KEEP PERMIT AT SITE **CONTROL NO. B- 05539**

Larry Hogan
Governor

Ben Grumbles
Secretary

State of Maryland

DEPARTMENT OF THE ENVIRONMENT

Air and Radiation Administration
1800 Washington Boulevard, Suite 720
Baltimore, MD 21230

☐ Construction Permit ☒ Part 70 Operating Permit

PERMIT NO.:
24-510-0001

DATE ISSUED:
September 1, 2018

PERMIT FEE:
To Be Paid in Accordance with
COMAR 26.11.02.19B

EXPIRATION DATE:
August 31, 2023

LEGAL OWNER & ADDRESS
JHMI Utilities, LLC
600 N. Wolfe Street
Baltimore, MD 21287
Attn: Sally MacConnell, Chairperson

SITE
Johns Hopkins Hospital
600 N. Wolfe Street
Baltimore, MD 21287
Baltimore City
AI # 11984

SOURCE DESCRIPTION

A major medical facility consisting of boilers, diesel fired generators, and combustion turbines.

This source is subject to the conditions described on the attached pages.

Program Manager

Director, Air and Radiation Administration

JHMI UTILITIES, LLC
600 NORTH WOLFE STREET
BALTIMORE, MD 21287
PART 70 OPERATING PERMIT NO. 24-510-00001

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. Locating 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

Emissions Unit Number	MDE 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

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

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.

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

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.

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;

(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,

(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:

(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.

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;

(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.

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.

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;

(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.

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;

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 b y (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.

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.

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.

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;

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.

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;

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.

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.

Reference 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.

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.

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

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:

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.

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 performing maintenance, service, repairs or disposal of appliances shall certify with the Administrator pursuant to 40 CFR 82.162.

e. 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 82.166.

f. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.

g. 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

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	**Emissions Unit Number(s): EU-1 – EU-4 Boilers** 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	**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 26.1.09.05A(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

Table IV – 1

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 referenced 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

Table IV – 1	
	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." 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. **[Reference: COMAR 26.11.02.09A]** E. Control of Hazardous Air Pollutants See Table IV-3a.
1.2	**Testing Requirements:** A. Control of Visible Emissions See Section 2.3, Monitoring Requirements. B. Control of Sulfur Oxides See Section 2.3, Monitoring Requirements. C. 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]** D. Operational Limit See Section 1.4, Record Keeping Requirements. E. Control of Hazardous Air Pollutants See Table IV-3a.
1.3	**Monitoring Requirements:** A. Control of Visible Emissions 1. The Permittee shall: a. Properly operate and maintain the boilers in a manner to

Table IV – 1	
	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]** B. 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]** C. Control of Nitrogen Oxides 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. **[Reference: COMAR 26.11.03.06C]** D. Operational Limit See Section 1.4, Record Keeping Requirements. E. Control of Hazardous Air Pollutants See Table IV-3a.
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]**

Table IV – 1	
	A. 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]** B. Control of Sulfur Oxides The Permittee shall maintain records of fuel supplier's certification. **[Reference: COMAR 26.11.03.06C]** C. 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 NO_x stack tests and the NO_x 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)]** D. Operational Limit The Permittee shall maintain records of the quantity and type of fuel burned. **[Reference: COMAR 26.11.02.19C(1)(c)]** E. Control of Hazardous Air Pollutants See Table IV-3a.
1.5	**Reporting Requirements:** A. 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." B. Control of Sulfur Oxides The Permittee shall report fuel supplier certification to the Department upon request. **[Reference: COMAR 26.11.09.07C]**

Table IV – 1	
	C. 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]** D. 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. E. Control of Hazardous Air Pollutants See Table IV-3a.

Table IV – 2	
2.0	**Emissions Unit Number(s): EU-5 Boiler** 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.
2.1	**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 26.1.09.05A(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.

Table IV – 2

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."

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.
   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."

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. **[Reference: COMAR 26.11.02.09A]**

Table IV – 2	
	E. Control of Hazardous Air Pollutants See Table IV-3a.
2.2	**Testing Requirements:** A. Control of Visible Emissions See Section 2.3, Monitoring Requirements. B. Control of Sulfur Oxides See Section 2.3, Monitoring Requirements. C. 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)]** D. Operational Limit See Section 2.4, Record Keeping Requirements. E. Control of Hazardous Air Pollutants See Table IV-3a.
2.3	**Monitoring Requirements:** A. 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]**

Table IV – 2	
	B. 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]** C. Control of Nitrogen Oxides The Permittee shall optimize combustion based on the annual combustion analysis. **[Reference: COMAR 26.11.09.08E(2)]** D. Operational Limit See Section 2.4, Record Keeping Requirements. E. Control of Hazardous Air Pollutants See Table IV-3a.
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]** A. 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]** B. Control of Sulfur Oxides The Permittee shall maintain records of fuel supplier's certification. **[Reference: COMAR 26.11.03.06C]** C. Control of Nitrogen Oxides 1. The Permittee shall maintain annual fuel use records on site. **[Reference: COMAR 26.11.09.05K(3)]**

Table IV – 2	
	2. The Permittee shall maintain records of the results of the annual combustion analysis. **[Reference: COMAR 26.11.09.08E(5)]** 3. The Permittee shall maintain a record of training program attendance for each operator at the site. **[Reference: COMAR 26.11.09.08E(5)]** E. Operational Limit The Permittee shall maintain records of the quantity and types of fuel burned. **[Reference: COMAR 26.11.02.19C(1)(c)]** E. Control of Hazardous Air Pollutants See Table IV-3a.
2.5	**Reporting Requirements:** A. 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." B. Control of Sulfur Oxides The Permittee shall report fuel supplier's certification to the Department upon request. **[Reference: COMAR 26.11.09.07C]** C. 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)]** D. 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. E. Control of Hazardous Air Pollutants See Table IV-3a.

Table IV – 3	
3.0	**Emissions Unit Number(s): EU-22 Boiler** 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.
3.1	**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." 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 SO_2 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)]**

Table IV – 3

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 SO_2 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 SO_2 emissions. **[Reference: 40 CFR §60.42c(e)(4)]**

5. The Permittee shall demonstrate compliance with the SO_2 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)]**

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;
   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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	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." D. Control of Hazardous Air Pollutants See Table IV-3a.
3.2	**Testing Requirements:** A. Control of Visible Emissions See Section 4.3, Monitoring Requirements. B. Control of Sulfur Oxides 1. 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)]** C. Control of Nitrogen Oxides See Section 3.3, Monitoring Requirements. D. Control of Hazardous Air Pollutants See Table IV-3a.
3.3	**Monitoring Requirements:** A. 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;

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	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]** B. 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]** C. 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)]** D. Control of Hazardous Air Pollutants See Table IV-3a.
3.4	**Record Keeping Requirements:** A. 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]** B. Control of Sulfur Oxides The Permittee shall maintain records of fuel supplier's certification. **[Reference: COMAR 26.11.03.06C]** C. Control of Nitrogen Oxides The Permittee shall maintain the following records on site for at least five years and make them available to the Department upon request: a. Records of all notifications required under regulation COMAR

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	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 **[Reference: 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 **[Reference: COMAR 26.11.09.08F(1)(e) and COMAR 26.11.09.08E(5)]**; and d. Annual fuel use records. [Reference: COMAR 26.11.09.08K(3)] **[Reference: COMAR 26.11.03.06C]** D. Control of Hazardous Air Pollutants See Table IV-3a.
3.5	**Reporting Requirements:** A. 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." B. Control of Sulfur Oxides The Permittee shall report fuel supplier's certification to the Department upon request. **[Reference: COMAR 26.11.09.07C]** C. 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)]** D. Control of Hazardous Air Pollutants See Table IV-3a.

