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Governor

State of



Maryland

Ben Grumbles
Secretary

DEPARTMENT OF THE ENVIRONMENT

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

Construction Permit

Part 70
 Operating Permit

PERMIT NO. 24-510-0077

DATE ISSUED September 1, 2019

PERMIT FEE To be paid in accordance with
COMAR 26.11.02.19B

EXPIRATION DATE August 31, 2024

LEGAL OWNER & ADDRESS
Johns Hopkins Univ. - Charles Street
2024 East Monument Street Suite B-200
Baltimore, Maryland 21287
Attn: Mr. David Ashwood, Director of Plant
Operations

SITE
Johns Hopkins Univ. - Charles Street
3400 N Charles St
Baltimore, MD 21218
AI # 2109

SOURCE DESCRIPTION

Research University operating fuel burning equipment.

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

Program Manager

Director, Air and Radiation Administration

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BALTIMORE, MD 21218
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SECTION I SOURCE IDENTIFICATION

1. DESCRIPTION OF FACILITY

The Johns Hopkins University (JHU), Homewood Campus provides an educational and research setting for undergraduate and graduate students. The primary SIC code for the facility is 8221.

The Johns Hopkins University operates several engines, boilers and hot water heaters for comfort heat, steam and electricity in several buildings at the Homewood Campus. Equipment at the Campus consists of six (6) emergency generators, thirty-four (34) natural gas-fired boilers, and one (1) 4.6 MW Combined Heat and Power (CHP) natural gas combustion turbine with Heat Recovery Steam Generator (HRSG).

2. FACILITY INVENTORY LIST

Emissions Unit Number	MDE - ARA Registration Number	Emissions Unit Name and Description	Date of Installation
5-0763	5-0763	One (1) Keeler natural gas fired boiler rated at 98 MMBtu/hr heat input with diesel as backup equipped with low NO _x burners. Boiler #1.	1980 Modified 12/2003
5-0533	5-0533	One (1) Babcock & Wilcox natural gas fired boiler rated at 62 MMBtu/hr heat input with diesel as backup equipped with low NO _x burners. Boiler #2	1962 Modified 05/2006
5-0534	5-0534	One (1) Babcock & Wilcox natural gas fired boiler rated at 62 MMBtu/hr heat input with diesel as backup equipped with low NO _x burners. Boiler #3	1948 Modified 12/2002
5-0535	5-0535	One (1) Babcock & Wilcox natural gas fired boiler rated at 62 MMBtu/hr heat input with diesel as backup equipped with low NO _x burners. Boiler #4.	1954 Modified 01/2008
5-0964 & 5-0965	5-0964 & 5-0965	Two (2) HB Smith hot water natural gas fired boilers each rated at 1.6 MMBtu/hr heat input.	1982
5-2040 & 5-2041	5-2040 & 5-2041	Two (2) RayPak hot water heaters fired on natural gas and rated 1.069 MMBtu/hr heat input	1989

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Emissions Unit Number	MDE - ARA Registration Number	Emissions Unit Name and Description	Date of Installation
5-2024 & 5-2025	5-2024 & 5-2025	Two (2) Peerless natural gas-fired boilers each rated at 2.1 MMBtu/hr heat input	1991
5-2026 & 5-2027	5-2026 & 5-2027	Two (2) Teledyne-Laars natural gas-fired boiler rated at 1.2 MMBtu/hr heat input	1991
5-2028 & 5-2029	5-2028 & 5-2029	Two (2) Teledyne-Laars natural gas-fired hot water heaters each rated at 1.43 MMBtu/hr heat input	1993
5-2030	5-2030	One (1) Teledyne-Laars natural gas fired hot water heaters rated at 1.2 MMBtu/hr heat input	1993
5-2031 & 5-2032	5-2031 & 5-2032	Two (2) Teledyne-Laars natural gas-fired boilers each rated at 1.67 MMBtu/hr heat input	1993
5-2033 & 5-2034	5-2033 & 5-2034	Two (2) Jarco natural gas-fired hot water heaters each rated at 1.4 MMBtu/hr heat input	1996
5-2035 & 5-2036	5-2035 & 5-2036	Two (2) Teledyne Laars natural gas-fired boilers each rated at 3.05 MMBtu/hr heat input	1996
5-1728 & 5-1729	5-1728 & 5-1729	Two (2) Cleaver Brooks natural gas-fired boilers each rated at 10.206 MMBtu/hr equipped with low NO _x burners and flue gas recirculation	2004
5-1867 & 5-1868	5-1867 & 5-1868	Two (2) HB Smith natural gas-fired hot water boilers each rated at 17.6 MMBtu/hr	2006
5-1861 & 5-1862 & 5-1863	5-1861 & 5-1862 & 5-1863	Three (3) TurboPower Gas Water Heaters Model 1500N500A-TP fired on natural gas and rated at 1.2 MMBtu/hr heat input.	2007
5-1864 & 5-1865 & 5-1866	5-1864 & 5-1865 & 5-1866	Three (3) TurboPower Gas Water Heaters Model 2000N750A-TP fired on natural gas and rated at 1.6 MMBtu/hr heat input.	2007
5-1885	5-1885	One (1) Columbia Boiler Co. natural gas fired boiler rated at 1.26 MMBtu/hr heat input.	2007
5-2067	5-2067	One (1) Combined Heat and Power (CHP) system consisting of 4.6 MW natural gas combustion turbine generator with Heat Recovery Steam Generator (HRSG)	2010
5-2173	5-2173	One (1) Tecogen/CM75 natural gas-fired boiler rated at 1.0 MMBtu/hr heat input.	2013

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Emissions Unit Number	MDE - ARA Registration Number	Emissions Unit Name and Description	Date of Installation
		General Permit issued 12/11/2013	
5-2206	5-2206	One (1) Cleaver Brooks CBEX Elite natural gas fired boiler rated at 12.5 MMBtu/hr	2015
9-1179	9-1179	One (1) 650 kW Emergency Generator	2006
9-1282	9-1282	One (1) Kohler diesel-fired emergency generator rated at 1000 kW	2013
9-1379	9-1379	One (1) Detroit Diesel, Series 60 diesel fired emergency generator rated at 543 horsepower. (Manufacture Date: 9/2006)	2007
9-1380	9-1380	One (1) Detroit Diesel, model 6063HK35 diesel fired emergency generator rated at 685 horsepower. (Manufacture Date: 2/2003)	2003
9-1381	9-1381	One (1) Kohler, model KTTA19G diesel fired emergency generator rated at 685 horsepower. (Manufacture Date: 3/1989)	1989
9-1382	9-1382	One (1) Cummins, model QSX15-G9 diesel fired emergency generator rated at 755 horsepower. (Manufacture Date: 5/2011)	2011

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SECTION II GENERAL CONDITIONS

1. DEFINITIONS

[COMAR 26.11.01.01] and [COMAR 26.11.02.01]

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

2. ACRONYMS

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

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

3. EFFECTIVE DATE

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

4. PERMIT EXPIRATION

[COMAR 26.11.03.13B(2)]

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

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

5. PERMIT RENEWAL

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

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

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

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6. CONFIDENTIAL INFORMATION

[COMAR 26.11.02.02G]

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

7. PERMIT ACTIONS

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

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

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

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

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

8. PERMIT AVAILABILITY

[COMAR 26.11.02.13G]

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

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

[COMAR 26.11.03.20B]

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

10. TRANSFER OF PERMIT

[COMAR 26.11.02.02E]

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

11. REVISION OF PART 70 PERMITS – GENERAL CONDITIONS

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

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

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

12. SIGNIFICANT PART 70 OPERATING PERMIT MODIFICATIONS

[COMAR 26.11.03.17]

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

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

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

13. MINOR PERMIT MODIFICATIONS

[COMAR 26.11.03.16]

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

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

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

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

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

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

14. ADMINISTRATIVE PART 70 OPERATING PERMIT AMENDMENTS

[COMAR 26.11.03.15]

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

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

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

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15. OFF-PERMIT CHANGES TO THIS SOURCE

[COMAR 26.11.03.19]

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

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

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

16. ON-PERMIT CHANGES TO SOURCES

[COMAR 26.11.03.18]

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

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

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

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

17. FEE PAYMENT

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

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

18. REQUIREMENTS FOR PERMITS-TO-CONSTRUCT AND APPROVALS

[COMAR 26.11.02.09.]

