.11196(a)(3), 40 CFR Part 63, Subpart JJJJJJ, Table 2, Item 16, and 40 CFR §63.11210(c)]**

Note: The previous requirement was completed by the Permittee on July 10, 2013.

Compliance Methods for the Above (Description and Citation):

JHMI completed a one-time energy assessment at these emission units on July 10, 2013.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-22

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-3. 3a 1. Applicable Standards/Limits-Control of Hazardous Air Pollutants

- (5) The Permittee shall combust only oil that contains no more than 0.50 weight percent sulfur. **[Reference: 40 CFR §63.11210(e)]**
- Note:** Compliance with this requirement is met by meeting COMAR 26.11.09.07A(2)(b), which limits the sulfur in fuel to 0.3 weight percent.
- (6) The Permittee is not required to complete an initial performance tune-up, but must complete

the applicable biennial tune-up as specified in § 63.11223 no later than 25 months after the initial startup of the affected source. **[Reference: 40 CFR §63.11210(f)]**

- (7) The Permittee must minimize the boiler's startup and shutdown periods and conduct startups and shutdowns according to the manufacturer's recommended procedures. If manufacturer's recommended procedures are not available, the Permittee must follow recommended procedures for a unit of similar design for which manufacturer's recommended procedures are available. **[Reference: 40 CFR §63.11201(b) and 40 CFR Part 63, Subpart JJJJJJ, Table 2, Item 1]**

Compliance Methods for the Above (Description and Citation):

JHMI conducts biennial tune-ups as required. JHMI operates the boiler to minimize the boiler's startup and shutdown periods and conduct startups and shutdowns according to the manufacturer's recommended procedures.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-01, EU-02, EU-03, EU-04, EU-05, EU-22

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-3. 3a 2. Testing Requirements- Control of Hazardous Air Pollutants

- (1) The Permittee shall conduct a tune-up of each boiler biennially as described in 40 CFR §63.11223(a) and (b)

Compliance Methods for the Above (Description and Citation):

JHMI conducts biennial tune-ups as required

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-01, EU-02, EU-03, EU-04, EU-05

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-3. 3a 2. Testing Requirements- Control of Hazardous Air Pollutants

- (2) The Permittee shall conduct a one-time energy assessment as described in 40 CFR Part 63, Subpart JJJJJJ, Table 2, Item 16.

Compliance Methods for the Above (Description and Citation):

JHMI completed a one-time energy assessment on July 10, 2013.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-22

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-3. 3a 3. Monitoring Requirements- Control of Hazardous Air Pollutants

The Permittee must monitor and record on a monthly basis the type of fuel combusted.
[Reference: 40 CFR §63.11210(e)]

Compliance Methods for the Above (Description and Citation):

JHMI monitors and records on a monthly basis the type of fuel combusted.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-01, EU-02, EU-03, EU-04, EU-05, EU-22

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-3. 3a 4. Record Keeping Requirements- Control of Hazardous Air Pollutants

- (1) The Permittee shall maintain on site for five (5) years and submit to the Department upon request, a report containing the following information:
- 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.
 - A description of any corrective actions taken as part of the tune-up of the boiler.
 - The type and amount of fuel used over the 12 months prior to tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.

[Reference: 40 CFR §63.611223(b)(6)]

Compliance Methods for the Above (Description and Citation):

JHMI maintains all of the required reports on site.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-01, EU-02, EU-03, EU-04, EU-05

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-3. 3a 4. Record Keeping Requirements- Control of Hazardous Air Pollutants

- (2) The Permittee must maintain the following records 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.
- A copy of each notification and report that you submitted to comply with this subpart and all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted.
 - Records to document conformance with the work practices, emission reduction measures, and management practices required by § 63.11214 and § 63.11223 as specified in paragraphs (c)(2)(i) through (vi) of this section.
 - 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.
 - A copy of the energy assessment report for each boiler.
 - Records of the occurrence and duration of each malfunction of the boiler, or of the associated air pollution control and monitoring equipment.
 - Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in § 63.11205(a), including corrective actions to restore the malfunctioning boiler, air pollution control, or monitoring equipment to its normal or usual manner of operation.

[Reference: 40 CFR §63.11225(c)(1), (2)(i) and (iii), (4), (5), and 40 CFR §63.6625(d)]

Compliance Methods for the Above (Description and Citation):

JHMI maintains all the required records on site.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-01, EU-02, EU-03, EU-04, EU-05, EU-22

Permit Term (Describe requirements and cross-reference)Section IV. Table IV-3. 3a 5. Reporting Requirements- Control of Hazardous Air Pollutants

- (1) The Permittee must submit all of the notifications in 63.9(b) through (d), and (h) by the dates specified in those sections except as specified below in Conditions (2) and (3).
[Reference: 40 CFR §63.11225(a)(1)]
- (2) The Permittee must submit a signed statement in the Notification of Compliance Status Report that indicates that the Permittee conducted a tune-up of the boiler. [Reference: 40 CFR §63.11214(b)]
- (3) The Permittee must prepare a biennial compliance report and submit it to the delegated authority upon request. The compliance report must include the following:
 - a. Company name and address.
 - b. 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:
 - i. "This facility complies with the requirements in § 63.11223 to conduct a biennial or 5-year tune-up, as applicable, of each boiler."
 - ii. 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." [Reference: 40 CFR §63.11225(b)(1), and (2)(i) and (ii)]

Compliance Methods for the Above (Description and Citation):

JHMI submits all of the required reports to the Department.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-01, EU-02, EU-03, EU-04, EU-05

Permit Term (Describe requirements and cross-reference)Section IV. Table IV-3. 3a 5. Reporting Requirements- Control of Hazardous Air Pollutants

- (4) By January 20, 2014, the Permittee must submit an Initial Notification. [Reference: 40 CFR §63.11225(a)(2)]
- (5) By March 21, 2014, the Permittee must submit a Notification of Compliance Status electronically using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/csx). If the reporting form specific to 40 CFR 63, Subpart JJJJJJ is not available in CEDRI at the time the report is due, the written Notification of Compliance Status must be submitted to the Administrator at the address listed in §63.13. The Notification of Compliance Status must be signed by a responsible official and include the following information:
 - a. The following information required in §63.9(h)(2):
 - i. The methods that were used to determine compliance
 - ii. The methods that will be used for determining continuing compliance, including a description of monitoring and reporting requirements and test methods;
 - iii. A statement by the owner or operator of the affected existing, new, or reconstructed source as to whether the source has complied with the relevant standard or other requirements.
 - b. "This facility complies with the requirements in §63.11214 to conduct an initial tune-up of the boiler."
 - c. This facility has had an energy assessment performed according to §63.11214(c)."
 - d. 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."

[Reference: 40 CFR §63.11225(a)(4)(i), (ii), (iii), (v), and (vi) and 40 FR §63.11214(b) and (c)]

- (6) The Permittee must submit a signed certification in the Notification of Compliance Status Report that an energy assessment of the boiler and its energy use systems was completed according to 40 CFR Part 63, Subpart JJJJJJ, Table 2 and is an accurate depiction of the Permittee's facility.

[Reference: 40 CFR §63.11214(c)]

Compliance Methods for the Above (Description and Citation):

JHMI submits all of the required reports to the Department and electronically to EPA using the CEDRI.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-13

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-4. 4.1A. Applicable Standards/Limits-Control of Visible Emissions

- (1) COMAR 26.11.09.05E(2), Emissions During Idle Mode. "A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity."
- (2) COMAR 26.11.09.05E(3), Emissions During Operating Mode. "A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity."
- (3) COMAR 26.11.09.05E(4), Exceptions.
 - a. "Section E(2) of this regulation does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system."
 - b. Section E(2) of this regulation does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:\
 - i. Engines that are idled continuously when not in service: 30 minutes;
 - ii. All other engines: 15 minutes.
 - c. Section E(2) and (3) of this regulation do not apply while maintenance, repair, or testing is being performed by qualified mechanics."

Compliance Methods for the Above (Description and Citation):

JHMI employs good engineering, operational and preventative maintenance practices on EU-13 which minimizes visible emissions during idle and other-than-idle operations.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-13

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-4. 4.1B. Applicable Standards/Limits-Control of Sulfur Oxides

COMAR 26.11.09.07A(2)(b), Sulfur Content Limitations for Fuel. "A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: (2) In Areas III and IV: (b) Distillate fuel oils, 0.3 percent."