Table IV – 3a NESHAP Requirements – 40 CFR Part 63, Subpart JJJJJJ Existing and New, Gas and Oil Fired Boilers	
3a.0	**Emissions Unit Number(s): EU-1 through EU-5 and EU-22**

Table IV – 3a **NESHAP Requirements – 40 CFR Part 63, Subpart JJJJJJ** **Existing and New, Gas and Oil Fired Boilers**	
	EU-1 through EU-4: Four (4) Cleaver Brooks, model AO-24, boilers, each rated at 102.5 million Btu/hr heat input. Boilers are fired on natural gas or distillate oil only. (MDE Registration Nos. 510-0001-5-0303, 5-0304, 5-0305, and 5-0306). EU-5: One (1) Cleaver Brooks, model DLD-94E, boiler rated at 94 million Btu/hr heat input. Boiler is fired on natural gas and distillate oil only. (MDE Registration No. 510-0001-5-0734) EU-22: One (1) boiler rated at 50.4 million Btu/hr heat input firing natural gas and No. 2 fuel oil only and equipped with a low NO_x burner and flue gas recirculation. (MDE Registration No. 510-0001-5-2075).
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

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NESHAP Requirements – 40 CFR Part 63, Subpart JJJJJJ
Existing and New, Gas and Oil Fired Boilers

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. 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)]**

Condition (4) below applies only to EU-1 through EU-5 (MDE Registration No. 510-0001-5-0303, 5-0304, 50-0305, 5-0306, and 5-0734).

4. By March 21, 2014, The Permittee shall conduct a one-time

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NESHAP Requirements – 40 CFR Part 63, Subpart JJJJJJ
Existing and New, Gas and Oil Fired Boilers

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.*

Conditions (5), (6), and (7) below apply only to EU-22 (ARMA Registration No. 510-0001-5-2075)

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)]**

Table IV – 3a **NESHAP Requirements – 40 CFR Part 63, Subpart JJJJJJ** **Existing and New, Gas and Oil Fired Boilers**	
	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]**
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) ***Condition (2) below applies only to EU-1 through EU-5 (MDE Registration Nos. 510-0001-5-0303, 5-0304, 5-0305, 5-0306, and 5-0734)*** 2. The Permittee shall conduct a one-time energy assessment as described in 40 CFR Part 63, Subpart JJJJJJ, Table 2, Item 16.
3a.3	**Monitoring Requirements:** Control of Hazardous Air Pollutants ***The condition below applies only to EU-22 (MDE Registration No. 510-0001-5-2075)*** The Permittee must monitor and record on a monthly basis the type of fuel combusted. **[Reference: 40 CFR §63.11210(e)]**
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: 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

Table IV – 3a **NESHAP Requirements – 40 CFR Part 63, Subpart JJJJJJ** **Existing and New, Gas and Oil Fired Boilers**	
	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. **[Reference: 40 CFR §63.611223(b)(6)]** ***Condition (2)(b)(ii) below does not apply to EU-22 (MDE Registration No. 510-0001-5-2075)*** 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 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)]**
3a.5	**Reporting Requirements:**

Table IV – 3a
NESHAP Requirements – 40 CFR Part 63, Subpart JJJJJJ
Existing and New, Gas and Oil Fired Boilers

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)]**

Condition (4) below applies only to EU-1 through EU-5 (MDE Registration Nos. 510-0001-5-0303, 5-0304, 5-0305, 5-0306, and 5-0734)

4. By January 20, 2014, the Permittee must submit an Initial Notification. **[Reference: 40 CFR §63.11225(a)(2)]**

Condition (5)(c) below does not apply to EU-22 (MDE Registration

Table IV – 3a **NESHAP Requirements – 40 CFR Part 63, Subpart JJJJJJ** **Existing and New, Gas and Oil Fired Boilers**	
	No. 510-0001-5-2075) 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 CFR §63.11214(b) and (c)]** ***Condition (6) below applies only to EU-1 through EU-5 (MDE Registration Nos. 510-0001-5-0303, 5-0304, 5-0305, 5-0306, and 5-0734)*** 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)]**

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4.0	**Emissions Unit Number(s): EU-13 – Emergency Generators** 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)
4.1	**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." 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." 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

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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."

D. 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

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	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. *<u>Note:</u> 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.*
4.2	**<u>Testing Requirements</u>:** A. <u>Control of Visible Emissions</u> See Section 4.3, Monitoring Requirements. B. <u>Control of Sulfur Oxides</u> See Section 4.3, Monitoring Requirements. 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)(b)]** D. <u>Control of Hazardous Air Pollutants</u> See Section 4.4, Record Keeping Requirements.

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4.3	**Monitoring Requirements:** A. Control of Visible Emissions The Permittee shall perform preventive maintenance to optimize combustion performance. **[Reference: COMAR 26.11.03.06C]** B. 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]** C. Control of Nitrogen Oxides 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)]** D. Control of Hazardous Air Pollutants See Section 4.4, Record Keeping Requirements.
4.4	**Record Keeping Requirements:** A. Control of Visible Emissions 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]** B. Control of Sulfur Oxides 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]** C. Control of Nitrogen Oxides 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]**

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	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]** D. Control of Hazardous Air Pollutants 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: 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]**
4.5	**Reporting Requirements:** A. 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." B. 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]** C. 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)]** D. 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]**

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5.0	**Emissions Unit Number(s) 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)
5.1	**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

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mechanics."

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 §80.510(b) will demonstrate compliance with this requirement. See Table IV-5a, Section 5a.1(5) for additional detail.

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 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

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	Department upon request." D. Control of Hazardous Air Pollutants See Table IV-5a. E. 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]**
5.2	**Testing Requirements:** A. Control of Visible Emissions See Section 5.3, Monitoring Requirements. B. Control of Sulfur Oxides See Section 5.3, Monitoring Requirements. C. 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)]** D. Control of Hazardous Air Pollutants See Table IV-5a. E. Operational Limits See Section 5.3, Monitoring Requirements.
5.3	**Monitoring Requirements:** A. Control of Visible Emissions The Permittee shall perform preventive maintenance and optimize combustion performance. **[Reference: COMAR 26.11.03.06C]** B. 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]**

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	C. 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)]** D. Control of Hazardous Air Pollutants See Table IV-5a. E. Operational Limits ***The following condition applies only to EU-14 and EU-15 (MDE Registration Nos. 510-1043-9-0949 and 9-0950]*** 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]**
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)]** A. Control of Visible Emissions The Permittee shall retain preventive maintenance records on site. B. 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]** C. Control of Nitrogen Oxides The Permittee shall maintain the following: 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]** 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]**

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	D. Control of Hazardous Air Pollutants See Table IV-5a. E. Operational Limits 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 NO_x emissions from EU-14 and EU-15. **[Reference: COMAR 26.11.03.06C]**
5.5	**Reporting Requirements:** A. 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." B. Control of Sulfur Oxides 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]** C. Control of Nitrogen Oxides 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)]** D. Control of Hazardous Air Pollutants See Table IV-5a. E. Operational Limits 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]**