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

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

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

19. CONSOLIDATION OF PROCEDURES FOR PUBLIC PARTICIPATION

[COMAR 26.11.02.11C] and [COMAR 26.11.03.01K]

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

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

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

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20. PROPERTY RIGHTS

[COMAR 26.11.03.06E(4)]

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

21. SEVERABILITY

[COMAR 26.11.03.06A(5)]

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

22. INSPECTION AND ENTRY

[COMAR 26.11.03.06G(3)]

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

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

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23. DUTY TO PROVIDE INFORMATION

[COMAR 26.11.03.06E(5)]

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

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

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

24. COMPLIANCE REQUIREMENTS

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

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

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

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

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

25. CREDIBLE EVIDENCE

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

26. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE

[COMAR 26.11.03.06E(2)]

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

27. CIRCUMVENTION

[COMAR 26.11.01.06]

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

28. PERMIT SHIELD

[COMAR 26.11.03.23]

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

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

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

29. ALTERNATE OPERATING SCENARIOS

[COMAR 26.11.03.06A(9)]

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

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SECTION III PLANT WIDE CONDITIONS

1. PARTICULATE MATTER FROM CONSTRUCTION AND DEMOLITION

[COMAR 26.11.06.03D]

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

2. OPEN BURNING

[COMAR 26.11.07]

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

3. AIR POLLUTION EPISODE

[COMAR 26.11.05.04]

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

4. REPORT OF EXCESS EMISSIONS AND DEVIATIONS

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

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

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

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

5. ACCIDENTAL RELEASE PROVISIONS

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

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

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

6. GENERAL TESTING REQUIREMENTS

[COMAR 26.11.01.04]

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

7. EMISSIONS TEST METHODS

[COMAR 26.11.01.04]

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

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.

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

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9. COMPLIANCE CERTIFICATION REPORT

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

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

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

10. CERTIFICATION BY RESPONSIBLE OFFICIAL

[COMAR 26.11.02.02F]

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

The certification shall be in the following form:

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

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

11. SAMPLING AND EMISSIONS TESTING RECORD KEEPING

[COMAR 26.11.03.06C(5)]

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

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

12. GENERAL RECORDKEEPING

[COMAR 26.11.03.06C(6)]

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

These records and support information shall include:

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

13. GENERAL CONFORMITY

[COMAR 26.11.26.09]

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

14. ASBESTOS PROVISIONS

[40 CFR 61, Subpart M]

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

15. OZONE DEPLETING REGULATIONS

[40 CFR 82, Subpart F]

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

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

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

16. ACID RAIN PERMIT

Not applicable

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SECTION IV PLANT SPECIFIC CONDITIONS

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

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

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

Table IV – 1	
1.0	<p><u>Emissions Unit Number(s): Natural gas fired boilers rated between 10 and 100 MMBtu/hr constructed before June 9, 1989</u></p> <p><u>5-0763</u>: One (1) Keeler natural gas and No. 2 fuel oil (only during periods of natural gas curtailment) firing boiler rated at 98 MMBtu/hr heat input equipped with low NO_x burners. Boiler #1.</p> <p><u>5-0533 thru 5-0535</u>: Three (3) Babcock & Wilcox natural gas and No. 2 fuel oil (only during periods of natural gas curtailment) firing boilers each rated at 62 MMBtu/hr heat input equipped with low NO_x burners. Boiler #2, #3, & #4 respectively.</p>
1.1	<p><u>Applicable Standards/Limits:</u></p> <p>A. <u>Visible Emissions Limitations</u></p> <p>1. COMAR 26.11.09.05A(2), <u>Fuel Burning Equipment</u>. “Areas III and IV. In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.”</p>

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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.

B. Control of Sulfur Oxides

COMAR 26.11.09.07A(2), 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: In Areas III and IV: (b) Distillate fuel oils, 0.3 percent.”

Note: *Condition B applies only while burning fuel oil which may only occur during times of natural gas curtailment.*

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 MMBtu/hr or Less. A person who owns or operates fuel-burning equipment with a rated heat input capacity of 100 MMBtu/hr or less shall:
 - a. Submit to the Department an identification of each affected installation, the rated heat input capacity of each installation, and the type of fuel burned in each;
 - b. Perform a combustion analysis for each installation at least once each year and optimize combustion based on the analysis;
 - c. Maintain the results of the combustion analysis at the site for at least 2 years and make this data available to the Department and the EPA upon request;

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Table IV – 1	
	<p>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</p> <p>e. Prepare and maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request.</p> <p>D. <u>Operational Limit</u></p> <p>1. The Permittee shall burn only natural gas or No. 2 fuel oil in the boilers unless the Permittee applies for and obtains a Permit to Construct from the Department to burn an alternate fuel. [Reference: COMAR 26.11.02.09A]</p> <p>2. The Permittee shall burn gaseous fuel in the boiler not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment, gas supply interruption, startups, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year. [Reference: 40 CFR §63.11237]</p>
1.2	<p><u>Testing Requirements:</u></p> <p>A. <u>Visible Emissions Limitations</u></p> <p>See Monitoring Requirements.</p> <p>B. <u>Control of Sulfur Oxides</u></p> <p>See Monitoring Requirements.</p> <p>C. <u>Control of Nitrogen Oxides</u></p> <p>The Permittee shall perform a combustion analysis once a year. [Reference: COMAR 26.11.09.08E(2)]</p> <p>D. <u>Operational Limit</u></p> <p>See Record Keeping Requirements.</p>

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Table IV – 1

1.3	<p><u>Monitoring Requirements:</u></p> <p>A. <u>Visible Emissions Limitations</u></p> <p>1. The Permittee shall:</p> <ul style="list-style-type: none">a. Properly operate and maintain the boilers in a manner to prevent visible emissions; andb. Verify no visible emissions when burning No. 2 fuel oil. The Permittee shall perform a visual observation for a 6-minute period once for each 168 hours that the boiler burns oil or at a minimum of once per year. [Authority: COMAR 26.11.03.06C] <p><i>Note: If a unit burns No. 2 fuel oil for less than 100 hours in a calendar year, this requirement is waived for that unit for that calendar year.</i></p> <p>2. The Permittee shall perform the following, if emissions are visible:</p> <ul style="list-style-type: none">a. Inspect combustion control system and boiler operations,b. Perform all necessary adjustments and/or repairs to the boiler within 48 hours, so that visible emissions are eliminated;c. Document in writing the results of the inspections, adjustments and/or repairs to the boiler; andd. After 48 hours, if the required adjustments and/or repairs had not eliminated the visible emissions, perform Method 9 observations once daily for 18 minutes until corrective actions have eliminated the visible emissions. [Authority: COMAR 26.11.03.06C] <p>B. <u>Control of Sulfur Oxides</u></p> <p>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]</p> <p>C. <u>Control of Nitrogen Oxides</u></p> <p>The Permittee shall optimize combustion based on the annual combustion analysis. [Reference: COMAR 26.11.09.08E(2)]</p> <p>D. <u>Operational Limit</u></p> <p>See Recording Keeping Requirements.</p>
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Table IV – 1	
1.4	<p><u>Record Keeping Requirements:</u></p> <p>All records must be maintained for a period of 5 years. [Reference: COMAR 26.11.03.06.C (5)(g)]</p> <p>A. <u>Visible Emissions Limitations</u></p> <p>The Permittee shall:</p> <ul style="list-style-type: none"> a. Maintain an operation manual and prevention maintenance plan on site; b. Maintain a record of the maintenance performed that relates to combustion performance; c. Maintain a log of visible emissions observations performed and make it available to the Department’s representative upon request; and d. Maintain a record of the hours that No. 2 fuel oil is burned. [Reference: COMAR 26.11.03.06C] <p>B. <u>Control of Sulfur Oxides</u></p> <p>The Permittee shall maintain records of fuel supplier’s certification and shall make records available to the Department upon request. [Reference: COMAR 26.11.03.06C]</p> <p>C. <u>Control of Nitrogen Oxides</u></p> <p>The Permittee shall maintain:</p> <ul style="list-style-type: none"> a. Records of the results of the annual combustion analysis on site. b. Record of training program attendance for each operator at the site. [Reference: COMAR 26.11.09.08E(5)] <p>D. <u>Operational Limit</u></p> <p>The Permittee shall maintain records of the quantity and types of fuel burned. [Reference: COMAR 26.11.02.19C(1)(c)]</p>
1.5	<p><u>Reporting Requirements:</u></p> <p>A. <u>Visible Emissions Limitations</u></p> <p>The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, “Report of</p>