Compliance Methods for the Above (Description and Citation):

Supplier's certifications are kept on site.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-13

Permit Term (Describe requirements and cross-reference)Section IV. Table IV-4. 4.1C. Applicable Standards/Limits-Control of Nitrogen Oxides

- (1) COMAR 26.11.09.08B(5), Operator Training.
 - a. "For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.
 - b. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department."
- (2) COMAR 26.11.09.08G(1), Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 Percent or Less, and Combustion Turbines with a Capacity Factor Greater than 15 Percent. "A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:
 - a. Provide certification of the capacity factor of the equipment to the Department in writing;
 - b. For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually;
 - c. Maintain the results of the combustion analysis at the site for at least 2 years and make these results available to the Department and the EPA upon request;
 - d. Require each operator of an installation, except combustion turbines, to attend operator training programs at least once every 3 years, on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and
 - e. Maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request."

Compliance Methods for the Above (Description and Citation):

Equipment operators and maintenance technicians are trained as required. Attendance records are maintained as part of the training program. Combustion analysis and optimization are conducted at least once each year. Records are kept at least for 2 years on site.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-13

Permit Term (Describe requirements and cross-reference)Section IV. Table IV-4. 4.1D. Applicable Standards/Limits-Control of Hazardous Air Pollutants

- (1) The Permittee may not operate the engine for any use other than emergency operation, maintenance and testing, and emergency demand response (less than 15 hours per calendar year). **[Reference: 40 CFR §63.6640(f) and COMAR 26.11.36.03A(1)]**
- (2) There is no time limit on the use of the emergency stationary RICE in emergency situations. **[Reference: 40 CFR §63.6640(f)(1)]**
- (3) The Permittee may operate the engine for any combination of the purposes listed below for a maximum of 100 hours per calendar year.
 - a. Maintenance checks and readiness testing, provided that the tests are recommended by federal, state, or local government the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.
 - b. Emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard

EOP-002-3.

- c. Periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

Note: Per 40 CFR §63.6585(f)(3), to be considered an institutional emergency engine under this section, the Permittee may not be contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in (3)(b) and (c) above.

Compliance Methods for the Above (Description and Citation):

JHMI meets all standards and limits for emergency generators. All applicable records are kept on site.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-13

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-4. 4.2C. Testing Requirements-Control of Nitrogen Oxides

The Permittee shall perform a combustion analysis and optimize combustion at least once annually for any of the engines that operates more than 500 hours during a calendar year.
[Reference: COMAR 26.11.09.08G(1)(b)]

Compliance Methods for the Above (Description and Citation):

Combustion analysis and optimization are conducted as required. Records are kept at least for 5 years on site.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-13

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-4. 4.3A. Monitoring Requirements-Control of Visible Emissions

The Permittee shall perform preventive maintenance to optimize combustion performance.
[Reference: COMAR 26.11.03.06C]

Compliance Methods for the Above (Description and Citation):

JHMI has performed the required preventative maintenance and all records are available for review upon request.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-13

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-4. 4.3B. Monitoring Requirements-Control of Sulfur Oxides

The Permittee shall obtain a certification from the fuel supplier that the fuel oil is in compliance with the sulfur in fuel limitation. [Reference: COMAR 26.11.03.06C]

Compliance Methods for the Above (Description and Citation):

JHMI obtains the certification from the fuel supplier and records are kept as required.

Status (Check one): <input type="checkbox"/> Intermittent Compliance <input checked="" type="checkbox"/> Continuous Compliance
Emission Unit ID(s): EU-13 Permit Term (Describe requirements and cross-reference) Section IV. Table IV-4. 4.3C. <u>Monitoring Requirements-Control of Nitrogen Oxides</u> The Permittee shall maintain annual fuel use records on site for not less than 3 years, and make these records available to the Department upon request. [Reference: COMAR 26.11.09.08K(3)] Compliance Methods for the Above (Description and Citation): JHMI maintains annual fuel use records on site for 5 years, and makes these records available to the Department upon request. Status (Check one): <input type="checkbox"/> Intermittent Compliance <input checked="" type="checkbox"/> Continuous Compliance
Emission Unit ID(s): EU-13 Permit Term (Describe requirements and cross-reference) Section IV. Table IV-4. 4.4A. <u>Recordkeeping Requirements-Control of Visible Emissions</u> The Permittee shall retain preventive maintenance records on site for at least five (5) years and make the records available to the Department upon request. [Reference: COMAR 26.11.03.06C] Compliance Methods for the Above (Description and Citation): JHMI maintains preventive maintenance records on site for 5 years and makes these records available to the Department upon request. Status (Check one): <input type="checkbox"/> Intermittent Compliance <input checked="" type="checkbox"/> Continuous Compliance
Emission Unit ID(s): EU-13 Permit Term (Describe requirements and cross-reference) Section IV. Table IV-4. 4.4B. <u>Recordkeeping Requirements-Control of Sulfur Oxides</u> The Permittee shall retain fuel supplier certifications stating that the fuel oil is in compliance with this regulation and must maintain these records for at least five (5) years. [Reference: COMAR 26.11.09.07C] Compliance Methods for the Above (Description and Citation): Compliance with fuel oil sulfur limit is demonstrated by certification from the supplier. Certification records are kept on file. Status (Check one): <input type="checkbox"/> Intermittent Compliance <input checked="" type="checkbox"/> Continuous Compliance
Emission Unit ID(s): EU-13 Permit Term (Describe requirements and cross-reference) Section IV. Table IV-4. 4.4C. <u>Recordkeeping Requirements-Control of Nitrogen Oxides</u> The Permittee shall maintain the following records onsite for at least five (5) years and must

make these records available to the Department upon request:

1. Records of the results of the combustion analysis. **[Reference: COMAR 26.11.09.08G(1)(c) and COMAR 26.11.03.06C]**
2. Records of training program attendance for each operator. **[Reference: COMAR 26.11.09.08G(1)(e) and COMAR 26.11.03.06C]**
3. Records of the hours of operation and fuel usage on a monthly basis for all generators. At the end of each month, the Permittee shall calculate the total hours for the prior rolling 12-month period. **[Reference: COMAR 26.11.03.06C]**

Compliance Methods for the Above (Description and Citation):

JHMI maintains records of combustion analysis performed and records of hours of operation and fuel usage. Records are available for the Department upon request.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-13

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-4. 4.4D. Recordkeeping Requirements-Control of Hazardous Air Pollutants

The Permittee must maintain records of the following on site for at least five years and must make available to the Department upon request:

- a. Hours of operation of each engine.
- b. Reason for operation of each engine (i.e. emergency, emergency demand response, voltage deviation, etc.) **[Reference: COMAR 26.11.03.06C]**

Compliance Methods for the Above (Description and Citation):

JHMI maintains all the required records.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-13

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-4. 4.5A. Reporting Requirements-Control of Visible Emissions

The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, "Report of Excess Emissions and Deviations."

Compliance Methods for the Above (Description and Citation):

No incidents of visible emissions occurred during the reporting period.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-13

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-4. 4.5B. Reporting Requirements-Control of Sulfur Oxides

The Permittee shall report fuel supplier's certification for sulfur content to the Department upon request. **[Reference: COMAR 26.11.09.07C and COMAR 26.11.03.06C]**

Compliance Methods for the Above (Description and Citation):

Fuel certifications provided by fuel oil supplier is kept onsite and available to the Department upon request.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-13

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-4. 4.5C. Reporting Requirements-Control of Nitrogen Oxides

The Permittee shall provide certification of the capacity factor of the engines to the Department in writing with an annual emissions certification. [Reference: COMAR 26.11.09.08G(1)(e)]

Compliance Methods for the Above (Description and Citation):

This information is provided in the annual emissions certification.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-13

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-4. 4.5D. Reporting Requirements-Control of Hazardous Air Pollutants

The Permittee must submit records of operation for each engine to the Department with the facility's annual Emissions Certification. [Reference: COMAR 26.11.03.06C]

Compliance Methods for the Above (Description and Citation):

This information is provided in the annual emissions certification.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-14, EU-15, EU-16, EU-17, EU-18, EU-19

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-5. 5.1A. Applicable Standards/Limits-Control of Visible Emissions

- (1) COMAR 26.11.09.05E(2), Emissions During Idle Mode. "A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity."
- (2) COMAR 26.11.09.05E(3), Emissions During Operating Mode. "A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity."
- (3) COMAR 26.11.09.05E(4), Exceptions.
 - a. "Section E(2) of this regulation does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.
 - b. Section E(2) of this regulation does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:
 - i. Engines that are idled continuously when not in service: 30 minutes;
 - ii. All other engines: 15 minutes.
 - c. Section E(2) and (3) of this regulation do not apply while maintenance, repair, or testing is being performed by qualified mechanics."

Compliance Methods for the Above (Description and Citation):

JHMI employs good engineering, operational and preventative maintenance practices on EU-13 which minimizes visible emissions during idle and other-than-idle operations.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-14, EU-15, EU-16, EU-17, EU-18, EU-19

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-5. 5.1B. Applicable Standards/Limits-Control of Sulfur Oxides

COMAR 26.11.09.07A(2)(b), Sulfur Content Limitations for Fuel. "A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: (2) In Areas III and IV: (b) Distillate fuel oils, 0.3 percent."