Table IV – 5a **NESHAP REQUIREMENTS – 40 CFR PART 63, SUBPART ZZZZ** **EXISTING PEAK SHAVING GENERATORS**	
5a.0	**Emissions Unit Number(s) EU-14 – 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)
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 O_2; 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 450ºF and less than or equal to 1350ºF. **[Reference: 40 CFR §63.6603(a) and 40 CFR Part 63, Subpart ZZZZ, Table 2b, Item 2]**

Table IV – 5a **NESHAP REQUIREMENTS – 40 CFR PART 63, SUBPART ZZZZ** **EXISTING PEAK SHAVING GENERATORS**	
	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)]** *<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.* 5. The Permittee shall only use fuel that meets the following per-gallon standards: a. Sulfur content. 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 §80.510(b)]** *<u>Note:</u> Compliance with 5. above will demonstrate compliance with COMAR 26.11.09.07A(2)(b) discussed in Table IV – 5, Section 5.1B.*
5a.2	**<u>Testing Requirements</u>:** <u>Control of Hazardous Air Pollutants</u> 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

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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

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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_2at 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_2must 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)]

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_2concentration of the stationary RICE exhaust at the	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522-00	(a) measurements to determine O_2concentration must be made at

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sampling port location; and	(Reapproved 2005).[a]	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 (2005),[a] [c]Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03.[a]	(a) CO 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.

[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)]**

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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

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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)]**

Demonstration of Initial Compliance:

12. The Permittee shall demonstrate compliance according to the following 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-**	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

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		emergency stationary CI RICE >500 HP located at an area source of HAP		equal to the CO emission limitation; 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
		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.

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		4. 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 not using oxidation catalyst**	i. The average CO concentration 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 an area source of HAP**	a. **Reduce CO emissions, and using a CEMS**	i. You have installed a CEMS to continuously monitor CO and either O_2or CO_2at 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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				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_2or CO_2at 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 limitation. The initial test comprises the first 4-hour period after successful validation of the

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				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]

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).

Subsequent Performance Testing

13. 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 **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

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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 O_2 or CO_2 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 CO_2 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,

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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]

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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:
   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

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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.

[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:
   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.

   [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)]**

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5a.4 **Record Keeping Requirements:**

Control of Hazardous Air Pollutants

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:
   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 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:

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	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]**
5a.5	**<u>Reporting Requirements</u>:** <u>Control of Hazardous Air Pollutants</u> 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)]**

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EXISTING PEAK SHAVING GENERATORS

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,

Table IV – 5a **NESHAP REQUIREMENTS – 40 CFR PART 63, SUBPART ZZZZ** **EXISTING PEAK SHAVING GENERATORS**	
	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.

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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.
   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 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:
   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.

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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)]**

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)]**

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6.0	**Emissions Unit Number(s) 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.
6.1	**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." 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 SO_2: a. You must not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain SO_2 in excess of 110 nanograms per Joule (ng/J) (0.90 pounds per megawatt-hour (lb/MWh)) gross output; or

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b. You must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO_2 /J (0.060 lb SO_2 /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).

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 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	> 50 MMBtu/h and ≤ 850	25 ppm at 15 percent O_2 or

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natural gas	MMBtu/h	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).

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

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. **[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)]**

6.2 **Testing Requirements:**

A. 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)**

B. 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.

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	C. 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)]** D. Operational Limit See Section 6.3, Monitoring Requirements.
6.3	**Monitoring Requirements:** A. 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]**

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B. 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 SO_2/J (0.060 lb SO_2/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]**

C. 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]**

D. 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

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	§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)]**
6.4	**Record Keeping Requirements:** A. 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]** B. 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. C. 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

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	and the EPA upon request; **[Reference: COMAR 26.11.09.08G(a)(iii)]** D. 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)]**
6.5	**Reporting Requirements:** A. 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." B. 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)]** C. 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)]** D. Operational Limit See Section 6.4, Record Keeping requirements.

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 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;

[For Areas III and IV]

The units are subject to the following requirements:

COMAR 26.11.09.05A(2), which establishes that the Permittee 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..

Exceptions: COMAR 26.11.09.05A(3) does not apply to emissions during load changing, soot blowing, start-up, 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.

[For Distillate Fuel Oil]

COMAR 26.11.09.07A(2)(b), which establishes that the Permittee may not burn, sell, or make available for sale any distillate fuel with a sulfur content by weight in excess of 0.3 percent.

(2) 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.

(D) COMAR 26.11.36.03A(1), which establishes that the Permittee may not operate an emergency generator except for emergencies, testing and maintenance purposes.

(E) COMAR 26.11.36.03A(5), which establishes that the Permittee may not operate an emergency generator for testing and engine maintenance purposes between 12:01 a.m. and 2:00 p.m. on any day on which the Department forecasts that the air quality will be a code orange, code red, or code purple unless the engine fails a test and engine maintenance and a re-test are necessary.

Note: *COMAR 26.11.36 is being amended to reflect Federal regulations. This requirement is subject to change.*

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

(4) ✓ 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;

(5) 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.

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.

(6) ✓ Commercial bakery ovens with a rated heat input capacity of less than 2,000,000 Btu per hour;

(7) ✓ Confection cookers where the products are edible and intended for human consumption;

(8) ✓ Photographic process equipment used to reproduce an image upon sensitized material through the use of radiant energy;

(9) ✓ Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding, or disc sanding of wood or wood products;

(10) Containers, reservoirs, or tanks used exclusively for:

(a) No. 16 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel;

(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) ✓ Laboratory fume hoods and vents;

(15) 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)

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 WWWWW – 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.

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.

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."

   Conditions c. applies to EU-13 only.

   c. **COMAR 26.11.36.03A(1)**, Applicability and General Requirements for Emergency Generators and Load Shaving Units. "The owner or operator of an emergency generator may not operate the generator except for emergencies, testing, and maintenance purposes."

   Condition d. applies to EU-13 through EU-19 only.

   d. **COMAR 26.11.36.03A(5)**, Applicability and General Requirements for Emergency Generators and Load Shaving Units. "The owner or operator of an emergency generator or load shaving unit may not operate the engine for testing and engine maintenance purposes between 12:01 a.m. and 2:00 p.m. on any day on which the Department forecasts that the air quality will be a code orange, code red, or code purple unless the engine fails a test and engine maintenance and a re-test are necessary."

   Conditions e. and f. apply to EU-14 through EU-19 only.

   e. **COMAR 26.11.36.03A(4),** Applicability and General Requirements for Emergency Generators and Load Shaving Units. "The owner or operator of an emergency generator or load shaving unit may be subject to the federal standards for stationary **internal** combustion engines under 40 CFR Parts 60 and 63."

   f. **COMAR 26.11.36.03A(6)**, Applicability and General Requirements for Emergency Generators and Load Shaving Units. "The owner or operator of an engine that is used for any purpose other than for emergency purposes shall install and operate a non-resettable hourly

time meter on the engine for the purpose of maintaining the operating log required in §E of this regulation."

The Permittee must show compliance with either Condition g. or h. below.

g. **COMAR 26.11.36.03B**, Requirements for Existing Load Shaving Units Installed on or Before January 1, 2009.

(1) "The owner or operator of an existing load shaving unit that was installed on or before January 1, 2009, shall:
   (a) Install a NO_x control system to meet an emissions standard of 1.4 grams per brake horsepower or less;
   (b) Replace the engine with a new engine that meets federal new source performance standards and was manufactured after January 1, 2009; or
   (c) Not operate the engine for more than a total of 10 hours during the period of May 1 to September 30 of any year."