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	<p>Excess Emissions and Deviations”.</p> <p>B. <u>Control of Sulfur Oxides</u></p> <p>The Permittee shall report fuel supplier certification to the Department upon request. [Reference: COMAR 26.11.09.07C]</p> <p>C. <u>Control of Nitrogen Oxides</u></p> <p>The Permittee shall submit:</p> <ul style="list-style-type: none"> a. The results of combustion analysis to the department and the EPA upon request. [Reference: COMAR 26.11.09.08E(3)] b. A record of training program attendance for each operator to the Department upon request. [Reference: COMAR 26.11.09.08E(5)] <p>D. <u>Operational Limit</u></p> <p>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. [Reference: COMAR 26.11.03.06C]</p>

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

Table IV – 2	
2.0	<p><u>Emissions Unit Number(s): Boilers used for Space Heating</u></p> <p><u>5-0964 & 5-0965</u>: Two (2) natural gas-fired boilers each rated at 1.6 MMBtu/hr heat input.</p> <p><u>5-1861 thru 5-1863</u>: Three (3) TurboPower Gas Water Heaters Model 1500N500A-TP fired on natural gas and each rated at 1.2 MMBtu/hr heat input.</p> <p><u>5-1864 thru 5-1866</u>: Three (3) TurboPower Gas Water Heaters Model 2000N750A-TP fired on natural gas and each rated at 1.6 MMBtu/hr heat input.</p> <p><u>5-1885</u>: One (1) Columbia Boiler Co. natural gas fired boiler rated at 1.26 MMBtu/hr heat input.</p>

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	<p><u>5-2024 & 5-2025</u>: Two (2) Peerless natural gas fired boilers each rated at 2.1 MMBtu/hr heat input</p> <p><u>5-2031 & 5-2032</u>: Two (2) Teledyne-Laars natural gas fired boilers each rated at 1.67 MMBtu/hr heat input</p> <p><u>5-2035 & 5-2036</u>: Two (2) Teledyne Laars natural gas fired boilers each rated at 3.05 MMBtu/hr heat input</p> <p><u>5-2040 & 5-2041</u>: Two (2) Raychak hot water heaters fired on natural gas and each rated 1.069 MMBtu/hr heat input</p>
2.1	<p><u>Applicable Standards/Limits:</u></p> <p>A. <u>Visible Emissions Limitations</u></p> <ol style="list-style-type: none"> 1. COMAR 26.11.09.05A(2), <u>Fuel Burning Equipment</u>. “Areas III and IV. In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.” 2. COMAR 26.1.09.05A(3), <u>Exceptions</u>. “Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if: <ol style="list-style-type: none"> a. The visible emissions are not greater than 40 percent opacity; and b. The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period. <p>B. <u>Control of Nitrogen Oxides</u></p> <ol style="list-style-type: none"> 1. COMAR 26.11.09.08B(5), <u>Operator Training</u>. <ol style="list-style-type: none"> a. For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation. b. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.

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	<p>2. COMAR 26.11.09.08F - <u>Requirements for Space Heaters.</u></p> <p>a. A person who owns or operates a space heater as defined in Regulation .01B of this chapter shall:</p> <ul style="list-style-type: none"> i. Submit to the Department a list of each affected installation on the premises and the types of fuel used in each installation; ii. Develop an operating and maintenance plan to minimize NO_x emissions based on the recommendations of equipment vendors and other information including the source's operating and maintenance experience; iii. Implement the operating and maintenance plan and maintain the plan at the premises for review upon request by the Department; iv. Require installation operators to attend in-State operator training programs once every 3 years on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and v. Prepare and maintain a record of training program attendance for each operator at the site and make these records available to the Department upon request. <p>b. A person who owns or operates an installation that no longer qualifies as a space heater shall inform the Department not later than 60 days after the date when the fuel-burning equipment did not qualify, and shall meet the applicable fuel-burning equipment RACT requirement in this regulation.</p> <p>C. <u>Operational Limits</u></p> <p>The Permittee shall burn natural gas only in the boilers unless the Permittee applies for and obtains a Permit to Construct from the Department to burn an alternate fuel. [Reference: COMAR 26.11.02.09A]</p>
<p>2.2</p>	<p><u>Testing Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u></p> <p>See Monitoring Requirements.</p> <p>B. <u>Control of Nitrogen Oxides</u></p> <p>See Monitoring Requirements.</p>

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	<p>C. <u>Operational Limits</u></p> <p>See Record Keeping Requirements.</p>
2.3	<p><u>Monitoring Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u></p> <p>The Permittee shall properly operate and maintain the boilers in a manner to prevent visible emissions. [Reference: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Nitrogen Oxides</u></p> <p>The Permittee shall develop and implement an operating and maintenance plan as recommended by the equipment vendor to minimize NO_x emissions. [Reference: COMAR 26.11.09.08F(1)]</p> <p><i>Note: COMAR 26.11.09.08B(5)(a) states that “for the purpose 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.”</i></p> <p>C. <u>Operational Limits</u></p> <p>See Record Keeping Requirements.</p>
2.4	<p><u>Record Keeping Requirements:</u></p> <p>All records must be maintained for a period of 5 years. [Reference: COMAR 26.11.03.06.C (5)(g)]</p> <p>A. <u>Control of Visible Emissions</u></p> <p>The Permittee shall maintain an operations manual and preventive maintenance plan. The Permittee shall maintain a log of maintenance performed that relates to combustion performance. [Reference: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Nitrogen Oxides</u></p> <p>The Permittee shall maintain:</p> <ol style="list-style-type: none"> a. Records of maintenance performed that relates to combustion

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	<p>performance in keeping with the requirements of an operations and maintenance plan. [Reference: COMAR 26.11.09.08F(1)(c)]</p> <p>b. Record of training program attendance for each operator. [Reference: COMAR 26.11.09.08F(1)(e)]</p> <p>c. An operations manual and preventive maintenance plan. [Reference: COMAR 26.11.09.08F(1)(b)]</p> <p>d. Records of fuel use that demonstrate that the boiler meets the definition of a space heater. [Reference: COMAR 26.11.09.08K(3) and COMAR 26.11.03.06C]</p> <p>C. <u>Operational Limits</u></p> <p>The Permittee shall maintain records of the quantity and types of fuel burned. [Reference: COMAR 26.11.02.19C(1)(c)]</p>
2.5	<p><u>Reporting Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u></p> <p>The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, “Report of Excess Emissions and Deviations”. [Reference: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Nitrogen Oxides</u></p> <p>The Permittee shall submit: a record of training program attendance for each operator to the Department upon request. [Reference: COMAR 26.11.09.08F(1)(e)]</p> <p>C. <u>Operational Limits</u></p> <p>The Permittee shall submit a record of the quantity of each type of fuel burned with the annual emission certification report that is due April 1 of each year. [Reference: COMAR 26.11.02.19C(2)]</p>

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

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Table IV – 3	
3.0	<p><u>Emissions Unit Number(s) – NSPS Boilers</u></p> <p><u>5-1728 & 5- 1729</u>: Two (2) Cleaver Brooks natural gas fired boilers each rated at 10.206 MMBtu/hr with diesel as backup equipped with low NO_x burners and flue gas recirculation.</p> <p><u>5-1867 & 5-1868</u>: Two (2) HB Smith natural gas-fired hot water boilers each rated at 17.6 MMBtu/hr.</p> <p><u>5-2206</u>: One (1) Cleaver Brooks CBEX Elite Boiler natural gas boiler rated at 12.5 MMBtu/hr.</p>
3.1	<p><u>Applicable Standards/Limits:</u></p> <p>A. <u>Control of Visible Emissions</u></p> <ol style="list-style-type: none"> 1. COMAR 26.11.09.05A(2), <u>Fuel Burning Equipment</u>. “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), <u>Exceptions</u>. “Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if: <ol style="list-style-type: none"> a. The visible emissions are not greater than 40 percent opacity; and b. The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period. <p>B. <u>Control of Nitrogen Oxides</u></p> <ol style="list-style-type: none"> 1. COMAR 26.11.09.08B(5), <u>Operator Training</u>. <ol style="list-style-type: none"> a. For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation. b. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.