Note: Compliance with 40 CFR §63.6604(a) and 40 CFR §80.510(b) will demonstrate compliance with this requirement. See Table IV-5a, Section 5a.1(5) for additional detail.

Compliance Methods for the Above (Description and Citation):

Supplier's certifications are kept on site.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-14, EU-15, EU-16, EU-17, EU-18, EU-19

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-5. 5.1C. Applicable Standards/Limits-Control of Nitrogen Oxides

- (1) COMAR 26.11.09.08B(5), Operator Training.
 - a. "For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.
 - b. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department."
- (2) COMAR 26.11.09.08G(1), Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 Percent or Less, and Combustion Turbines with a Capacity Factor Greater than 15 Percent. "A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:
 - a. Provide certification of the capacity factor of the equipment to the Department in writing;
 - b. For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually;
 - c. Maintain the results of the combustion analysis at the site for at least 2 years and make these results available to the Department and the EPA upon request;
 - d. Require each operator of an installation, except combustion turbines, to attend operator training programs at least once every 3 years, on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and
 - e. Maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request."

Compliance Methods for the Above (Description and Citation):

Equipment operators and maintenance technicians are trained as required. Attendance records are maintained as part of the training program. Combustion analysis and optimization are conducted at least once each year. Records are kept at least for 2 years on site.

Status (Check one): <input type="checkbox"/> Intermittent Compliance <input checked="" type="checkbox"/> Continuous Compliance
Emission Unit ID(s): EU-14, EU-15 Permit Term (Describe requirements and cross-reference) Section IV. Table IV-5. 5.1E. <u>Applicable Standards/Limits-Operational Limitations</u> The combined NOx emissions from both of these diesel generators must not exceed 25 tons in any rolling 12-month period. [Reference: Permit to Construct 510-9-0949 and 0950N issued on April 2, 2002] Compliance Methods for the Above (Description and Citation): JHMI maintains a rolling 12-month NOx emissions calculation for both generators.
Status (Check one): <input type="checkbox"/> Intermittent Compliance <input checked="" type="checkbox"/> Continuous Compliance
Emission Unit ID(s): EU-14, EU-15, EU-16, EU-17, EU-18, EU-19 Permit Term (Describe requirements and cross-reference) Section IV. Table IV-5. 5.2C. <u>Testing Requirements-Control of Nitrogen Oxides</u> The Permittee shall perform a combustion analysis and optimize combustion at least once annually for any of the engines that operates more than 500 hours during a calendar year. [Reference: COMAR 26.11.09.08G(1)] Compliance Methods for the Above (Description and Citation): Combustion analysis and optimization are conducted as required. Records are kept at least for 5 years on site.
Status (Check one): <input type="checkbox"/> Intermittent Compliance <input checked="" type="checkbox"/> Continuous Compliance
Emission Unit ID(s): EU-14, EU-15, EU-16, EU-17, EU-18, EU-19 Permit Term (Describe requirements and cross-reference) Section IV. Table IV-5. 5.3A. <u>Monitoring Requirements-Control of Visible Emissions</u> The Permittee shall perform preventive maintenance and optimize combustion performance. [Reference: COMAR 26.11.03.06C] Compliance Methods for the Above (Description and Citation): JHMI has performed the required preventative maintenance and all records are available for review upon request.
Status (Check one): <input type="checkbox"/> Intermittent Compliance <input checked="" type="checkbox"/> Continuous Compliance
Emission Unit ID(s): EU-14, EU-15, EU-16, EU-17, EU-18, EU-19 Permit Term (Describe requirements and cross-reference) Section IV. Table IV-5. 5.3B. <u>Monitoring Requirements-Control of Sulfur Oxides</u> The Permittee shall obtain a certification from the fuel supplier that the fuel oil is in compliance with the sulfur in fuel limitation. [Reference: COMAR 26.11.03.06C]

Compliance Methods for the Above (Description and Citation):

JHMI obtains the certification from the fuel supplier and records are kept as required.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-14, EU-15, EU-16, EU-17, EU-18, EU-19

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-5. 5.3C. Monitoring Requirements-Control of Nitrogen Oxides

For engines that operate more than 500 hours during a calendar year; perform a combustion analysis and optimize combustion. **[Reference: COMAR 26.11.09.08G(1)(c)]**

Compliance Methods for the Above (Description and Citation):

Combustion analysis and optimization are conducted as required. Records are kept at least for 5 years on site.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-14, EU-15

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-5. 5.3E. Monitoring Requirements-Operational Limits

The Permittee shall calculate monthly NOx emissions from both of these emission units combined at the end of each calendar month. **[Reference: COMAR 26.11.03.06C]**

Compliance Methods for the Above (Description and Citation):

JHMI maintains a monthly NOx emissions calculation.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-14, EU-15, EU-16, EU-17, EU-18, EU-19

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-5. 5.4 . Record Keeping Requirements

Note: All records must be maintained at the site for a period of at least five (5) years and made available to the Department upon request. **[Reference: COMAR 26.11.03.06C(5)(g)]**

Compliance Methods for the Above (Description and Citation):

JHMI adheres to all record keeping requirements and all monitoring data and information that supports compliance is kept in hard copy or digital form for at least five (5) years.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-14, EU-15, EU-16, EU-17, EU-19

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-5. 5.4 A. Record Keeping Requirements-Control of Visible Emissions

The Permittee shall retain preventive maintenance records on site.

Compliance Methods for the Above (Description and Citation):

JHMI maintains records of preventive maintenance performed on site.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-14, EU-15, EU-16, EU-17, EU-18, EU-19

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-5. 5.4 B. Record Keeping Requirements-Control of Sulfur Oxides

The Permittee shall retain fuel supplier certifications stating that the fuel oil is in compliance with this regulation. **[Reference: COMAR 26.11.09.07C]**

Compliance Methods for the Above (Description and Citation):

JHMI maintains fuel supplier certifications demonstrating compliance with the requirement.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-14, EU-15, EU-16, EU-17, EU-18, EU19

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-5. 5.4 C. Record Keeping Requirements-Control of Nitrogen Oxides

The Permittee shall maintain the following:

- (1) Records of the results of the combustion analysis. **[Reference: COMAR 26.11.09.08G(1)(c) and COMAR 26.11.03.06C]**
- (2) Records of training program attendance for each operator. **[Reference: COMAR 26.11.09.08G(1)(e) and COMAR 26.11.03.06C]**
- (3) Records of hours of operation and fuel usage on a monthly basis for all generators. At the end of each month, the Permittee shall calculate the total hours for the prior rolling 12-month period. **[Reference: COMAR 26.11.03.06C]**

Compliance Methods for the Above (Description and Citation):

JHMI maintains all of the required records.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-14, EU-15, EU-16, EU-17, EU-18, EU-19

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-5. 5.4 C. Record Keeping Requirements-Control of Nitrogen Oxides

The Permittee shall maintain for 5 years and make available to the department upon request the following information:

- (1) An operating log that includes the date the unit operated and the total operating time for each day that the unit operated and
- (2) Monthly calculations of NOx emissions from EU-14 and EU-15. **[Reference: COMAR 26.11.03.06C]**

Compliance Methods for the Above (Description and Citation):

JHMI maintains all of the required logs and calculations.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