(2) "The 10-hour limit in §B(1)(c) of this regulation is exclusive of the time that the unit operates for emergency purposes and the time for testing and engine maintenance."

(3) *Not applicable*

(4) "For engines to be equipped with NO_x controls or replaced with a new engine that meets federal standards, compliance shall be achieved by July 1, 2010, or a later date approved by the Department."

OR

h. **COMAR 26.11.36.03D**, Alternative Method of Achieving Compliance.

(1) "The owner or operator of a load shaving unit may, in lieu of meeting the requirements of §B or C of this regulation, achieve compliance by securing ozone season NO_x allowances for the NO_x emitted for load shaving purposes during the period of May 1 to September 30 of each year."

(2) "The owner or operator of a load shaving unit who chooses to secure ozone season NO_x allowances in lieu of complying with §B or C of this regulation shall:
   (a) Secure not less than one ozone season NO_x allowance;
   (b) Round up to the next whole number if the number of allowances to be secured under §D(3)(c) or (4)(d) results in a fractional number;

(c) When calculating the amount of NO_x emitted for load shaving purposes during the period May 1 to September 30 under §D(3)(a) or (4)(a) and (b) of this regulation, exclude from those calculations the amount of NO_x emitted during the initial 10 hours of operation during that period; and

(d) Secure the ozone season NO_x allowances by December 31 of each year and submit those allowances to the Department for retirement by February 1 of the following year."

(3) "The owner or operator of an existing load shaving unit installed on or before January 1, 2009, who chooses to secure ozone season NO_x allowances in lieu of compliance with §B of this regulation shall:

(a) Calculate, in tons, the total amount of NO_x emitted during the period May 1 to September 30;

(b) Multiply the total tons of NO_x emitted, as calculated in §D(3)(a) of this regulation, by three; and

(c) Secure at least the same number of ozone season NO_x allowances as the number resulting from the calculation performed in §D(3)(b) of this regulation."

2. Operating Requirements:

The Permittee shall maintain a non-resettable hour meter on each engine.

3. Record Keeping and Reporting Requirements:

a. The Permittee shall maintain on site for at least five (5) years and shall submit to the Department, by April 1 of each year during the term of this permit, records of the following information:

i. The type and quantity of fuel used in each engine,

ii. The hours of operation and reason of operation of each generator, and

Condition 3.(a)(iii) applies to EU-14 through EU-19 only.

iii. An operating log that includes the date the unit operated and the total operating time for each day that the unit operated.

b. 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.

JHMI UTILITIES, LLC
600 NORTH WOLFE STREET
BALTIMORE, MD 21287
PERMIT NO. 24-510-00001
PART 70 OPERATING PERMIT FACT SHEET

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 7 diesel-fired generators, each rated at 2520 horsepower, used for emergency and/or peak shaving operations. One (1) engine rated is for emergency use only, the other six (6) engines are for emergency and peak shaving operations. 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.

In October 2011, JHMI Utilities, LLC added two (2) Vulcan VCCB-47 charbroilers each equipped with an exhaust ventilator hood. These units have been added to insignificant activities.

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)
2012	88.50	3.67	6.49	53.41	4.03	<1
2013	77.12	3.71	6.81	42.11	3.67	<1
2014	78.43	11.93	7.33	46.74	3.81	<1
2015	70.33	7.69	7.29	42.02	3.70	<1
2016	69.60	4.43	6.93	43.11	3.73	<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 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 1, 2017. An administrative completeness review was conducted and the application was deemed to be administratively complete. An Administrative Completeness Letter was sent on September 5, 2017.

On March 30, 2016, MDE conducted a full on-site compliance evaluation. 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:

The following Emission Units were removed from JHMI Utilities, LLC facility since the prior Title V Operating Permit was issued:

Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
EU-10	510-0001-9-0936	Cummins KTA 23000-GS diesel generators rated at 2300 horsepower. Used for emergency backup power. Located in the Meyer building.	1980
EU-11	510-0001-9-0937	Cummins KTA 23000-GS diesel generators rated at 2300 horsepower. Used for emergency backup power. Located in the Meyer building.	1980
EU-12	510-001-9-0938	Cummins KTA 23000-GS diesel generators rated at 2300 horsepower. Used for emergency backup power. Located in the Meyer building.	1980

The following Emission Units were moved from Plant Specific Conditions to Insignificant Activities since the prior Title V Operating Permit was issued:

Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
EU-23	510-0001-8-0364	Vulcan VCCB-47 charbroilers, each equipped with an exhaust ventilator hood	2011
EU-24	510-0001-8-0365	Vulcan VCCB-47 charbroilers, each equipped with an exhaust ventilator hood	2011

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 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.

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

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**	**2014** tpy CO_2e	**2015** tpy CO_2e	**2016** tpy CO_2e
Carbon dioxide CO_2	1	117,547	111,503	108,966
Methane CH_4	25	6.13	5.84	5.55
Nitrous Oxide N_2O	300	2.63	2.40	2.50
Total GHG CO_{2eq}		**117,556**	**111,511**	**108,974**

Plantwide Applicability Limit (PAL)

In 2011, the Department issued a PAL permit of 104.9 tons of NOx emissions per year to JHMI Utilities, LLC with an expiration date of June 17, 2016. On December 17, 2015, the Department received a renewal application of the PAL permit. See Appendix A for the renewal PAL permit.

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 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 AO24 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 32516-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. Locating 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
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

Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
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

Federal Regulation Review

A. 40 CFR Part 60, Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

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.

The other five (5) boilers are exempt from this regulation because they were installed prior to June 9, 1989, per 40 CFR §60.40c(a).

B. 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.

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

Six (6) generators (EU-14 through EU-19) are subject to this regulation and are considered "existing" per 40 CFR §63.6590(a)(1)(iii). These engines are for emergency operation and peak shaving usage. All requirements of this regulation were included in the Title V Operating Permit.

One (1) emergency generator (EU-13) is for emergency use only and are considered "institutional emergency" per 40 CFR §63.6585(f)(3) and are therefore not subject to this regulation.

D. 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.

E. 40 CFR Part 63, Subpart WWWWW - 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.

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 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 9-23, 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) (O_2 based)	Avg. NO_x emissions (oil) (lb/MMBtu) (O_2 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 26.1.09.05A(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 prevention 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 with No. 2 Fuel Oil as backup 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. No. 2 fuel oil is burned only as a backup fuel. 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
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

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 referenced 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.

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. **[Reference: 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.

Emission Unit – EU-5
Existing Boiler <100MMBtu/hr (Natural Gas/Diesel)

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 26.1.09.05A(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 prevention 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 with No. 2 Fuel Oil as backup 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. No. 2 fuel oil is burned only as a backup fuel. 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.
   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. **[Reference: COMAR 26.11.02.09A]**

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.

Emission Unit – EU-22
New 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 9-23, 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. The results are as follows:

Boiler	NO_x emissions (gas) (lb/MMBtu)	NO_x emissions (oil) (lb/MMBtu)
EU-22	0.089	0.094

Particulate Matter Emissions Limits for EU-22 Removed from Title V Operating Permit

The Permit to Construct for this installation which was issued on June 17, 2011, contained PM emission requirements based on 40 CFR Part 60, Subpart Dc and 40 CFR Part 63, Subpart JJJJJJ. These emission limits no longer apply to this facility as described below.