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2. COMAR 26.11.09.08E, Requirements for Fuel-Burning Equipment with a Rated Heat Input Capacity of 100 MMBtu/hr or Less. A person who owns or operates fuel-burning equipment with a rated heat input capacity of 100 MMBtu/hr 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.

Condition C applies to ARA Registration Nos. 510-0077-5-1728 and 5-1729 only.

C. Control of Sulfur Oxides

COMAR 26.11.09.07A(2) - 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: In Areas III and IV: (b) Distillate fuel oils, 0.3 percent.”

Note: *This condition only applies when these boilers are firing No. 2 fuel oil.*

D. Operational Limitations

1. The Permittee shall burn only natural gas in the two HB Smith and one Cleaver Brooks CBEX boilers (ARA Registration Nos. 510-0077-5-1867, 5-1867, and 5-2206) unless the Permittee applies for and obtains an approval from the Department to burn an alternate fuel.
[Reference: COMAR 26.11.02.09A]

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	<p>2. The Permittee shall burn gaseous fuel in the two Cleaver Brooks boilers (ARA Registration Nos. 510-0077-5-1867 and 5-1868) not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment, gas supply interruption, startups, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year. [Reference: 40 CFR §63.11237]</p>
3.2	<p><u>Testing Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> See Monitoring Requirements.</p> <p>B. <u>Control of Nitrogen Oxides</u> The Permittee shall perform a combustion analysis once a year. [Reference: COMAR 26.11.09.08E(2)]</p> <p>C. <u>Control of Sulfur Oxides</u> See Monitoring Requirements.</p> <p>D. <u>Operational Limitations</u> See Record Keeping Requirements.</p>
3.3	<p><u>Monitoring Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> The Permittee shall properly operate and maintain the boilers in a manner to prevent visible emissions. [Reference: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Nitrogen Oxides</u> The Permittee shall optimize combustion based on the annual combustion analysis. [Reference: COMAR 26.11.09.08E(2)]</p> <p>C. <u>Control of Sulfur Oxides</u> The Permittee shall obtain a certification from the fuel supplier indicating</p>

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	<p>that the oil complies with the limitation on the sulfur content of the fuel oil. [Reference: COMAR 26.11.03.06C]</p> <p>D. <u>Operational Limitations</u></p> <p>See Record Keeping Requirements.</p>
3.4	<p><u>Record Keeping Requirements:</u></p> <p>All records must be maintained for a period of 5 years. [Reference: COMAR 26.11.03.06.C (5)(g)]</p> <p>A. <u>Control of Visible Emissions</u></p> <p>The Permittee shall maintain an operations manual and preventive maintenance plan. The Permittee shall maintain a log of maintenance performed that relates to combustion performance. [Reference: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Nitrogen Oxides</u></p> <p>The Permittee shall maintain:</p> <ol style="list-style-type: none"> a. Records of the results of the annual combustion analysis on site. b. Record of training program attendance for each operator at the site. [Reference: COMAR 26.11.09.08E(5)] <p>C. <u>Control of Sulfur Oxides</u></p> <p>The Permittee shall maintain records of fuel supplier’s certification and shall make records available to the Department upon request. [Reference: COMAR 26.11.03.06C]</p> <p>D. <u>Operational Limitations</u></p> <ol style="list-style-type: none"> 1. The Permittee may elect to record and maintain records of the amount of each fuel combusted during each calendar month as an alternative to the fuel certification in 40 CFR §60.48c(f) to demonstrate compliance with the SO₂ standard. [Reference: 40 CFR §60.48c(g)(2)] 2. The Permittee shall maintain records of the quantity and types of fuel burned in each boiler. [Reference: COMAR 26.11.02.19C(1)(c)]

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3.5	<p><u>Reporting Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u></p> <p>The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, “Report of Excess Emissions and Deviations”. [Reference: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Nitrogen Oxides</u></p> <p>The Permittee shall submit:</p> <ul style="list-style-type: none">a. The results of combustion analysis to the department and the EPA upon request. [Reference: COMAR 26.11.09.08E(3)]b. A record of training program attendance for each operator to the Department upon request. [Reference: COMAR 26.11.09.08E(5)] <p>C. <u>Control of Sulfur Oxides</u></p> <p>The Permittee shall report fuel supplier certification to the Department upon request. [Reference: COMAR 26.11.09.07C]</p> <p>D. <u>Operational Limitations</u></p> <ul style="list-style-type: none">1. The Permittee shall submit all reports to the Administrator and all reports shall be postmarked by the 30th day following the end of the reporting period. The reporting period for the reports required under 40 CFR Part 60, Subpart Dc is each six-month period. [Reference: 40 CFR §60.48c(j)]2. 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.
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“A permit shield shall cover the applicable requirements identified for the emissions unit(s) listed in the table above.”

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4.0	<p><u>Emissions Unit Number(s): Boilers rated less than 10 MMBtu/hr</u></p> <p><u>5-2026 & 5-2027</u>: One (1) Teledyne-Laars natural gas-fired boiler rated at 1.2 MMBtu/hr heat input</p> <p><u>5-2028 & 5-2029</u>: Two (2) Teledyne-Laars natural gas-fired hot water heaters each rated at 1.43 MMBtu/hr heat input</p> <p><u>5-2030</u>: One (1) Teledyne-Laars natural gas-fired hot water heaters rated at 1.2 MMBtu/hr heat input</p> <p><u>5-2033 & 5-2034</u>: Two (2) Jarco natural gas-fired hot water heaters each rated at 1.4 MMBtu/hr heat input.</p> <p><u>5-2173</u>: One (1) Tecogen/CM75 natural gas-fired boiler rated at 1.0 MMBtu/hr heat input.</p>
4.1	<p><u>Applicable Standards/Limits:</u></p> <p>A. <u>Control of Visible Emissions</u></p> <ol style="list-style-type: none"> 1. COMAR 26.11.09.05A(2), <u>Fuel Burning Equipment</u>. “Areas III and IV. In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.” 2. COMAR 26.1.09.05A(3), <u>Exceptions</u>. “Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if: <ol style="list-style-type: none"> a. The visible emissions are not greater than 40 percent opacity; and b. The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period. <p>B. <u>Control of Nitrogen Oxides</u></p> <ol style="list-style-type: none"> 1. COMAR 26.11.09.08B(5), <u>Operator Training</u>. <ol style="list-style-type: none"> a. For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.

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	<p>b. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.</p> <p>2. COMAR 26.11.09.08E, <u>Requirements for Fuel-Burning Equipment with a Rated Heat Input Capacity of 100 MMBtu/hr or Less</u>. A person who owns or operates fuel-burning equipment with a rated heat input capacity of 100 MMBtu/hr or less shall:</p> <ul style="list-style-type: none"> a. Submit to the Department an identification of each affected installation, the rated heat input capacity of each installation, and the type of fuel burned in each; b. Perform a combustion analysis for each installation at least once each year and optimize combustion based on the analysis; c. Maintain the results of the combustion analysis at the site for at least 2 years and make this data available to the Department and the EPA upon request; d. Once every 3 years, require each operator of the installation to attend operator training programs on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and e. Prepare and maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request. <p>C. <u>Operational Limits</u></p> <p>The Permittee shall burn natural gas only in the boilers unless the Permittee applies for and obtains an approval from the Department to burn an alternate fuel. [Reference: COMAR 26.11.02.09A]</p>
<p>4.2</p>	<p><u>Testing Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u></p> <p>See Monitoring Requirements.</p> <p>B. <u>Control of Nitrogen Oxides</u></p> <p>The <u>Permittee</u> shall perform a combustion analysis once a year. [Reference: COMAR 26.11.09.08E(2)]</p>