<p>Emission Unit ID(s): EU-14, EU-15, EU-16, EU-17, EU-18, EU-19</p> <p>Permit Term (Describe requirements and cross-reference)</p> <p>Section IV. Table IV-5. 5.5 A. <u>Reporting Requirements-Control of Visible Emissions</u></p> <p>The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, "Report of Excess Emissions and Deviations."</p> <p>Compliance Methods for the Above (Description and Citation):</p> <p>No incidents of visible emissions occurred during the reporting period.</p> <p>Status (Check one): <input type="checkbox"/> Intermittent Compliance <input checked="" type="checkbox"/> Continuous Compliance</p>
<p>Emission Unit ID(s): EU-14, EU-15, EU-16, EU-17, EU-18, EU-19</p> <p>Permit Term (Describe requirements and cross-reference)</p> <p>Section IV. Table IV-5. 5.5 B. <u>Reporting Requirements-Control of Sulfur Oxides</u></p> <p>The Permittee shall report fuel supplier certifications for sulfur content to the Department upon request. [Reference: COMAR 26.11.09.07C and COMAR 26.11.03.06C]</p> <p>Compliance Methods for the Above (Description and Citation):</p> <p>No incidents of visible emissions occurred during the reporting period.</p> <p>Status (Check one): <input type="checkbox"/> Intermittent Compliance <input checked="" type="checkbox"/> Continuous Compliance</p>
<p>Emission Unit ID(s): EU-14, EU-15, EU-16, EU-17, EU-18, EU-19</p> <p>Permit Term (Describe requirements and cross-reference)</p> <p>Section IV. Table IV-5. 5.5 C. <u>Reporting Requirements-Control of Nitrogen Oxides</u></p> <p>(1) The Permittee shall maintain annual fuel use records on site for not less than 3 years, and make these records available to the Department upon request. [Reference: COMAR 26.11.09.08K(3)]</p> <p>(2) The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing with the annual emissions certification. [Reference: COMAR 26.11.09.08G(1)(e)]</p> <p>Compliance Methods for the Above (Description and Citation):</p> <p>JHMI maintains annual fuel use records on site for 5 years. Certification of the capacity factor of the equipment is provided in the annual emissions certification.</p> <p>Status (Check one): <input type="checkbox"/> Intermittent Compliance <input checked="" type="checkbox"/> Continuous Compliance</p>
<p>Emission Unit ID(s): EU-14, EU-15, EU-16, EU-17, EU-18, EU-19</p> <p>Permit Term (Describe requirements and cross-reference)</p> <p>Section IV. Table IV-5. 5.5 E. <u>Reporting Requirements-Operational Limits</u></p> <p>The Permittee shall report the type and quantity of fuel used in the engines, and the monthly NOx emissions from EU-14 and EU-15 to the Department in the annual emissions certification report</p>

due on April 1 of each year. [Reference: COMAR 26.11.02.19C]

Compliance Methods for the Above (Description and Citation):

This information is provided in the annual emissions certification report.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-14, EU-15, EU-16, EU-17, EU-18, EU-19

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-5. 5a 1. Applicable Standards/Limits-Control of Hazardous Air Pollutants

- (1) The Permittee shall:
 - a. Limit the concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O₂; or
 - b. Reduce CO emissions by 70 percent or more.
[Reference: 40 CFR §63.6603(a) and 40 CFR Part 63, Subpart ZZZZ, Table 2d, Item 3]
- (2) If the Permittee is using a catalyst to reduce or limit CO emissions, the Permittee shall:
 - a. Maintain the catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test; and
 - b. Maintain the temperature of the stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450°F and less than or equal to 1350°F.
[Reference: 40 CFR §63.6603(a) and 40 CFR Part 63, Subpart ZZZZ, Table 2b, Item 2]
- (3) If the Permittee is not using a catalyst to reduce or limit CO emissions, the Permittee shall comply with any operating limitations approved by the Administrator. [Reference: 40 CFR §63.6603(a) and 40 CFR Part 63, Subpart ZZZZ, Table 2b, Item 3]
- (4) The Permittee shall:
 - a. Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or
 - b. Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates and metals.
[Reference: 40 CFR §63.6625(g)]

Note: The Permittee must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters.

- (5) The Permittee shall only use fuel that meets the following per gallon standards:
 - a. Sulfur Content
 - i. 15ppm maximum for NR diesel fuel
 - ii. 500ppm maximum for LM diesel fuel
 - b. Cetane index or aromatic content, as follows:
 - i. A minimum cetane index of 40; or
 - ii. A maximum aromatic content of 35 volume percent

[Reference: 40 CFR §63.6604(a) and 40 CFR §80.510(b)]

Note: Compliance with 5. above will demonstrate compliance with COMAR 26.11.09.07A(2)(b) discussed in Table IV – 5, Section 5.1B.

Compliance Methods for the Above (Description and Citation):

JHMI meets all standards and limits for peak shaving generators. All applicable records are kept on site.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-14, EU-15, EU-16, EU-17, EU-18, EU-19

Permit Term (Describe requirements and cross-reference)Section IV. Table IV-5. 5a 2. Testing Requirements-Control of Hazardous Air Pollutants

- (1) The Permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in 40 CFR Part 63, Subpart ZZZZ, Table 2d. The oil analysis must be performed at the same frequency specified for changing the oil in 2d. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. **[Reference: 40 CFR §63.6625(i)]**

Initial Performance Testing:

Note: The Permittee must conduct any initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in § 63.6595 and according to the provisions in § 63.7(a)(2). **[Reference: 40 CFR §63.6620(a)]**

- (2) The Permittee is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described below:
- a. The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.
 - b. The test must not be older than 2 years.
 - c. The test must be reviewed and accepted by the Administrator.
 - d. Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.
- [Reference: 40 CFR §63.6612(b)]**
- (3) If the Permittee is reducing CO emissions, the Permittee must do the following table:
[Reference: 40 CFR §6612(a), §63.6620(a), and 40 CFR Part art ZZZZ, Table 4, Item 1]
Note: The Permittee does not need to start up the engine solely to conduct the performance test. The Permittee can conduct the performance test when the engine is started up again. [Reference: 40 CFR §63.6620(b)]
- (4) If the Permittee is limiting the concentration of CO, the Permittee must do the following table:
[Reference: 40 CFR §6612(a), §63.6620(a), and 40 CFR Part 63, Subpart ZZZZ, Table 4, Item 3]
- (5) The Permittee must conduct three separate test runs for each performance test, as specified in § 63.7(e)(3). Each test run must last at least 1 hour, unless otherwise specified in this subpart.
[Reference: 40 CFR §63.6620(d)]
- (6) If the Permittee is using an oxidation catalyst to limit or reduce the CO emissions, during the initial performance test, the Permittee must establish the following operating limitations:
- a. maintain the catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test; and
 - b. maintain the temperature of the stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F
- [Reference: 40 CFR §63.6603(a), §63.6630(b) and 40 CFR Part 63, Subpart ZZZZ, Table 2b, Item 2]**
- (7) If the Permittee is reducing the CO emissions by 70% or more, the Permittee must determine compliance with the percent reduction requirement according to the calculations in 40 CFR §63.6620(e). **[Reference: 40 CFR §63.6620(e)]**
- (8) If the Permittee chooses to comply with the emission limitation to reduce CO and is not using an oxidation catalyst, the Permittee must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of

no operating limitations. The Permittee must not conduct the initial performance test until after the petition has been approved by the Administrator. **[Reference: 40 CFR §63.6620(f)]**

- (9) If the Permittee is petitioning the Administrator for approval of operating limitations, the petition must include the information in 40 CFR §63.6620(g). **[Reference: 40 CFR §63.6620(g)]**
- (10) If the Permittee is petitioning the Administrator for approval of no operating limitations, the petition must include the information in 40 CFR §63.6620(h). **[Reference: 40 CFR §63.6620(h)]**
- (11) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided. **[Reference: 40 CFR §63.6620(i)]**
- (12) Demonstration of Initial Compliance: The Permittee shall demonstrate compliance according to the following table:
[Reference: 40 CFR §63.6612(a), §63.6630(a), and 40 CFR Part 63, Subpart ZZZZ, Table 5, Items 1 - 6]
Note: The Permittee is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted and meets the conditions of 40 CFR §63.6612(b).
- (13) Subsequent Performance Testing: If the Permittee is not using CEMs to demonstrate compliance, the Permittee must conduct subsequent performance tests every 8,760 hours or 3 years, whichever comes first. **[Reference: 40 CFR §63.6615, §63.6620(a), and 40 CFR Part 63, Subpart ZZZZ, Table 3, Item 4]**

Compliance Methods for the Above (Description and Citation):

JHMI meets all standards and limits for peak shaving generators. All applicable records are kept on site.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-14, EU-15, EU-16, EU-17, EU-18, EU-19

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-5. 5a 3. Monitoring Requirements-Control of Hazardous Air Pollutants

- (1) The Permittee must be in compliance with the emission limitations, operating limitations, and other requirements in this subpart that apply to you at all times. **[Reference: 40 CFR §63.6605(a)]**
- (2) At all times the Permittee 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. **[Reference: 40 CFR §63.6605(b)]**
- (3) The Permittee shall minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in 40 CFR Part 63, Subpart ZZZZ, Table 2d apply. **[Reference: 40 CFR §63.6625(h)]**
- (4) If the Permittee is meeting the CO limitations or reductions requirements according to 40 CFR Part 63, Subpart ZZZZ, Table 5, Items 5 or 6, the Permittee must install, operate, and maintain a CEMS to monitor CO and either O₂ or CO₂ according to the following requirements. If the Permittee is meeting the requirement to reduce CO emissions, the CEMS must be installed at both the inlet and outlet of the control device. If the Permittee is meeting the requirement to limit the concentration of CO, the CEMS must be installed at the outlet of the control device.
 - a. Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of 40 CFR part 60, appendix B.
 - b. You must conduct an initial performance evaluation and an annual relative accuracy test