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. This unit was constructed in 2011. The low NO_x burner and flue gas recirculation are not used to reduce PM or SO_2 emissions.

§60.43c(e)(4):

> *"An owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.50 weight percent sulfur or a mixture of 0.50 weight percent sulfur oil with other fuels not subject to a PM standard under § 60.43c and not using a post-combustion technology (except a wet scrubber) to reduce PM or SO_2 emissions is not subject to the PM limit in this section."*

40 CFR Part 63, Subpart JJJJJJ:

This regulation was revised on February 1, 2013 and include changes to the PM emissions limit. This now includes an exemption that covers this boiler. 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. The boiler was installed at the facility in 2011.

§63.11210(e):

> *"For new or reconstructed oil-fired boilers that combust only oil that contains no more than 0.50 weight percent sulfur or a mixture of 0.50 weight percent sulfur oil with other fuels not subject to a PM emission limit under this subpart and that do not use a post-combustion technology (except a wet scrubber) to reduce particulate matter (PM) or sulfur dioxide emissions, you are not subject to the PM emission limit in Table 1 of this subpart providing you monitor and record on a monthly basis the type of fuel combusted. If you intend to burn a new type of fuel or fuel mixture that does not meet the requirements of this paragraph, you must conduct a performance test within 60 days of burning the new fuel".*

§63.1194(c):

"An affected source is a new source if you commenced construction of the affected source after June 4, 2010, and the boiler meets the applicability criteria at the time you commence construction."

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 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 prevention 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 with No. 2 Fuel Oil as backup 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. No. 2 fuel oil is burned only as a backup fuel. 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."

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 SO_2 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 SO_2 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 SO_2 emissions. **[Reference: 40 CFR §60.42c(e)(4)]**

5. The Permittee shall demonstrate compliance with the SO_2 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 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;
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.

Emission Units – EU-1 through EU-5 and EU-22
40 CFR Part 63 JJJJJJ Boilers

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

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

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

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). 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. 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)]**

Condition (4) below applies only to EU-1 through EU-5 (ARA Registration No. 510-0001-5-0303, 5-0304, 50-0305, 5-0306, and 5-0734).

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)]

Conditions (5), (6), and (7) below apply only to EU-22 (MDE Registration No. 510-0001-5-2075)

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 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.
Note: EU-22 is not required to conduct a one-time energy assessment.

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.

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

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 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:

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, O_2, 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. 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. **[Reference: 40 CFR §63.6640(f)(2)]**

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 (4)(b) and (c) above.

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.

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 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 §80.510(b) 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 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, O_2, 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. 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)

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 O_2; 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 450ºF and less than or equal to 1350ºF.

   [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. 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 §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 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 O_2 or CO_2, 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) on March 14-15, 2013. A more recent stack test was scheduled for the Summer of 2017, but the Department has yet to receive any results. The stack testing was performed to demonstrate compliance with the NO_x emission limit of 25 ppmvd at 15% O_2 (1.2 lb/MWh) when the CT is firing natural gas, 75 ppmvd at 15% O_2 (3.6 lb/MWh) when the CT is firing fuel oil, and 54 ppmvd at 15% O_2 (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 boilers 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. If visible emissions occur, the Permittee shall perform the

following: 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 boilers; 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 on-site the following: an operation manual and prevention 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 SO_2:

a. You must not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain SO_2 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 SO_2 /J (0.060 lb SO_2 /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 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.

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 SO_2/J (0.060 lb SO_2/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 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).

[Reference: 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.

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. **[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 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.

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

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.

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 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;

[For Areas III and IV]

The units are subject to the following requirements:

COMAR 26.11.09.05A(2), which establishes that the Permittee 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.

Exceptions: COMAR 26.11.09.05A(3) does not apply to emissions during load changing, soot blowing, start-up, 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.

[For Distillate Fuel Oil]

COMAR 26.11.09.07A(2)(b), which establishes that the Permittee may not burn, sell, or make available for sale any distillate fuel with a sulfur content by weight in excess of 0.3 percent.

(2) 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.

(D) COMAR 26.11.36.03A(1), which establishes that the Permittee may not operate an emergency generator except for emergencies, testing and maintenance purposes.

(E) COMAR 26.11.36.03A(5), which establishes that the Permittee may not operate an emergency generator for testing and engine maintenance purposes between 12:01 a.m. and 2:00 p.m. on any day on which the Department forecasts that the air quality will be a code orange, code red, or code purple unless the engine fails a test and engine maintenance and a re-test are necessary.

Note: *COMAR 26.11.36 is being amended to reflect Federal regulations. This requirement is subject to change.*

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

(4) ✓ 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;

(5) 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.

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.

(6) ✓ Commercial bakery ovens with a rated heat input capacity of less than 2,000,000 Btu per hour;

(7) ✓ Confection cookers where the products are edible and intended for human consumption;

(8) ✓ Photographic process equipment used to reproduce an image upon sensitized material through the use of radiant energy;

(9) ✓ Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding, or disc sanding of wood or wood products;

(10) Containers, reservoirs, or tanks used exclusively for:

(a) No. 16 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel;

(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) ✓ Laboratory fume hoods and vents;

(15) 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)

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 WWWWW – 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.

(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.

STATE ONLY ENFORCEABLE REQUIREMENTS

This section of the permit contain state-only enforceable requirements. The requirements in this section will not be enforced by the U.S. Environmental Protection Agency. The requirements in this section are not subject to COMAR 26.11.03 10 - Public Petitions for Review to EPA Regarding Part 70 Permits.

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."

    Conditions c. applies to EU-13 only.

    c. **COMAR 26.11.36.03A(1)**, Applicability and General Requirements for Emergency Generators and Load Shaving Units. "The owner or operator of an emergency generator may not operate the generator except for emergencies, testing, and maintenance purposes."

    Condition d. applies to EU-13 through EU-19 only.

    d. **COMAR 26.11.36.03A(5)**, Applicability and General Requirements for Emergency Generators and Load Shaving Units. "The owner or operator of an emergency generator or load shaving unit may not operate the engine for testing and engine maintenance purposes between 12:01 a.m. and 2:00 p.m. on any day on which the Department forecasts that the air quality will be a code orange, code red, or code purple unless the engine fails a test and engine maintenance and a re-test are necessary."

    Conditions e. and f. apply to EU-14 through EU-19 only.

    e. **COMAR 26.11.36.03A(4),** Applicability and General Requirements for Emergency Generators and Load Shaving Units. "The owner or operator of an emergency generator or load shaving unit may be

subject to the federal standards for stationary **internal** combustion engines under 40 CFR Parts 60 and 63."

f. **COMAR 26.11.36.03A(6)**, Applicability and General Requirements for Emergency Generators and Load Shaving Units. "The owner or operator of an engine that is used for any purpose other than for emergency purposes shall install and operate a non-resettable hourly time meter on the engine for the purpose of maintaining the operating log required in §E of this regulation."

The Permittee must show compliance with either Condition g. or h. below.

g. **COMAR 26.11.36.03B**, Requirements for Existing Load Shaving Units Installed on or Before January 1, 2009.

(1) "The owner or operator of an existing load shaving unit that was installed on or before January 1, 2009, shall:

(a) Install a NO_x control system to meet an emissions standard of 1.4 grams per brake horsepower or less;

(b) Replace the engine with a new engine that meets federal new source performance standards and was manufactured after January 1, 2009; or

(c) Not operate the engine for more than a total of 10 hours during the period of May 1 to September 30 of any year."