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	<p>C. <u>Operational Limits</u></p> <p>See Record Keeping Requirements.</p>
4.3	<p><u>Monitoring Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u></p> <p>The Permittee shall properly operate and maintain the boilers in a manner to prevent visible emissions. [Reference: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Nitrogen Oxides</u></p> <p>The Permittee shall optimize combustion based on the annual combustion analysis. [Reference: COMAR 26.11.09.08E(2)]</p> <p>C. <u>Operational Limits</u></p> <p>See Record Keeping Requirements.</p>
4.4	<p><u>Record Keeping Requirements:</u></p> <p>All records must be maintained for a period of 5 years. [Reference: COMAR 26.11.03.06.C (5)(g)]</p> <p>A. <u>Control of Visible Emissions</u></p> <p>The Permittee shall maintain an operations manual and preventive <u>maintenance</u> plan. The Permittee shall maintain a log of maintenance performed that relates to combustion performance. [Reference: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Nitrogen Oxides</u></p> <p>The Permittee shall maintain:</p> <ol style="list-style-type: none"> a. Records of the results of the annual combustion analysis on site. b. Record of training program attendance for each operator at the site. [Reference: COMAR 26.11.09.08E(5)] <p>C. <u>Operational Limits</u></p> <p>The Permittee shall maintain records of the quantity and types of fuel</p>

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Table IV – 4	
	burned. [Reference: COMAR 26.11.02.19C(1)(c)]
4.5	<p><u>Reporting Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u></p> <p>The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, “Report of Excess Emissions and Deviations”. [Reference: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Nitrogen Oxides</u></p> <p>The Permittee shall submit:</p> <ul style="list-style-type: none"> a. The results of combustion analysis to the department and the EPA upon request. [Reference: COMAR 26.11.09.08E(3)] b. A record of training program attendance for each operator to the Department upon request. [Reference: COMAR 26.11.09.08E(5)] <p>C. <u>Operational Limits</u></p> <p>The Permittee shall submit records of the quantity and type of fuels burned with the annual emissions certification report. See permit condition 8 of Section III.</p>

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

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5.0	<p><u>Emissions Unit Number(s): Emergency generator exempt from NSPS</u></p> <p><u>9-1179</u>: One (1) diesel fired emergency generator rated at 650 kW</p> <p><u>9-1380</u>: One (1) diesel fired Detroit Diesel emergency generator rated at 685 horsepower.</p> <p><u>9-1381</u>: One (1) diesel fired Kohler emergency generators rated at 685 horsepower</p>
5.1	<p><u>Applicable Standards/Limits:</u></p> <p>A. <u>Control of Visible Emissions</u></p>

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	<ol style="list-style-type: none">1. COMAR 26.11.09.05E(2), <u>Emissions During Idle Mode</u>. “A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.”2. COMAR 26.11.09.05E(3), <u>Emissions During Operating Mode</u>. “A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.”3. COMAR 26.11.09.05E(4), <u>Exceptions</u>.<ol style="list-style-type: none">a. “Section E(2) 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) does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:<ol style="list-style-type: none">i. Engines that are idled continuously when not in service: 30 minutes;ii. All other engines: 15 minutes.c. Section E(2) and (3) does not apply while maintenance, repair, or testing is being performed by qualified mechanics.” <p>B. <u>Control of Sulfur Oxides</u></p> <p>COMAR 26.11.09.07A(2), <u>Sulfur Content Limitations for Fuel</u>. “A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations: In Areas III and IV: (b) Distillate fuel oils, 0.3 percent.”</p> <p>C. <u>Control of Nitrogen Oxides</u></p> <ol style="list-style-type: none">1. COMAR 26.11.09.08B(5) - <u>Operator Training</u>.<ol style="list-style-type: none">a. For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.b. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.
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2. COMAR 26.11.09.08G – Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 Percent or Less.

- 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. 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
 - v. Maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request.

D. Operational Limits

- 1. The Permittee shall use diesel fuel only in the emergency generator unless the Permittee applies for and obtain approval from the Department to burn an alternate fuel. **[Reference: COMAR 26.11.02.09A]**
- 2. The Permittee must operate emergency stationary RICE according to the requirements in the paragraphs of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year is prohibited. If you do not operate the engine according to the requirements in the paragraphs of this section, the engine will not be considered an emergency engine under 40 CFR Part 63 Subpart ZZZZ and must meet all requirements for non-emergency engines.
 - a. There is no limit on emergency operation of the engine.
 - b. The Permittee may operate the emergency engines for the purpose of maintenance checks and readiness testing,

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	<p>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 for a maximum of 100 hours per calendar year.</p> <p>c. The Permittee may operate the emergency engine for up to 50 hours per year in non-emergency situations, but those 50 hours are counted toward the 100 hours per year provided for the maintenance and testing and emergency response. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [Reference: 40 CFR §63.6640(f)(1), (2), and (4)]</p>
5.2	<p><u>Testing Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u> See Monitoring Requirements.</p> <p>B. <u>Control of Sulfur Oxides</u> See Monitoring Requirements.</p> <p>C. <u>Control of Nitrogen Oxides</u> The Permittee shall perform a combustion analysis and optimize combustion at least once annually for any of the engines that operates more than 500 hours during a calendar year. [Reference: COMAR 26.11.09.08G(1)(b)]</p> <p>D. <u>Operational Limits</u> See Monitoring Requirements.</p>
5.3	<p><u>Monitoring Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u></p>

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	<p>The Permittee shall properly operate and maintain the engine in a manner to minimize visible emissions. [Reference: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Sulfur Oxides</u></p> <p>The Permittee shall obtain a certification from the fuel supplier indicating that the fuel oil complies with the limitation on sulfur content of the fuel oil. [Reference: COMAR 26.11.03.06C]</p> <p>C. <u>Control of Nitrogen Oxides</u></p> <p>For engines that operate more than 500 hours during a calendar year, the Permittee shall perform a combustion analysis and optimize combustion. [Reference: COMAR 26.11.03.06C].</p> <p>D. <u>Operational Limits</u></p> <p>The Permittee shall monitor fuel usage for the generator. [Reference: COMAR 26.11.03.06C]</p>
5.4	<p><u>Record Keeping Requirements:</u></p> <p>All records must be maintained for a period of 5 years. [Reference: COMAR 26.11.03.06.C (5)(g)]</p> <p>A. <u>Control of Visible Emissions</u></p> <p>The Permittee shall retain records of preventive maintenance on site for at least five years and make these records available to the Department upon request. [Reference: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Sulfur Oxides</u></p> <p>The Permittee shall retain annual fuel supplier certifications stating that the fuel oil is in compliance with this regulation must be maintained for at least 5 years. [Reference: COMAR 26.11.09.07C]</p> <p>C. <u>Control of Nitrogen Oxides</u></p> <p>The Permittee shall:</p> <ol style="list-style-type: none"> a. Maintain the results of the combustion analysis at the site for at least 5 years and make these results available to the Department and the EPA upon request. [Reference: COMAR

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	<p>26.11.09.08G(1)(c) & COMAR 26.11.03.06C].</p> <p>b. Retain records of training program attendance for each operator at the site for at least 5 years and make these records available to the Department upon request. [Reference: COMAR 26.11.09.08G(1)(e) and COMAR 26.11.03.06C].</p> <p>D. <u>Operational Limits</u></p> <p>1. The Permittee shall maintain a log for the emergency generator indicating the amount of fuel oil combusted, the hours of operation and the reason for generator operation. [Reference: COMAR 26.11.03.06C].</p> <p>2. The Permittee shall maintain on site for the life of the source the following records for the emergency diesel generator(s):</p> <p>a. Documentation of the manufacture date of the diesel engine, if manufactured prior to April 1, 2006 and the manufacturer model year of the diesel engine; and</p> <p>b. The installation date of the emergency diesel generator. [Reference: COMAR 26.11.03.06C]</p>
5.5	<p><u>Reporting Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u></p> <p>The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, Plant Wide Condition, “Report of Excess Emissions and Deviations” [Reference: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Sulfur Oxides</u></p> <p>The Permittee shall report annual fuel supplier certification to the Department upon request. [Reference: COMAR 26.11.09.07C]</p> <p>C. <u>Control of Nitrogen Oxides</u></p> <p>1. The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing as part of the April 1 certification report. [Reference: COMAR 26.11.09.08G(1)(a) & COMAR 26.11.03.06C]</p> <p>2. The Permittee shall submit a list of trained operators to the Department upon request. [Reference: COMAR 26.11.09.08G(e) and COMAR 26.11.03.06C]</p>

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D. <u>Operational Limits</u>	<p>The Permittee shall send a copy of the log for the emergency generator indicating the amount of fuel oil combusted, the hours of operation and the reason for generator operation to the Department in the annual emission certification report due on April 1 of each year. [Reference: COMAR 26.11.03.06C]</p>