- audit (RATA) of each CEMS according to the requirements in § 63.8 and according to the applicable performance specifications of 40 CFR part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.
- c. As specified in § 63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data.
 - d. The CEMS data must be reduced as specified in § 63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO₂ concentration. [Reference: 40 CFR §63.6625(a) and 40 CFR Part 63, Subpart ZZZZ, Table 5, Items 5 and 6]
- (5) If the Permittee is meeting the CO limitations or reductions requirements according to 40 CFR Part 63, Subpart ZZZZ, Table 5, Items 1, 2, 3, or 4, the Permittee must install, operate, and maintain each CPMS according to the following requirements:
- a. You must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined below and in § 63.8(d). As specified in § 63.8(f)(4) you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in paragraphs (a)(i) through (v) of this section in your site-specific monitoring plan.
 - i. The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;
 - ii. Sampling interface (e.g., thermocouple) location such that the monitoring system will provide representative measurements;
 - iii. Equipment performance evaluations, system accuracy audits, or other audit procedures;
 - iv. Ongoing operation and maintenance procedures in accordance with provisions in § 63.8(c)(1)(ii) and (c)(3); and
 - v. Ongoing reporting and recordkeeping procedures in accordance with provisions in § 63.10(c), (e)(1), and (e)(2)(i).
 - b. You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan.
 - c. The CPMS must collect data at least once every 15 minutes (see also § 63.6635).
 - d. For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.
 - e. You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually.
 - f. You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan
- [Reference: 40 CFR §63.6625(b) and 40 CFR Part 63, Subpart ZZZZ, Table 5, Items 1, 2, 3, and 4]**
- (6) Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, the Permittee must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. The Permittee may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. The Permittee must, however, use all the valid data collected during all other periods. **[Reference: 40 CFR §63.6635]**
- (7) If the Permittee is demonstrating continuous compliance through the use of CEMS, the Permittee must demonstrate continuous compliance with the emissions limits as follows:
- a. Collecting the monitoring data according to § 63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction or concentration of CO emissions according to § 63.6620; and
 - b. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period, or that the emission remain at or below the CO concentration limit; and
 - c. Conducting an annual RATA of your CEMS using PS 3 and 4A of 40 CFR part 60,

appendix B, as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1. **[Reference: 40 CFR §63.6640(a) and 40 CFR Part 63, Subpart ZZZZ, Table 6, Item 3]**

- (8) If the Permittee is demonstrating continuous compliance through the use of an oxidation catalyst, the Permittee must demonstrate continuous compliance with the emissions limits as follows:
- Conduct performance tests every 8,760 hours or 3 years, whichever comes first, for CO to demonstrate that the required CO percent reduction is achieved or that your emissions remain at or below the CO concentration limit; and
 - Collecting the catalyst inlet temperature data according to § 63.6625(b); and
 - Reducing these data to 4-hour rolling averages; and
 - Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
 - Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.

[Reference: 40 CFR §63.6640(a) and 40 CFR Part 63, Subpart ZZZZ, Table 6, Item 10]

- (9) If the Permittee is demonstrating compliance and is not using an oxidation catalyst, the Permittee must demonstrate continuous compliance with the emission limits as follows:
- Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
 - Collecting the approved operating parameter (if any) data according to § 63.6625(b); and
 - Reducing these data to 4-hour rolling averages; and
 - Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.

[Reference: 40 CFR §63.6640(a) and 40 CFR Part 63, Subpart ZZZZ, Table 6, Item 11]

- (10) The Permittee must report each instance in which you did not meet each emission limitation in Tables 2b and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in § 63.6650. If the Permittee changes the catalyst, the Permittee must reestablish the values of the operating parameters measured during the initial performance test. When the Permittee reestablishes the values of the operating parameters, the Permittee must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE. **[Reference: 40 CFR §63.6640(b)]**

Compliance Methods for the Above (Description and Citation):

JHMI meets all standards and limits for peak shaving generators. All applicable records are kept on site.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-14, EU-15, EU-16, EU-17, EU18, EU-19

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-5. 5a 4. Record Keeping Requirements-Control of Hazardous Air Pollutants

- The Permittee must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan. **[Reference: 40 CFR §63.6655(e)(2)]**
- The Permittee must keep the following records:
 - A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in § 63.10(b)(2)(xiv).

- b. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.
 - c. Records of performance tests and performance evaluations as required in § 63.10(b)(2)(viii).
 - d. Records of all required maintenance performed on the air pollution control and monitoring equipment.
 - e. Records of actions taken during periods of malfunction to minimize emissions in accordance with § 63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. **[Reference: 40 CFR §63.6655(a)]**
- (3) If the Permittee is demonstrating compliance using a CEMS or CPMS, the Permittee must keep the following records:
- a. Records described in § 63.10(b)(2)(vi) through (xi).
 - b. Previous (i.e., superseded) versions of the performance evaluation plan as required in § 63.8(d)(3).
 - c. Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in § 63.8(f)(6)(i), if applicable. **[Reference: 40 CFR §63.6655(b)]**
- (4) If the Permittee is demonstrating continuous compliance by using CEMs, the Permittee must keep the following records to show continuous compliance with the emission limits:
- a. Records of monitoring data (reduced to 1-hour averages);
 - b. Records of calculations of the percent reduction or concentration of CO emissions according to §63.6620;
 - c. Records of the annual RATA of the CEMs; and
 - d. Records of daily and periodic data quality checks performed.
- [Reference: 40 CFR §63.6655(d) and 40 CFR Part 63, Subpart ZZZZ, Table 6, Item 3]**
- (5) If the Permittee is demonstrating continuous compliance by using an oxidation catalyst, the Permittee must keep the following records to show continuous compliance with the emission limits:
- a. Records of performance tests conducted;
 - b. Records of catalyst inlet temperature data (reduced to 4- hour rolling averages);
 - c. Records of the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the established operating limit.
- [Reference: 40 CFR §63.6655(d) and 40 CFR Part 63, Subpart ZZZZ, Table 6, Item 10]**
- (6) If the Permittee is demonstrating continuous compliance without using an oxidation catalyst, the Permittee must keep the following records to show continuous compliance with the emissions limits:
- a. Records of performance tests; and
 - b. Records of approved operating parameter (if any) data according to 40 CFR §63.6625(b) (reduced to 4-hour rolling averages). **[Reference: 40 CFR §63.6655(d) and 40 CFR Part 63, Subpart ZZZZ, Table 6, Item 11]**
- (7) All records must be kept for five (5) years, in a form suitable and readily available for expeditious review and accessible in hard copy or electronic form. **[Reference: 40 CFR §63.6660]**

Compliance Methods for the Above (Description and Citation):

JHMI meets all standards and limits for peak shaving generators. All applicable records are kept on site.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-14, EU-15, EU-16, EU-17, EU-19

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-5. 5a 5. Reporting Requirements-Control of Hazardous Air Pollutants

- (1) The Permittee must submit the Notification of Compliance Status containing the results of the

initial compliance demonstration according to the requirements in § 63.6645. **[Reference: 40 CFR §63.6630(c)]**

- (2) The Permittee must submit all of the notifications in §§ 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified. **[Reference: 40 CFR §63.6645(a)(2)]**
- (3) The Permittee must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in § 63.7(b)(1). **[Reference: 40 CFR §63.6645(g)]**
- (4) The Permittee must submit a Notification of Compliance Status according to § 63.9(h)(2)(ii). **[Reference: 40 CFR §63.6645(h)]**
- (5) The Permittee must submit semiannual Compliance Report which includes the following information:
 - a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in § 63.8(c)(7), a statement that there were not periods during which the CMS was out-of control during the reporting period; or
 - b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in § 63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of control, as specified in § 63.8(c)(7), the information in § 63.6650(e); or
 - c. If you had a malfunction during the reporting period, the information in § 63.6650(c)(4). **[Reference: 40 CFR §63.6650(a) and 40 CFR Part 63, Subpart ZZZZ, Table 7, Item 1]**
- (6) The Permittee must submit the semiannual Compliance Reports according to the following schedule:
 - a. For semiannual Compliance reports, the first Compliance report must cover the period beginning on May 3, 2013 and ending on June 30, 2013.
 - b. For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31, 2013
 - c. For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.
 - d. For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.
 - e. For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (b)(4) of this section.

[Reference: 40 CFR §63.66650(b)(1) through (5)]

Note: On August 8, 2013, the Department issued the Permittee an extension of one year from the initial compliance date to meet the compliance requirements of 40 CFR Part 63, Subpart ZZZZ.