(2) "The 10-hour limit in §B(1)(c) of this regulation is exclusive of the time that the unit operates for emergency purposes and the time for testing and engine maintenance."

(3) *Not applicable*

(4) "For engines to be equipped with NO_x controls or replaced with a new engine that meets federal standards, compliance shall be achieved by July 1, 2010, or a later date approved by the Department."

OR

h. **COMAR 26.11.36.03D**, Alternative Method of Achieving Compliance.

(1) "The owner or operator of a load shaving unit may, in lieu of meeting the requirements of §B or C of this regulation, achieve compliance by securing ozone season NO_x allowances for the NO_x emitted for load shaving purposes during the period of May 1 to September 30 of each year."

(2) "The owner or operator of a load shaving unit who chooses to secure ozone season NO_x allowances in lieu of complying with §B or C of this regulation shall:
   (a) Secure not less than one ozone season NO_x allowance;
   (b) Round up to the next whole number if the number of allowances to be secured under §D(3)(c) or (4)(d) results in a fractional number;
   (c) When calculating the amount of NO_x emitted for load shaving purposes during the period May 1 to September 30 under §D(3)(a) or (4)(a) and (b) of this regulation, exclude from those calculations the amount of NO_x emitted during the initial 10 hours of operation during that period; and
   (d) Secure the ozone season NO_x allowances by December 31 of each year and submit those allowances to the Department for retirement by February 1 of the following year."

(3) "The owner or operator of an existing load shaving unit installed on or before January 1, 2009, who chooses to secure ozone season NO_x allowances in lieu of compliance with §B of this regulation shall:
   (a) Calculate, in tons, the total amount of NO_x emitted during the period May 1 to September 30;
   (b) Multiply the total tons of NO_x emitted, as calculated in §D(3)(a) of this regulation, by three; and
   (c) Secure at least the same number of ozone season NO_x allowances as the number resulting from the calculation performed in §D(3)(b) of this regulation."

2. Operating Requirements:

   The Permittee shall maintain a non-resettable hour meter on each engine.

3. Record Keeping and Reporting Requirements:

   a. The Permittee shall maintain on site for at least five (5) years and shall submit to the Department, by April 1 of each year during the term of this permit, records of the following information:

      i. The type and quantity of fuel used in each engine,

      ii. The hours of operation and reason of operation of each generator, and

Condition 3.a.iii. applies to EU-14 through EU-19 only.

iii. An operating log that includes the date the unit operated and the total operating time for each day that the unit operated.

b. 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.

APPENDIX A. – PLANTWIDE APPLICABLILITY LIMIT (PAL)

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A.0	**Emissions Unit Number(s)** Plant Wide Applicability Limit (PAL)
A.1	**Applicable Standards/Limits:** **[Reference: PAL issued on June 17, 2011]** A. General Requirements 1. COMAR 26.11.03.14A, Revisions of Part 70 Permits – General Requirements. "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, Plant wide Applicability Limit: Permit - General Requirements. 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: 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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	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, CERMs, 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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4. COMAR 26.11.17.08F, Reopening a PAL Permit.
   a. During the PAL effective period, the permit may be reopened to:
      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; or
      iii. Reflect a necessary increase in the PAL level.

   b. The Department may reopen the PAL to:
      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; or
      iii. Reduce the PAL if the Department determines that a reduction is necessary to avoid causing or contributing to:
         1. A NAAQS or PSD increment violation; or
         2. 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.

5. COMAR 26.11.17.08G, Renewal of a PAL.
   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:
      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
      iv. Any other information the Permittee wishes the

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Department to consider in determining the appropriate level for renewing the PAL.

c. Adjustments at Renewal.
   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. COMAR 26.11.17.08H, <u>Increasing a PAL.</u>
   a. Requirements for Increasing a PAL.
      i. A PAL may be increased during the PAL effective period if the requirements of this subsection are met.

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	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. 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)

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	of this regulation), plus the sum of the baseline actual emissions of the small emissions units. 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. B. 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]**
A.2	**Testing Requirements:** A. General Requirements See Section A.3, Monitoring Requirements. B. Control of Nitrogen Oxides See Section A.3, Monitoring Requirements.
A.3	**Monitoring Requirements:** A. 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]** B. 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)]**

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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. **[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. NO_X emissions for each EU will be calculated each month using the EF and activity level as follows:

$$M_{NOxEUi} = AL_{EUi} \times EF_{EUi}$$

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

AL_{EUi} 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_{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/month)	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 =	
Significant	EU-13; and EU-14 EU-19 (Engine	Oil		X 3.200 =		/2000 =	

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	Generators (3: 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	EU-23 – EU-24 (Gas-fired cooking equipment)	Gas		X 0.137 =		/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. **[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)]**

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9. Monitoring Plan for the Facility
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. **[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) below.
    a. Mass balance calculations - The owner or operator using mass balance calculations to monitor PAL pollutant emissions shall meet the following requirements:
        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; and
        iii. 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. **[Reference: 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:
        i. CEMS must comply with applicable Performance Specifications found in 40 CFR part 60, appendix B; and
        ii. CEMS must sample, analyze and record data at least every 15 minutes while the emissions unit is operating. **[Reference: 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

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	requirements: 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. **[Reference: 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: 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. **[Reference: 40 CFR §52.21(aa)(12)(vi)]**
A.4	**<u>Record Keeping Requirements</u>:** <u>General Requirements</u> See Section A.3, Monitoring Requirements. B. <u>Control of Nitrogen Oxides</u> 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)]**

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	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 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.
A.5	**Reporting Requirements:** A. General Requirements See Section A.3, Monitoring Requirements. B. Control of Nitrogen Oxides 2. The Permittee shall conduct reporting requirements in accordance with COMAR 26.11.17.09B, Reporting Requirements. 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: 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;

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	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. 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: 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. 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.

KEEP PERMIT AT SITE **CONTROL NO. B- 05540**

Larry Hogan
Governor

State of Maryland

Ben Grumbles
Secretary

DEPARTMENT OF THE ENVIRONMENT

Air and Radiation Administration
1800 Washington Boulevard, Suite 720
Baltimore, MD 21230

☒ Plantwide Applicability Limit ☐ Part 70 Operating Permit

PERMIT NO.:
510-0001

DATE ISSUED:
September 1, 2018

PERMIT FEE:
N/A

EXPIRATION DATE:
August 31, 2023

LEGAL OWNER & ADDRESS
JHMI Utilities, LLC
600 N. Wolfe Street
Baltimore, Maryland 21287
Attn: Sally W. MacConnell, Chairperson

SITE
Johns Hopkins Hospital
600 N. Wolfe Street
Baltimore, MD 21287
Premises # 510-0001
AI #11984

SOURCE DESCRIPTION

For Johns Hopkins Hospital, this permit authorizes a Plantwide Applicability Limit (PAL) of 104.9 tons of NO_x emissions per year.

This source is subject to the conditions described on the attached pages.