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

Table IV – 6	
6.0	<p><u>Emissions Unit Number(s): NSPS emergency generators</u></p> <p><u>9-1282</u>: One (1) Kohler diesel fired emergency generator rated at 1000 kW.</p> <p><u>9-1379</u>: One (1) diesel fired Detroit Diesel, Series 60 emergency generator rated at 543 horsepower. (Manufacture Date: 9/2006)</p> <p><u>9-1382</u>: One (1) diesel fired Cummins, model QSX15-G9 emergency generator rated at 755 horsepower. (Manufacture Date: 5/2011)</p>
6.1	<p><u>Applicable Standards/Limits:</u></p> <p>A. <u>Control of Visible Emissions</u></p> <ol style="list-style-type: none"> 1. COMAR 26.11.09.05E(2), <u>Emissions During Idle Mode.</u> “A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.” 2. COMAR 26.11.09.05E(3), <u>Emissions During Operating Mode.</u> “A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.” 3. COMAR 26.11.09.05E(4), <u>Exceptions.</u> <ol style="list-style-type: none"> a. “Section E(2) 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) does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:

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- i. Engines that are idled continuously when not in service: 30 minutes;
- ii. All other engines: 15 minutes.
- c. Section E(2) and (3) does not apply while maintenance, repair, or testing is being performed by qualified mechanics.”

B. Control of Sulfur Oxides

COMAR 26.11.09.07A(2), 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: In Areas III and IV: (b) Distillate fuel oils, 0.3 percent.”

***Note:** Installations subject to 40 CFR Part 60 Subpart IIII must comply with the diesel fuel standards of §60.4207 which limits the maximum sulfur content of fuel to 15 ppm.*

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, Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 Percent or Less.

- 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. Require each operator of an installation, except combustion

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- 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
- v. Maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request.

D. Operational Limits

1. The Permittee shall use diesel fuel only in the emergency generator unless the Permittee applies for and obtains a Permit to Construct from the Department to burn alternate fuel. **[Reference: COMAR 26.11.02.09A]**
2. The Permittee must operate and maintain the generators in a manner that achieve the emissions standards over the entire life of the engine. **[Reference: 40 CFR §60.4206]**
3. The Permittee must meet the non-road diesel fuel sulfur requirements of 40 CFR §80.510(b) as follows:
 - a. Maximum sulfur content 15 ppm and
 - b. Minimum cetane index of 40; or
 - c. Maximum aromatic content of 35 volume percent.**[Reference: 40 CFR §60.4207(b) and 40 CFR §80.510(b)]**
4. The Permittee must operate and maintain the stationary compression ignition internal combustion engines and control devices according to the manufacturer's emission related written instruction. **[Reference: 40 CFR §60.4211(a)(1)]**
5. The Permittee may change only those emission related settings that are permitted by the manufacturer. **[Reference: 40 CFR §60.4211(a)(2)]**
6. The Permittee must purchase an engine certified to the emission standards in 40 CFR §60.4205(b). The engine must be installed and configured according to the manufacturer's emissions related specifications. **[Reference: 40 CFR §60.4211(c)]**
7. The Permittee must not exceed the following opacity emission standards:
 - (a) 20 percent during the acceleration mode;
 - (b) 15 percent during the lugging mode; and

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(c) 50 percent during the peaks in either the acceleration or lugging modes. **[Reference: 40 CFR §60.4205(b), §60.4202(a)(2), and §89.113(a)]**

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

8. There is no time limit on the use of emergency stationary ICE (internal combustion engine) in emergency situations. **[Reference: 40 CFR §60.4211(f)(1)]**
9. The Permittee may operate the emergency stationary ICE for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine for a maximum of 100 hours per calendar year. The Permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year. **[Reference: 40 CFR §60.4211(f)(2)(i)]**
10. The Permittee may operate the emergency stationary ICE for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in the previous paragraph of this section. The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. **[Reference: 40 CFR §60.4211(f)(3)]**

Note: Effective May 2, 2016, emergency generators are no longer allowed to participate in emergency demand response unless they meet the requirements of a non-emergency generator of the same model year. This engine does not meet the standards for a non-emergency generator, therefore, operation for demand response during periods of voltage deviation are no longer permitted.

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6.2	<p><u>Testing Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u></p> <p style="padding-left: 40px;">See Monitoring Requirements.</p> <p>B. <u>Control of Sulfur Oxides</u></p> <p style="padding-left: 40px;">See Monitoring Requirements.</p> <p>C. <u>Control of Nitrogen Oxides</u></p> <p style="padding-left: 40px;">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)]</p> <p>D. <u>Operational Limits</u></p> <p style="padding-left: 40px;">See Monitoring Requirements.</p>
6.3	<p><u>Monitoring Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u></p> <p style="padding-left: 40px;">The Permittee shall properly operate and maintain the engine in a manner to minimize visible emissions. [Reference: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Sulfur Oxides</u></p> <p style="padding-left: 40px;">The Permittee shall obtain a certification from the fuel supplier indicating that the fuel oil complies with the limitation on sulfur content of the fuel oil. [Reference: COMAR 26.11.03.06C]</p> <p>C. <u>Control of Nitrogen Oxides</u></p> <p style="padding-left: 40px;">1. For engines that operate more than 500 hours during a calendar year, the Permittee shall perform a combustion analysis and optimize combustion. [Reference: COMAR 26.11.03.06C].</p>

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	<p>2. The Permittee shall calculate the capacity factor of the engine within 30 days after the end of each month. [Reference: COMAR 26.11.03.06C]</p> <p>D. <u>Operational Limits</u></p> <p>The Permittee shall monitor fuel usage for the generator. [Reference: COMAR 26.11.03.06C]</p>
6.4	<p><u>Record Keeping Requirements:</u></p> <p>All records must be maintained for a period of 5 years. [Reference: COMAR 26.11.03.06.C (5)(g)]</p> <p>A. <u>Control of Visible Emissions</u></p> <p>The Permittee shall retain records of preventive maintenance on site for at least five years and make these records available to the Department upon request. [Reference: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Sulfur Oxides</u></p> <p>The Permittee shall retain annual fuel supplier certifications stating that the fuel oil is in compliance with this regulation must be maintained for at least 5 years. [Reference: COMAR 26.11.09.07C]</p> <p>C. <u>Control of Nitrogen Oxides</u></p> <p>1. The Permittee shall maintain records of the results of the combustion analyses and any stack tests on site for at least five years and make them available to the Department and EPA upon request. [Reference: COMAR 26.11.09.08G(1)(c) & COMAR 26.11.03.06C].</p> <p>2. The Permittee shall maintain a record of the calculated capacity factor. [Reference: COMAR 26.11.09.08G(1)(c)].</p> <p>3. The Permittee shall maintain record of training program attendance for each operator on site for at least five years and make the records available to the Department upon request. [Reference: COMAR 26.11.09.08G(e) & COMAR 26.11.03.06C]</p>

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	<p>D. <u>Operational Limits</u></p> <ol style="list-style-type: none"> 1. The Permittee shall maintain a log for the emergency generator indicating the amount of fuel oil combusted, the hours of operation and the reason for generator operation. [Reference: COMAR 26.11.03.06C]. 2. The Permittee shall maintain on site for the life of the source the following records for the emergency diesel generator(s): <ol style="list-style-type: none"> a. Documentation of the manufacture date of the diesel engine, if manufactured prior to April 1, 2006 and the manufacturer model year of the diesel engine; b. The installation date of each emergency diesel generator; and c. The certifications of compliance or manufacturer engine test data required by 40 CFR §60.4211 and §60.4214(b). [Reference: MDE Permit to Construct No. 510-0077-9-1282 issued June 21, 2013 and MDE Permit to Construct No. 510-0077-9-1378 & 1382 issued October 20, 2018] 3. Permittee shall for each fuel delivery obtain from the fuel supplier a fuel supplier certification consisting of the name of the oil supplier, the date of delivery, the amount of fuel delivered, and a statement from the fuel supplier that the diesel fuel oil complies with the specifications of 40 CFR §80.510. The Permittee shall maintain the required records on site for at least five (5) years. [Reference: MDE Permit to Construct No. 510-0077-9-1282 issued June 21, 2013 and MDE Permit to Construct No. 510-0077-9-1378 & 1382 issued October 20, 2018]
<p>6.5</p>	<p><u>Reporting Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u></p> <p>The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, Plant Wide Condition, “Report of Excess Emissions and Deviations” [Reference: COMAR 26.11.03.06C].</p> <p>B. <u>Control of Sulfur Oxides</u></p> <p>The Permittee shall report annual fuel supplier certification to the Department upon request. [Reference: COMAR 26.11.09.07C]</p>