- (7) The Compliance Report must contain the following information:
 - a. Company name and address.
 - b. Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.
 - c. Date of report and beginning and ending dates of the reporting period.
 - d. If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with § 63.6605(b), including actions taken to correct a malfunction.
 - e. If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

- f. If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in § 63.8(c)(7), a statement that there were no periods during which the CMS was out-of control during the reporting period.
[Reference: 40 CFR §63.6650(c)]
- (8) If the Permittee is demonstrating compliance with the emissions limits without using a CEMS or CPMS, for each deviation from an emission or operating limitation that occurs the Compliance report must contain the information in paragraphs (c)(1) through (4) of this section and the information in paragraphs (d)(1) and (2) of this section.
- The total operating time of the stationary RICE at which the deviation occurred during the reporting period.
 - Information on the number, duration, and cause of deviation (including unknown cause, if applicable), as applicable, and the corrective action taken. [Reference: 40 CFR §63.6650(d)]
- (9) If the Permittee is demonstrating compliance with the emissions limits by using CEMS or CPMS, for each deviation from an emission or operating limitation occurring you must include the information in Table IV-5a (7)(a) – (d) and the following:
- The date and time that each malfunction started and stopped.
 - The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.
 - The date, time, and duration that each CMS was out-of control, including the information in § 63.8(c)(8).
 - The date and time that each deviation started and stopped and whether each deviation occurred during a period of malfunction or during another period.
 - A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.\
 - A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.
 - A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.
 - An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.
 - A brief description of the stationary RICE.
 - A brief description of the CMS.
 - The date of the latest CMS certification or audit.
 - A description of any changes in CMS, processes, or controls since the last reporting period.
- [Reference: 40 CFR §63.6650(e)]
- (10) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority. [Reference: 40 CFR §63.6650(f)]

Compliance Methods for the Above (Description and Citation):

JHMI meets all standards and limits for peak shaving generators. All applicable records are kept on site.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-20, EU-21

Permit Term (Describe requirements and cross-reference)Section IV. Table IV-6. 6.1 A. Applicable Standards/Limits-Control of Visible Emissions

- (1) COMAR 26.11.09.05A(2), Fuel Burning Equipment. "In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in a uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity."
- (2) COMAR 26.11.09.05A(3), Exceptions. "Section (A)(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if:
 - a. The visible
 - b. The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period."

Compliance Methods for the Above (Description and Citation):

JHMI employs good engineering, operational and preventative maintenance practices on EU-20 and EU-21 which minimizes visible emissions during idle and other-than-idle operations.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-20, EU-21

Permit Term (Describe requirements and cross-reference)Section IV. Table IV-6. 6.1 B. Applicable Standards/Limits-Control of Sulfur Oxides

- (1) COMAR 26.11.09.07A, Sulfur Content Limitations for Fuel. "A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: (2) In Areas III and IV: (b) Distillate fuel oils, 0.3 percent.
- (2) The Permittee must meet either of the following emission limits for SO₂:
 - a. You must not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain SO₂ in excess of 110 nanograms per Joule (ng/J) (0.90 pounds per megawatt-hour (lb/MWh)) gross output; or
 - b. You must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO₂ /J (0.060 lb SO₂ /MMBtu) heat input. If your turbine simultaneously fires multiple fuels, each fuel must meet this requirement. [Reference: 40 CFR §60.4330(a)(1) and (2)]

Note: Heat recovery steam generators and duct burners regulated under this subpart are exempted from the requirements of 40 CFR Part 60 subparts Da, Db, and Dc per 40 CFR §60.4305(b).

Compliance Methods for the Above (Description and Citation):

Fuel supplier's certifications are kept on site.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-20, EU-21

Permit Term (Describe requirements and cross-reference)Section IV. Table IV-6. 6.1 C. Applicable Standards/Limits-Control of Nitrogen Oxides

- (1) COMAR 26.11.09.08G, Requirements for Fuel-Burning Equipment with a Capacity Factor of

15 Percent or Less, and Combustion Turbines with a Capacity Factor Greater than 15 Percent.

- a. "A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR Part 72.2) of 15 percent or less shall:
- i. Provide certification of the capacity factor of the equipment to the Department in writing;
 - ii. For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually;
 - iii. Maintain the results of the combustion analysis at the site for at least 2 years and make these results available to the Department and the EPA upon request;"
 - iv. Not applicable.
 - v. Not applicable.
- b. "A person who owns or operates a combustion turbine with capacity factor greater than 15 percent shall meet an hourly average NO_x emission rate of not more than 42 ppm when burning gas or 65 ppm when burning fuel oil (dry volume at 15 percent oxygen) or meet applicable Prevention of Significant Deterioration limits, whichever is more restrictive."
- (2) The Permittee must meet the NO_x emissions limits specified in the following Table 1:
[Reference: 40 CFR §60.4320 and 40 CFR Part 60, Table 1]

Compliance Methods for the Above (Description and Citation):

JHMI meets all standards and limits for combined heat and power system. All applicable records are kept on site.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-20, EU-21

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-6. 6.1 D. Applicable Standards/Limits-Operational Limit

- (1) The CHP Project consisting of two (2) identical units comprising of a 7.5 MW combustion turbine and HRSG and a 42 million Btu per hour duct burner shall fire on natural gas as a primary fuel and No. 2 fuel oil as backup fuel except for the duct burner which is fired on natural gas only. **[Reference: Permit to Construct 510-0001-5- 2073, 5-2074, and 5-2075 issued on June 17, 2011, Part C, Condition 3]**
- (2) The Permittee must operate and maintain the stationary combustion turbines, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction. **[Reference: 40 CFR §60.4333(a)]**

Compliance Methods for the Above (Description and Citation):

JHMI operates equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-20, EU-21

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-6. 6.2 A. Testing Requirements-Control of Visible Emissions

The Permittee shall submit a notification of the anticipated date for conducting the opacity observations required by 40 CFR §60.11(e)(1). This notification shall also include, if appropriate, a request for the Administrator to provide a visible emissions reader during the performance test. The notification shall be

postmarked not less than 30 days prior to such date. [Reference: 40 CFR §60.7(a)(6)]

Compliance Methods for the Above (Description and Citation):

JHMI submits such a notification as required.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-20, EU-21

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-6. 6.2 B. Testing Requirements-Control of Sulfur Oxides

The Permittee shall conduct performance test for SO_x in accordance with the methodologies specified in 40 CFR §60.4415 and §60.8.

Compliance Methods for the Above (Description and Citation):

Fuel supplier's certifications are kept on site.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-20, EU-21

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-6. 6.2 C. Testing Requirements-Control of Nitrogen Oxides

- (1) The Permittee shall conduct performance test for NO_x in accordance with the methodologies specified in 40 CFR §60.4340, §60.4400, and §60.8. If you are not using water or steam injection to control NO_x emissions, you must perform annual performance tests in accordance with §60.4400 to demonstrate continuous compliance. If the NO_x emission result from the performance test is less than or equal to 75 percent of the NO_x emission limit for the turbine, you may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test). If the results of any subsequent performance test exceed 75 percent of the NO_x emission limit for the turbine, you must resume annual performance tests. [Reference: 40 CFR §60.4340]
- (2) For fuel-burning equipment that operates more than 500 hours during a calendar year, the Permittee must perform a combustion analysis and optimize combustion at least once annually. [Reference: COMAR 26.11.09.08G(a)(ii)]

Compliance Methods for the Above (Description and Citation):

JHMI conducts performance test for NO_x and combustion analysis and optimization as required.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-20, EU-21

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-6. 6.3 A. Monitoring Requirements-Control of Visible Emissions

- (1) The Permittee shall:
 - a. Properly operate and maintain the boilers in a manner to prevent visible emissions; and
 - b. Verify no visible emissions when burning No. 2 fuel oil. The Permittee shall perform a visual observation for a 6-minute period once for every 168 hours that the boiler burns oil or at a minimum of once per year.
- (2) The Permittee shall perform the following if emissions are visible:

- a. Inspect combustion control system and boiler operations;
- b. Perform all necessary adjustments and/or repairs to the boiler within 48 hours, so that visible emissions are eliminated;
- c. Document in writing the results of the inspections, adjustments, and/or repairs to the boilers; and
- d. After 48 hours, if the required adjustments and/or repairs had not eliminated the visible emissions, perform Method 9 observations once daily for 18 minutes until corrective actions have eliminated the visible emissions. **[Reference: COMAR 26.11.03.06C]**

Compliance Methods for the Above (Description and Citation):

JHMI employs good engineering, operational and preventative maintenance practices on EU-20 and EU-21 which minimizes visible emissions during idle and other-than-idle operations.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-20, EU-21

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-6. 6.3 B. Monitoring Requirements-Control of Sulfur Oxides