Program Manager

Director, Air and Radiation Administration

(NOT TRANSFERABLE)

JHMI UTILITIES, LLC
JOHNS HOPKINS HOSPITAL
PLANTWIDE APPLICABILITY LIMIT (PAL) PERMIT
PERMIT No. 510-0001

INDEX

This Plantwide Applicability Limit permit incorporates requirements for the following registered installations:

Emission Unit Number	MDE Registration Number	Description	Date of Installation
EU-1	5-0303	Boiler: natural gas/No. 2 fuel oil fired rated at 102.5 mmBtu/hr located in the North Energy Plant	1963
EU-2	5-0304	Boiler: natural gas/No. 2 fuel oil fired rated at 102.5 mmBtu/hr located in the North Energy Plant	1963
EU-3	5-0305	Boiler: natural gas/No. 2 fuel oil fired rated at 102.5 mmBtu/hr located in the North Energy Plant	1963
EU-4	5-0306	Boiler: natural gas/No. 2 fuel oil fired rated at 102.5 mmBtu/hr located in the North Energy Plant	1963
EU-5	5-0734	Boiler: natural gas/No. 2 fuel oil fired rated at 94 mmBtu/hr located in the North Energy Plant	1981
EU-10 Removed	9-0936	Generator: Cummins diesel fired rated at 750 kW/1135 BHP located Meyer Building	1980
EU-11 Removed	9-0937	Generator: Cummins diesel fired rated at 750 kW/1135 BHP located in the Meyer Building	1980
EU-12 Removed	9-0938	Generator: Cummins diesel fired rated at 750 kW/1135 BHP located in the Meyer Building	1980
EU-13	9-0951	Generator: Caterpillar diesel fired rated at 1750 kW/2300 BHP located in the Outpatient Building	1989
EU-14	9-0949	Generator: Caterpillar diesel fired rated at 1825 kW/2520 BHP located in the South Energy Plant Building	1999
EU-15	9-0950	Generator: Caterpillar diesel fired rated at 1825 kW/2520 BHP located in the South Energy Plant Building	1999

Emission Unit Number	MDE Registration Number	Description	Date of Installation
EU-16	9-0988	Generator: Caterpillar diesel fired rated at 1825 kW/2520 BHP located in the North Energy Plant Building	2004
EU-17	9-0989	Generator: Caterpillar diesel fired rated at 1825 kW/2520 BHP located in the North Energy Plant Building	2004
EU-18	9-1015	Generator: Caterpillar diesel fired rated at 1825 kW/2520 BHP located in the South Energy Plant Building	2005
EU-19	9-1016	Generator: Caterpillar diesel fired rated at 1825 kW/2520 BHP located in the South Energy Plant Building	2005
EU-20	5-2073	Combined Heat and Power (CHP): 7.5 MW combustion turbine (CT) equipped with a heat recovery steam generator (HRSG) equipped with a 42 million Btu per hour duct burner located in the North Energy Plant Building	2011
EU-21	5-2074	Combined Heat and Power (CHP): 7.5 MW combustion turbine (CT) equipped with a heat recovery steam generator (HRSG) equipped with a 42 million Btu per hour duct burner located in the South Energy Plant Building	2011
EU-22	5-2075	Boiler: Hurst 50.4 million Btu per hour natural gas/no. 2 fuel oil fired equipped with low NO_X burner and flue gas recirculation located in the South Energy Plant Building	2011
EU-23 (Insignificant)	8-0364	Charbroiler: Vulcan VCCB-47 charbroilers equipped with an exhaust ventilator hood	2011
EU-24 (Insignificant)	8-0365	Charbroiler: Vulcan VCCB-47 charbroilers equipped with an exhaust ventilator hood	2011

Part A – General Provisions

(1) The following Air and Radiation Administration (ARA) permit-to-construct applications is incorporated into this permit by reference:

Plantwide Applicability Limit Renewal Application received December 17, 2015.

If there are any conflicts between representations in this permit and representations in the applications, the representations in the permit shall

govern. Estimates of dimensions, volumes, emissions rates, operating rates, feed rates and hours of operation included in the applications do not constitute enforceable numeric limits beyond the extent necessary for compliance with applicable requirements.

(2) Upon presentation of credentials, representatives of the Maryland Department of the Environment ("MDE" or the "Department") and the Baltimore City Health Department shall at any reasonable time be granted, without delay and without prior notification, access to the Permittee's property and permitted to:

(a) inspect any construction authorized by this permit;

(b) sample, as necessary to determine compliance with requirements of this permit, any materials stored or processed on-site, any waste materials, and any discharge into the environment;

(c) inspect any monitoring equipment required by this permit;

(d) review and copy any records, including all documents required to be maintained by this permit, relevant to a determination of compliance with requirements of this permit; and

(e) obtain any photographic documentation or evidence necessary to determine compliance with the requirements of this permit.

(3) The Permittee shall notify the Department prior to increasing quantities and/or changing the types of any materials referenced in the application or limited by this permit. If the Department determines that such increases or changes constitute a modification, the Permittee shall obtain a permit-to-construct prior to implementing the modification.

(4) Nothing in this permit authorizes the violation of any rule or regulation or the creation of a nuisance or air pollution.

(5) If any provision of this permit is declared by proper authority to be invalid, the remaining provisions of the permit shall remain in effect.

Part B – Applicable Regulations

(1) This source is subject to all applicable federally enforceable state air pollution control requirements including, but not limited to, the following regulations:

(a) COMAR 26.11.03.14A – Revisions of Part 70 permits – General Requirements. "The Permittee shall submit an application to the Department to revise a Part 70 permit when required under Regulations. 15-.17 of this chapter."

COMAR 26.11.17.08 – Plantwide Applicability Limit: Permit

(b) COMAR 26.11.17.08D. - General Requirements.
(3) 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.
(4) The Permittee is subject to:
(a) All applicable existing State and federal requirements; and
(b) Any future State or federal requirements that apply to an emissions unit under an approved PAL.
(5) 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.
(6) 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. "

(c) COMAR 26.11.17.08E. - Expiration of a PAL.
"(1) 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.
(2) 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.
(3) 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.
(4) 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, CERMs, PEMs, or CPMs to demonstrate compliance with the allowable emission limitation.
(5) 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.
(6) 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.
(7) 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."

(d) COMAR 26.11.17.08F. - Reopening a PAL Permit.
"(1) During the PAL effective period, the permit may be reopened to:
(a) Correct any errors in setting the PAL or to reflect a more accurate determination of emissions used to establish the PAL;
(b) Reduce the PAL if the source creates emission reduction credits; or
(c) Reflect a necessary increase in the PAL level.
(2) The Department may reopen the PAL to:
(a) 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;
(b) 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; or
(c) Reduce the PAL if the Department determines that a reduction is necessary to avoid causing or contributing to:
(i) A NAAQS or PSD increment violation; or
(ii) 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.
(3) Any adjustment to the PAL shall be made through the public participation procedures required when the PAL was first established."

(e) COMAR 26.11.17.08G. - Renewal of a PAL.

(1) 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.
(2) The application to renew the PAL shall contain the following:
(a) The information required in §A of this regulation;
(b) A proposed PAL level;
(c) The sum of potential to emit of all emissions units under the PAL and supporting documentation; and
(d) Any other information the Permittee wishes the Department to consider in determining the appropriate level for renewing the PAL.
(3) Adjustments at Renewal.
(a).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).
(b) 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.
(c) 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.
(4) 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.
(5) 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.

(f) COMAR 26.11.17.08H. - Increasing a PAL.
(1) Requirements for Increasing a PAL.
(a) A PAL may be increased during the PAL effective period if the requirements of this subsection are met.
(b) 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.
(c) 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.
(d) 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.
(e) 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.
(2) 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) of this regulation), plus the sum of the baseline actual emissions of the small emissions units.
(3) The PAL permit shall be revised to reflect the increased PAL level pursuant to the public notice requirements of §D(6) of this regulation.