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	<p>C. <u>Control of Nitrogen Oxides</u></p> <ol style="list-style-type: none"> 1. The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing as part of the April 1 certification report. [Reference: COMAR 26.11.03.06C]. 2. The Permittee shall submit a list of trained operators to the Department upon request. [Reference: COMAR 26.11.09.08G(e) and COMAR 26.11.03.06C] <p>D. <u>Operational Limits</u></p> <p>The Permittee shall report a copy of the log for the emergency generator indicating the amount of fuel oil combusted, the hours of operation and the reason for generator operation to the Department in the annual emission certification report due on April 1 of each year. [Reference: COMAR 26.11.03.06C]</p>

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

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7.0	<p><u>Emissions Unit Number(s): CHP and HRSG</u></p> <p>5-2067 – One (1) Combined Heat and Power (CHP) system consisting of 4.6 MW natural gas combustion turbine generator with Heat Recovery Steam Generator (HRSG). (510-0077-5-2067)</p>
7.1	<p><u>Applicable Standards/Limits:</u></p> <p>A. <u>Control of Visible Emissions</u></p> <ol style="list-style-type: none"> 1. COMAR 26.11.09.05A(2), <u>Fuel Burning Equipment</u>. “Areas III and IV. In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.”

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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.

B. Control of Sulfur Oxides

1. The Permittee must not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain SO₂ in excess of 110 nanograms per Joule (ng/J) (0.90 pounds per megawatt-hour (lb/MWh)) gross output. **[Reference: 40 CFR §60.4330(a)(1)]**
2. The Permittee must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input. If your turbine simultaneously fires multiple fuels, each fuel must meet this requirement. **[Reference: 40 CFR §60.4330(a)(2)]**

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 MMBtu/hr or Less. A person who owns or operates fuel-burning equipment with a rated heat input capacity of 100 MMBtu/hr 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

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	<p>the EPA upon request;</p> <p>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</p> <p>e. Prepare and maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request.</p> <p>3. The Permittee may not cause to be discharged into the atmosphere from the stationary combustion turbine NO_x emissions in excess of 25 ppm at 15 percent O₂ or 150 ng/J of useful output (1.2 lb/MWh). [Reference: 40 CFR §60.4320(a) and 40 CFR Part 60, Subpart KKKK Table 1]</p> <p>4. The Permittee must operate and maintain the stationary combustion turbine, 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)]</p> <p>D. <u>Operational Limits</u></p> <p>The CHP System which comprise of a 4.6 MW combustion turbine (CT) driven generator equipped with a heat recovery steam generator shall fire only natural gas unless the Permittee applies for and obtains a Permit to Construct from the Department to burn an alternate fuel. [Reference: MDE Permit to Construct No.510-0077-5-2067 issued May 18, 2010 & COMAR 26.11.02.09A]</p>
7.2	<p><u>Testing Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u></p> <p>See Monitoring Requirements.</p> <p>B. <u>Control of Sulfur Oxides</u></p> <p>The Permittee shall conduct performance test for SO_x in accordance with the methodologies specified in 40 CFR §60.4415. [Reference: 40 CFR §60.4415(a)]</p> <p>C. <u>Control of Nitrogen Oxides</u></p>

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1. The Permittee shall perform a combustion analysis once a year.
[Reference: COMAR 26.11.09.08E(2)]

2. The Permittee 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(a)]**

3. As an alternative to the annual performance testing required in 40 CFR §60.4340(a), the Permittee may install, calibrate, maintain and operate one of the following continuous monitoring systems:
 - a. Continuous emission monitoring as described in §60.4335(b) and §60.4345, or
 - b. Continuous parameter monitoring as follows:
 - i. For a diffusion flame turbine without add-on selective catalytic reduction (SCR) controls, you must define parameters indicative of the unit's NO_x formation characteristics, and you must monitor these parameters continuously.
 - ii. For any lean premix stationary combustion turbine, you must continuously monitor the appropriate parameters to determine whether the unit is operating in low-NO_x mode.
 - iii. For any turbine that uses SCR to reduce NO_x emissions, you must continuously monitor appropriate parameters to verify the proper operation of the emission controls.
 - iv. For affected units that are also regulated under 40 CFR Part 75, with state approval you can monitor the NO_x emission rate using the methodology in appendix E to part 75 of chapter 40, or the low mass emissions methodology in 40 CFR §75.19, the requirements of this paragraph (b) may be met by performing the parametric monitoring described in Section 2.3 of part 75 appendix E or in 40 CFR §75.19(c)(1)(iv)(H).

D. Operational Limits

See Record Keeping Requirements.

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7.3	<p><u>Monitoring Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u></p> <p>The Permittee shall properly operate and maintain the CHP System in a manner to prevent visible emissions. [Reference: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Sulfur Oxides</u></p> <ol style="list-style-type: none">1. The Permittee must monitor the total sulfur content of the fuel being fired in the turbine, except as provided in 40 CFR §60.4365. The sulfur content of the fuel must be determined using total sulfur methods described in 40 CFR §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 40 CFR §60.17), which measure the major sulfur compounds, may be used. [Reference: 40 CFR §60.4360]2. The Permittee may elect not to monitor the total sulfur content of the fuel combusted in the turbine, if the fuel is demonstrated not to exceed potential sulfur emissions of 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input for units located in continental areas and 180 ng SO₂/J (0.42 lb SO₂/MMBtu) heat input for units located in noncontinental areas or a continental area that the Administrator determines does not have access to natural gas and that the removal of sulfur compounds would cause more environmental harm than benefit. [Reference: 40 CFR §60.4365]3. If the Permittee elects not to demonstrate sulfur content using options in 40 CFR §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] <p>C. <u>Control of Nitrogen Oxides</u></p> <ol style="list-style-type: none">1. The Permittee shall optimize combustion based on the annual combustion analysis. [Reference: COMAR 26.11.09.08E(2)]
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2. The Permittee shall demonstrate continuous compliance with NO_x in accordance with 40 CFR §60.4340 as follows:
 - a. If the Permittee is not using water or steam injection to control NO_x emissions, The Permittee must perform annual performance tests in accordance with 40 CFR §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, The Permittee 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, The Permittee must resume annual performance tests.
 - b. As an alternative, you may install, calibrate, maintain and operate one of the following continuous monitoring systems:
 - i. Continuous emission monitoring as described in 40 CFR §60.4335(b) and 40 CFR §60.4345, or
 - ii. For a diffusion flame turbine without add-on selective catalytic reduction (SCR) controls, the Permittee must define parameters indicative of the unit's NO_x formation characteristics, and you must monitor these parameters continuously.
3. 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:
 - a. Selection of indicators to be monitored,
 - b. Ranges of indicators,
 - c. Process used to obtain representative data,
 - d. Quality assurance,
 - e. Frequency of monitoring, and
 - f. Justification for the proposed elements of monitoring. **[Reference 40 CFR §60.4355]**

D. Operational Limits

See Record Keeping Requirements.