- (1) The Permittee shall obtain a certification from the fuel supplier indicating that the oil complies with the limitation on the sulfur content of the fuel oil. **[Reference: COMAR 26.11.03.06C]**
- (2) The Permittee must monitor the total sulfur content of the fuel being fired in the turbine, except as provided in §60.4365. The sulfur content of the fuel must be determined using total sulfur methods described in §60.4415. Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than half the applicable limit, ASTM D4084, D4810, D5504, or D6228, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see §60.17), which measure the major sulfur compounds, may be used. **[Reference: 40 CFR §60.4360]**
- (3) The Permittee may elect not to monitor the total sulfur content of the fuel combusted in the turbine, if the fuel is demonstrated not to exceed potential sulfur emissions of 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input. **[Reference: 40 CFR §60.4365]**
- (4) If the Permittee elects not to demonstrate sulfur content using options in §60.4365, and the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel must be determined and recorded once per unit operating day. **[Reference: 40 CFR §60.4370]**

Compliance Methods for the Above (Description and Citation):

JHMI maintains fuel supplier certifications demonstrating compliance with the requirement.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-20, EU-21

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-6. 6.3 C. Monitoring Requirements-Control of Nitrogen Oxides

The Permittee shall establish and document an appropriate parametric monitoring plan in accordance with 40 CFR §60.4355. The plan shall include, but not be limited to: selection of indicators to be monitored, ranges of indicators, process used to obtain representative data, quality assurance, frequency of monitoring, and justification for the proposed elements of monitoring. The parametric monitoring plan is due to the Department sixty days after completion of the performance testing. **[Reference: 40 CFR §4355]**

Compliance Methods for the Above (Description and Citation):

A parametric monitoring plan was developed based on the results of performance testing and submitted to the Department as required.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-20, EU-21

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-6. 6.3 D. Monitoring Requirements-Operational Limit

The Permittee shall submit 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 information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator (Department) may request additional relevant information subsequent to this notice. **[Reference: 40 CFR §60.7(a)(4)]**

Compliance Methods for the Above (Description and Citation):

There was no physical or operational changes requiring a notification during the reporting period.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-20, EU-21

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-6. 6.4 A. Record Keeping Requirements-Control of Visible Emissions

The Permittee shall maintain for a period of at least 5 years and shall make available to the Department upon request the following:

- (1) An operation manual and prevention maintenance plan on site;
- (2) A record of the maintenance performed that relates to combustion performance;
- (3) A log of visible emissions observations performed; and
- (4) A record of the hours that No. 2 fuel oil is burned. **[Reference: COMAR 26.11.03.06C]**

Compliance Methods for the Above (Description and Citation):

JHMI maintains all of the required records and logs.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-20, EU-21

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-6. 6.4 B. Record Keeping Requirements-Control of Sulfur Oxides

The Permittee shall maintain for at least five years and shall make available to the Department upon request the following:

- (1) Records of fuel supplier's certification. **[Reference: COMAR 26.11.03.06C]**
- (2) Records and results of any tests performed in compliance with the initial testing as required under 40 CFR §60.8 and 40 CFR Part 60, Subpart KKKK.
- (3) Records and results of fuel sulfur content monitoring.

Compliance Methods for the Above (Description and Citation):

JHMI maintains all of the required records.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-20, EU-21

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-6. 6.4 C. Record Keeping Requirements-Control of Nitrogen Oxides

The Permittee shall maintain for at least five (5) years, and shall make available to the Department upon request, records of the following information:

- (1) Records and results of any tests performed in compliance with the initial testing as required under 40 CFR §60.8 and 40 CFR 60, Subpart KKKK.
- (2) Parametric monitoring plan in accordance with 40 CFR §60.4355 and submit a copy of the plan to the Department upon completion.
- (3) Results of the combustion analysis at the site for at least 2 years and make these results available to the Department and the EPA upon request; **[Reference: COMAR 26.11.09.08G(a)(iii)]**

Compliance Methods for the Above (Description and Citation):

JHMI maintains all of the required records and results of any tests performed as required.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-20, EU-21

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-6. 6.4 D. Record Keeping Requirements-Operational Limit

The Permittee shall maintain for a period of at least 5 years copies of any notifications submitted to the Department regarding physical or operational changes to the existing facility. **[Reference: 40 CFR §60.7(a)(4)]**

Compliance Methods for the Above (Description and Citation):

JHMI maintains copies of any notifications submitted to the Department for 5 years.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-20, EU-21

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-6. 6.5 A. Reporting Requirements-Control of Visible Emissions

The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, "Report of Excess Emissions and Deviations."

Compliance Methods for the Above (Description and Citation):

No incidents of visible emissions occurred during the reporting period.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-20, EU-21

Permit Term (Describe requirements and cross-reference)

Section IV. Table IV-6. 6.5 B. Reporting Requirements-Control of Sulfur Oxides

- (1) The Permittee shall report fuel supplier's certification to the Department upon request. **[Reference: COMAR 26.11.09.07C]**
- (2) For each affected unit required to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content under this subpart, the Permittee must submit reports of excess emissions and monitor downtime, in accordance with §60.7(c). Excess emissions must be reported for all periods of unit operation, including start-up, shutdown, and malfunction. **[Reference: 40 CFR §60.4375(a)]**

Compliance Methods for the Above (Description and Citation):

JHMI maintains fuel suppliers certifications which are available to the Department upon request.
JHMI did not have any occurrences of excess emissions during the reporting period.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): EU-20, EU-21

Permit Term (Describe requirements and cross-reference)Section IV. Table IV-6. 6.5 C. Reporting Requirements-Control of Nitrogen Oxides

- (1) For each affected unit required to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content under this subpart, the Permittee must submit reports of excess emissions and monitor downtime, in accordance with §60.7(c). Excess emissions must be reported for all periods of unit operation, including start-up, shutdown, and malfunction. **[Reference: 40 CFR §60.4375(a)]**
- (2) For each affected unit required to perform annual performance tests in accordance with 40 CFR §60.4340(a), the Permittee must submit a written report of the results of each performance test before the close of business on the 60th day following the completion of the performance test. **[Reference: 40 CFR §60.4375(b)]**

Compliance Methods for the Above (Description and Citation):

JHMI did not have any occurrences of excess emissions during the reporting period. A written report of the results of each performance test was submitted to the Department within 60 days after the completion of the performance test.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): Facility-wide

Permit Term (Describe requirements and cross-reference)Appendix A. Table A-1.A Applicable Standards/Limits – General Requirements

1. COMAR 26.11.03.14A, Revisions of Part 70 Permits – General Requirements.
2. COMAR 26.11.17.08D, Plant Wide Applicability Limit: Permit – General Requirements
3. COMAR 26.11.17.08E, Expiration of a PAL
4. COMAR 26.11.17.08F, Reopening of a PAL Permit
5. COMAR 26.11.17.08G, Renewal of a PAL
6. COMAR 26.11.17.08H, Increasing a PAL

Compliance Methods for the Above (Description and Citation):

JHMI adheres all of the requirements. The current PAL permit was issued on September 1, 2018.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): Facility-wide

Permit Term (Describe requirements and cross-reference)

Appendix A. Table A-1.B Applicable Standards/Limits – Control of Nitrogen Oxides

The Permittee is subject to a Plant wide Applicability Limit (PAL) of 104.9 tons of NO_x emissions in any 12-month rolling period. The baseline period of 2005-2006 was used to determine the baseline actual emissions for all existing emission units. **[Reference: PAL issued on June 17, 2011]**

Compliance Methods for the Above (Description and Citation):

JHMI tracks NO_x emissions with a monthly spreadsheet and maintains 12-month rolling NO_x emissions calculations demonstrating compliance with the PAL limit.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): Facility-wide

Permit Term (Describe requirements and cross-reference)

Appendix A. Table A-3.A Monitoring Requirements – General Requirements

The PAL permit shall remain in effect for a period not to exceed 5 years from the PAL effective date unless the Permittee applies to renew the PAL in accordance with COMAR 26.11.07.08G before the end of the PAL effective period, then the PAL does not expire at the end of the PAL effective period but remains in effect until a revised PAL permit is issued by the Department. **[Reference: PAL issued on June 17, 2011]**

Compliance Methods for the Above (Description and Citation):

JHMI submitted a renewal application prior to the end of the PAL effective period and the current PAL permit was issued on September 1, 2018.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): Facility-wide

Permit Term (Describe requirements and cross-reference)