Part C – Operating Conditions

(1) The Permittee is subject to a Plantwide Applicability Limit (PAL) of 104.9 tons in any 12 month rolling period for NO_X emissions. The baseline period of 2005-2006 was used to determine the baseline actual emissions for all existing emissions units.

(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 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 26.11.17.08G 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: COMAR 26.11.17.08C(1) & (3)**]

(4) 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 monthly emissions and annual emissions based on a 12-month rolling total for each month. **[Reference: COMAR 26.11.17.08(2)(d) & (f)**]

Part D – Monitoring, Record Keeping and Reporting Requirements

(1) The Permittee shall conduct monitoring and record keeping requirements in accordance with COMAR 26.11.17.09 A. - Monitoring and Record Keeping Requirements.

Emissions of NO_X from all of the significant 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:

$$M_{NOxEUi} = AL_{EUi} \times EF_{EUi}$$

Where: M_{NOxEUi} is the tons of NO_X emitted by the ith EU during the period
AL_{EUi} is the activity level (fuel burned) for the ith EU during the period.
EF_{EUi} is the emission factor for the ith 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.

Significant /Small	Device	Fuel Type	AL_{EUi} Heat Input (MMBtu/month)	EF_{EUi} NO_X Emission Factor (lb/MMBtu)	Emissions (lb/month)	Unit Conversion	M_{NOxEUi} Emission (tons/Month)
Significant	Boiler Nos. 7-10	Gas		X 0.086 =		/2000 =	
Significant	Boiler Nos. 7-10	Oil		X 0.156 =		/2000 =	
Significant	Boiler No. 11	Gas		X 0.098 =		/2000 =	
Significant	Boiler No. 11	Oil		X 0.143 =		/2000 =	
Significant	NEP CT	Gas		X 0.066 =		/2000 =	
Significant	NEP CT	Oil		X 0.266 =		/2000 =	
Significant	SEP CT	Gas		X 0.066 =		/2000 =	
Significant	SEP CT	Oil		X 0.266 =		/2000 =	
Significant	NEP Duct Burner	Gas		X 0.080 =		/2000 =	
Significant	N SEP Duct Burner	Gas		X 0.080 =		/2000 =	
Significant	SEP Boiler	Gas		X 0.035 =		/2000 =	
Significant	SEP Boiler	Oil		X 0.143 =		/2000 =	
Significant	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 =	
						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.

(12) Revalidation. 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.
(13) 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.
(14) 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."

Monitoring Plan for the Facility
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.

(2) The Permittee shall conduct reporting requirement in accordance with COMAR 26.11.17.09B. - Reporting Requirements.
"(1) 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:
(a) The identification of the owner and operator and the permit number;
(b) 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;
(c) All data relied upon including any quality assurance or quality control data in calculating the monthly and annual PAL pollutant emissions;
(d) A list of any emissions units modified or added to the major stationary source during the preceding 6-month period;
(e) 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;
(f) 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
(g) A signed statement by the responsible official certifying the truth, accuracy, and completeness of the information provided in the report.
(2) 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:

(a) The identification of the owner or operator and the permit number;
(b) The PAL requirement that experienced the deviation or that was exceeded;
(c) The emissions resulting from the deviation or the exceedances; and
(d) A signed statement by the responsible official certifying the truth, accuracy, and completeness of the information provided in the report.
(3) 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."

Background

Johns Hopkins Medical Institute, LLC operates and maintains the Johns Hopkins Hospital (JHH). The JHH occupies several city blocks in downtown Baltimore. Campus building and activities includes: main hospital, outpatient center, research facilities, medical training, libraries and bookstores, administrative offices and utility services.

JHH owns and operates the following fuel burning equipment to provide services to campus: four (4) natural gas/no. 2 fuel oil fired boilers rated 102.5 MMBtu/hr; one (1) natural gas/no. 2 fuel oil fired boiler rated 94 MMBtu/hr; one (1) diesel fired emergency generators rated 750kW; one (1) diesel fired emergency generator rated 1750 kW; and six (6) diesel fired emergency and peak shaving generators rated 1825 kW.

JHH is a major source of NO_X emissions and has in effect a Part 70 Operating Permit with an expiration of August 31, 2018.

Since 1980, the JHH campus has expanded by approximately 3 million gross square feet of building area. Through energy conservation, the campus has been served by the existing boiler plant with no new heating emission sources added. To serve the emergency and critical electric power requirements of the expansion, a number of diesel engine generators were installed during this period.

To meet the expansion's increased utility demands, JHH determined that combined heat and power was the most appropriate method to reduce energy cost. All the electric power and steam generated by the combined heat and power systems will be utilized by JHH and no power will be exported.

Please note: The campus does utilize the existing emergency generators for limited peak electric demand shaving.

Notice of Violations

The Permittee was in compliance with all applicable requirements during the 24-month period of 2005 and 2006. No Notice of Violation was issued.

Proposed Submittal

JHH submitted a Plantwide Applicability Limit (PAL) renewal application received at the Department on December 17, 2015 for a PAL permit for NO_X emissions based on baseline actual emissions calculated in accordance with COMAR 26.11.17.08.

A PAL is an optional approach that provides the owners or operators of major stationary sources with the ability to manage facility-wide emissions without triggering major New Source Review (NSR). JHH requested a PAL Level of **104.9 tons per year of NO_X** emissions.

PAL Level Determination

The PAL level for a major stationary source shall be established as the sum of the baseline actual emissions of the PAL pollutant for each emissions unit at the source plus an amount equal to the applicable significant level for the PAL pollutant under Regulation .01B of this chapter (Chapter 17) or under the Clean Air Act, whichever is lower [Reference: COMAR 26.11.17.08B(1)].

JHH identified all existing emissions units and all new units at the facility as small, major or significant based on their potential to emit; applicable State and federal requirements for each emission unit; the baseline actual emissions for each emission unit with supporting calculations documentation including emissions associated with startup, shutdown, and malfunctions; and the method to be used to monitor each emission unit.

JHH used the 24-month period of 2005-2006 as being representative of the baseline actual NO_X emissions for the existing sources. The actual baseline NO_X emissions is determined to be 80.8 tons per year plus 25 ton per year (the significance level for NO_X) yields an intermediate PAL Level of 105.8 tons per year. However, four emissions units included in the calculation were decommissioned with emission contribution of 0.92 tons per year which is subtracted from the intermediate PAL level resulting in the requested level of **104.9 tons per year of NO_X** emissions.

Proposed Operation based on the PAL

To ensure that the PAL level of 104.9 tons per year of NO_X emissions will not be exceeded, the following parameters will be controlled and the preference of the generating units will be as follows:

- The combined heat and power system will be base-loaded and operated continuously throughout the year. All electricity generated and unfired steam produced will be used by the campus.
- The use of No.2 fuel oil in the combustion turbines produces much more NO_X emissions than the use of natural gas for the same power output; therefore, the use of No.2 fuel oil in the combustion turbines will be limited to emergency situations (natural gas service interruptions).
- Use of the 50.4 million Btu per hour Hurst boiler located in South Energy Plant

- Operation of the existing boilers and existing generators on an as needed basis.

Using the above mentioned preference will minimize the production of NO_X emissions.