Appendix A. Table A-3.B Monitoring Requirements – Control of Nitrogen Oxides

1. For each month during the PAL effective period after the first 12 months of establishing a PAL, the Permittee shall show that the sum of the monthly emissions from each emissions unit under the PAL for the previous 12 consecutive months is less than the PAL. For each month during the first 11 months from the PAL effective date, the Permittee shall show that the sum of the preceding monthly emissions from the PAL effective date for each emissions unit under the PAL is less than the PAL. **[Reference: COMAR 26.11.17.08D(3)]**
2. After the first twelve months of the effective date of the PAL period, the Permittee shall document the total NO_x emissions for each emissions unit identified in the PAL and demonstrate that the aggregate emissions have not exceeded the prescribed PAL. Additionally, for each month after the first year, the Permittee shall document NO_x emissions for each emissions unit identified in the PAL and continue to demonstrate that the aggregate emissions for the previous 12 months have not exceeded the PAL.
3. The Permittee's NO_x emissions calculations shall include emissions from startup, shutdowns, and malfunctions. The Permittee shall state the calculation procedures used to convert the monitoring system data to a monthly emissions and annual emissions based on a 12-month rolling total for each month. **[Reference: COMAR 26.11.17.08C(2)(d) and (f)]**
4. The Permittee shall conduct monitoring and record keeping requirements in accordance with COMAR 26.11.17.09A, Monitoring and Record Keeping Requirements.
5. Emissions of NO_x from all of the emission units (EUs) at the facility will be calculated on a 12-month rolling annual basis using emission factors (EFs) and activity levels. EFs will have units of mass of NO_x generated per

unit of activity. The primary unit of activity will be the amount of the fuel burned in each EU in MMBtu/hr. The fuel use activity level for each EU will be measured continuously using totalizing flow meters for both natural gas and fuel oil. The process control system will convert raw volumetric flow data from the meters to mass flow data. The mass flow data will then be converted using fuel energy content (e.g. Btu/cubic foot, Btu/lb, Btu/gal, etc.) to rates of energy input: MMBtu/hr. NOX emissions for each EU will be calculated each month using the EF and activity level

6. The Permittee shall revalidate the PAL pollutant through performance testing or other scientifically valid means approved by the Department. This testing shall occur at least once during the term of this permit. **[Reference: COMAR 26.11.17.09A(12)]**
7. The Permittee shall retain a copy of all records necessary to determine compliance with any requirement of Regulations .07—.09 of this chapter and of the PAL, including a determination of each emissions unit's 12-month rolling total emissions for 5 years from the date of that record. **[Reference: COMAR 26.11.17.09A(13)]**
8. The Permittee shall retain a copy of the following records for the duration of the PAL effective period plus 5 years: a. A copy of the PAL permit application and any application for revisions to the PAL; and b. Each annual certification of compliance pursuant to Title V and the data relied on in certifying the compliance. **[Reference: COMAR 26.11.17.09A(14)]**
9. Monitoring Plan for the Facility 12-month rolling annual NOX emissions totals for the entire source will be complied by summing monthly NOX emissions for each EU calculated in this manner. This tally will demonstrate that total NOX emissions are below the PAL: 104.9 tons. **[Reference: PAL issued on June 17, 2011]**
10. Monitoring System for Emissions Units Added or Modified After Issuance of the PAL The monitoring system for emissions units added or modified after issuance of the PAL shall use one of the four general monitoring approaches in paragraphs (a) through (d)

Compliance Methods for the Above (Description and Citation):

JHMI adheres all of the requirements, utilizes a emission tracking form to ensure compliance, and maintains 12-month rolling NOx emissions and all required records..

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): Facility-wide

Permit Term (Describe requirements and cross-reference)

Appendix A. Table A-4.B Record Keeping Requirements – Control of Nitrogen Oxides

1. The PAL shall remain in effect for a period not to exceed 5 years from the PAL effective. **[Reference: COMAR 26.11.17.08C(1)]**
2. The Permittee shall retain a copy of all records necessary to determine compliance with any requirement of COMAR 26.11.17.07 through .09 and of the PAL, including a determination of each emission unit's 12-month rolling total emissions for 5 years from the date of that record. **[Reference: COMAR 26.11.17.09A(13)]**
3. The Permittee shall retain a copy of the following records for the duration of the PAL effective period plus 5 years: a. A copy of the PAL permit application and any application for revisions to the PAL; and b. Each annual certification of compliance pursuant to Title V and the data relied on in certifying the compliance. **[Reference: COMAR 26.11.17.09A(14)]**
4. 12-month rolling annual NOx emissions totals for the entire source will be compiled by summing month NOx emissions for each EU calculated in this manner. This tally will demonstrate that total NOx emissions are below the PAL.

Compliance Methods for the Above (Description and Citation):

JHMI maintains copies of all required records.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

Emission Unit ID(s): Facility-wide

Permit Term (Describe requirements and cross-reference)

Appendix A. Table A-5.B Reporting Requirements – Control of Nitrogen Oxides

The Permittee shall conduct reporting requirements in accordance with COMAR 26.11.17.09B, Reporting Requirements.

Compliance Methods for the Above (Description and Citation):

JHMI adheres all of reporting requirements in accordance with COMAR 26.11.17.09B.

Status (Check one): ☐ Intermittent Compliance ☒ Continuous Compliance

C. DEVIATIONS FROM PERMIT TERMS AND CONDITIONS

Report all deviations from permit terms (whether reported previously or not) that occurred during the permit term. Cross-reference deviations already reported in the six-month report. Indicate whether each deviation is a "possible exception" to compliance." Start and end period of each deviation should be in mo/day/yr, hr:min format (24-hour clock). Also specify the date when the written deviation report was submitted (If written report required, but not submitted, leave the date field blank).

Permit Term for Which There was a Deviation:

Emission Units (unit IDs):

Deviation Start ____/____/____ ____:____ End:____/____/____ ____:____

Date Written Report Submitted ____/____/____

Permit Term for Which There was a Deviation:

Emission Units (unit IDs):

Deviation Start ____/____/____ ____:____ End:____/____/____ ____:____

Date Written Report Submitted ____/____/____

Permit Term for Which There was a Deviation:

Emission Units (unit IDs):

Deviation Start ____/____/____ ____:____ End:____/____/____ ____:____

Date Written Report Submitted ____/____/____

Permit Term for Which There was a Deviation:

Emission Units (unit IDs):

Deviation Start ____/____/____ ____:____ End:____/____/____ ____:____

Date Written Report Submitted ____/____/____

**CERTIFICATION OF PLANT-WIDE CONDITIONS
(SECTION III OF PART 70 OPERATING PERMIT)
Reporting Period: 1/1/2021 through 12/31/2021**

Indicate compliance with the following requirements of Section III of your Part 70 Operating Permit in the space provided below:

1. Particulate Matter from Construction and Demolition

JHMI Utilities, LLC (JHMI) incorporates into all appropriate construction contracts a provision for the control of fugitive dust emissions from construction activities. JHMI utilizes a construction oversight contractor to monitor construction activities and is present onsite throughout the construction period to enforce contract provisions.

2. Open Burning

There were no open burning events at the Facility during the reporting period.

3. Air Pollution Episode (N/A)

The Department did not request a written standby emissions reduction plan during the reporting period.

4. Report of Excess Emissions and Deviations

(All deviations from permit requirements should be clearly identified in quarterly monitoring reports.)

There were no occurrences of Excess Emissions or Deviations during the reporting period.

5. Accidental Release Provisions (if applicable)

40 CFR Part 68 was not applicable to the Facility during the reporting period.

6. General Testing Requirements

All required testing was conducted during the reporting period after coordination with the Department and results were reported to the Department.

7. Emissions Test Methods

All testing was done in accordance with approved test methods, including prior approval of test protocols by the Department.

8. Emission Certification Report

The Annual Emissions Certification for the calendar year 2020 was submitted to the Department by a responsible official by April 1, 2021, and back-up documentation is being maintained at the Facility.

9. Compliance Certification Report

The Annual Compliance Certification (FORM A-COMP and CERTIFICATION OF PLANT-WIDE CONDITIONS) for the calendar year 2020 was submitted to the Department and EPA Region III by a responsible official by April 1, 2021, and back-up documentation is being maintained at the Facility.

10. Certification by Responsible Official

All submittals to the Department during and for the reporting period were certified by a Responsible Official as to Truth, Accuracy, and Completeness.

11. Sampling and Emissions Testing Record Keeping

JHMI contracts only competent (QTSI/QTSO certified) emissions testing companies. All testing performed complies with the applicable monitoring, record-keeping and reporting requirements.

12. General Record Keeping

All of the required records are being maintained at the Facility for at least five (5) years.

13. General Conformity (N/A except for federal facilities)

The Facility was not subject to the General Conformity requirements of 40 CFR Part 93 during the reporting period.

14. Asbestos Provisions (if applicable)

All asbestos containing materials are handled in accordance with federal and state laws. All JHMI contracts for such activities reference these regulations.

15. Ozone Depleting Regulations (if applicable)

JHMI complies with all regulations governing ozone depleting substances. All technicians who provide maintenance, service, repair, or disposal of appliances are certified. Certification documentation is in the JHMI contractor's file. All refrigerant recovery and recycling equipment is certified and documentation of certification is kept on file.

16. Acid Rain Permit (if applicable)

Not Applicable