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7.4	<p><u>Record Keeping Requirements:</u></p> <p>All records must be maintained for a period of 5 years. [Reference: COMAR 26.11.03.06.C (5)(g)]</p> <p>A. <u>Control of Visible Emissions</u></p> <p>The Permittee shall maintain an operations manual and preventive maintenance plan. The Permittee shall maintain a log of maintenance performed that relates to combustion performance. [Reference: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Sulfur Oxides</u></p> <p>The Permittee shall maintain records and results of fuel sulfur content monitoring and make them available to the Department upon request. [Reference: MDE Permit to Construct No. 510-0077-5-2067 issued May 18, 2010]</p> <p>C. <u>Control of Nitrogen Oxides</u></p> <p>1. The Permittee shall maintain:</p> <ul style="list-style-type: none">a. Records of the results of the annual combustion analysis on site. [Reference: COMAR 26.11.09.08E(5)]b. Record of training program attendance for each operator at the site. [Reference: COMAR 26.11.09.08E(5)] <p>2. The Permittee shall maintain:</p> <ul style="list-style-type: none">a. Records and results of any tests performed in compliance with the NO_x emission standards as required under 40 CFR §60.8 and 40 CFR 60, Subpart KKKK.b. Parametric monitoring plan in accordance with §60.4355 and submit a copy of the plan to the Department upon completion. [Reference: MDE Permit to Construct No. 510-0077-5-2067 issued May 18, 2010] <p>D. <u>Operational Limits</u></p> <p>1. The Permittee shall maintain records of the quantity and types of fuel burned. [Reference: COMAR 26.11.02.19C(1)(c)]</p> <p>2. The Permittee shall maintain logs of visible emissions observations performed during the annual stack test or at any</p>
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	other time and make available to the Department upon request. [Reference: MDE Permit to Construct No. 510-0077-5-2067 issued May 18, 2010 & COMAR 26.11.03.06C]
7.5	<p><u>Reporting Requirements:</u></p> <p>A. <u>Control of Visible Emissions</u></p> <p>The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, “Report of Excess Emissions and Deviations”. [Reference: COMAR 26.11.03.06C]</p> <p>B. <u>Control of Sulfur Oxides</u></p> <p>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. All reports required under §60.7(c) must be postmarked by the 30th day following the end of each 6-month period. [Reference: 40 CFR §60.4375 and §60.4395]</p> <p>C. <u>Control of Nitrogen Oxides</u></p> <ol style="list-style-type: none"> 1. The Permittee shall submit: <ol style="list-style-type: none"> a. The results of combustion analysis to the department and the EPA upon request. [Reference: COMAR 26.11.09.08E(3)] b. (2) A record of training program attendance for each operator to the Department upon request. [Reference: COMAR 26.11.09.08E(5)] 2. 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] 3. All reports required under §60.7(c) must be postmarked by the 30th day following the end of each 6-month period. [40 CFR §60.4395] <p>D. <u>Operational Limits</u></p> <p>The Permittee shall submit records of the quantity and type of fuels burned with the annual emissions certification report. See permit condition 8 of Section III.</p>

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SECTION V INSIGNIFICANT ACTIVITIES

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

- (1) No. 21 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;

The affected fuel burning 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(2) 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.

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. 18 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:

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- (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.

- (3) ✓ Commercial bakery ovens with a rated heat input capacity of less than 2,000,000 Btu per hour;
- (4) ✓ Confection cookers where the products are edible and intended for human consumption;
- (5) ✓ Photographic process equipment used to reproduce an image upon sensitized material through the use of radiant energy;
- (6) ✓ Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding, or disc sanding of wood or wood products;

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- (7) Containers, reservoirs, or tanks used exclusively for:
 - (a) No. 24 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel;
 - (b) No. 1 Storage of motor vehicle gasoline and having individual tank capacities of 2,000 gallons (7.6 cubic meters) or less;
- (8) ✓ 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;
- (9) ✓ Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;
- (10) ✓ Laboratory fume hoods and vents;

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SECTION VI STATE-ONLY ENFORCEABLE CONDITIONS

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

1. Applicable Regulations:

- (A) **COMAR 26.11.06.08 – Nuisance**. An installation or premises may not be operated or maintained in such a manner that nuisance or air pollution is created. Nothing in this regulation relating to the control of emissions may in any manner be construed as authorizing or permitting the creation of, or maintenance of, nuisance or air pollution.”
- (B) **COMAR 26.11.06.09 - Odors**. “A person may not cause or permit the discharge into the atmosphere of gases, vapors, or odors beyond the property line in such a manner that a nuisance or air pollution is created.”

2. Record Keeping and Reporting:

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:

- (a) a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or
- (b) a revised compliance demonstration, developed in accordance with requirements included under COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.

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BACKGROUND

The Johns Hopkins University (JHU), Homewood Campus provides an educational and research setting for undergraduate and graduate students. The primary SIC code for the facility is 8221.

The Johns Hopkins University operates several engines, boilers and hot water heaters for comfort heat, steam and electricity in several buildings at the Homewood Campus. Equipment at the Campus consists of six (6) emergency generators, thirty-four (34) natural gas-fired boilers, and one (1) 4.6 MW Combined Heat and Power (CHP) natural gas combustion turbine with Heat Recovery Steam Generator (HRSG).

The facility's emission units have been organized for Title V permitting into the following categories:

1. Natural gas fired boilers with fuel oil backup rated between 10 and 100 MMBtu/hr constructed before June 9, 1989
The four (4) boilers in this category are exempt from boiler MACT and NSPS requirement because they qualify as "gas-fired boilers" under 40 CFR Part 63 Subpart JJJJJJ and they were constructed before June 9, 1989, when NSPS requirements were enacted.
2. Boilers used for space heating
The seventeen (17) boilers under this heading are all rated below 10 MMBtu/hour, exempting them from further federal requirements, and meet the requirements of COMAR 26.11.09.08F – Requirements for Space Heaters.
3. NSPS Boilers
The five (5) boilers of this category are all "gas-fired" and were all constructed after June 9, 1989 and thus are obligated to meet the NSPS requirements of 40 CFR Part 60 Subpart Dc.
4. Boilers rated less than 10 MMBtu/hr
The eight (8) boilers under this heading are all rated below 10 MMBtu/hour, exempting them from further federal requirements, but do not meet the requirements to be considered space heaters under COMAR.
5. Emergency generators exempt from NSPS
These three (3) emergency generators are all diesel fired and exempt from NSPS requirements as they were constructed before July 11, 2005. They are exempt from further regulation from 40 CFR Part 63 Subpart ZZZZ as long as

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they operate in a manner that qualifies them as “emergency stationary RICE” as defined by the subpart.

6. NSPS emergency generators

The three (3) emergency generators in this category are all diesel fired and constructed after July 11, 2005, making them applicable to NSPS requirements. Per 40 CFR §63.6590(c), these engines meet the requirements of 40 CFR Part 63 Subpart ZZZZ by complying with NSPS regulations.

7. CHP and HRSG

This category consists of one (1) combined heat and power (CHP) system. The CHP system comprises one (1) natural gas fired combustion turbine with one (1) heat recovery steam generator (HRSG). This single emission unit is required to follow the NSPS regulations of 40 CFR Part 60 Subpart KKKK.

This will be the fourth renewal of JHU – Homewood Campus’ Title V – Part 70 Operating Permit. The most recent renewal was issued on September 1, 2014 and will expire on August 31, 2019.

The following table summarizes the actual emissions from JHU-Homewood Campus 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)
2013	31.99	0.70	2.25	13.95	1.12	0.00
2014	34.21	0.56	2.39	18.74	1.31	0.00
2015	30.67	2.95	2.13	10.59	0.94	0.00
2016	29.11	0.62	2.37	13.04	1.09	0.00
2017	28.58	0.73	2.05	11.73	0.98	0.00

The major source threshold for triggering Title V permitting requirements in Baltimore City is 25 tons per year for VOC, 25 tons for NO_x, and 100 tons per year for any other criteria pollutants and 10 tons 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, JHU-Homewood Campus is required to obtain a Title V – Part 70 Operating Permit under COMAR 26.11.03.01.

The Department received the JHU-Homewood Campus’s Part 70 renewal permit application on September 5, 2018. An administrative completeness review was conducted and the application was deemed to be administratively complete. A

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completeness determination letter was sent to the JHU-Homewood Campus on September 13, 2018 granting the JHU-Homewood Campus an application shield.

CHANGES AND MODIFICATIONS TO THE PART 70 OPERATING PERMIT

The following changes and/or modifications have been incorporated into the renewal Title V – Part 70 Operating Permit for JHU-Homewood Campus.

Additions to the facility

- One (1) Teledyne-Laars natural gas-fired boiler rated at 1.2 MMBtu/hr heat input (MDE Registration No. 510-0077-5-2026) installed in 1991. This unit is permitted but was not included in the previous Part 70 Operating Permit for an unknown reason.
- One (1) Cleaver Brooks CBEX Elite natural gas fired boiler rated at 12.5 MMBtu/hr (MDE Registration No. 510-0077-5-2206) installed in 2015.
- One (1) diesel fired Detroit Diesel, Series 60 emergency generator rated at 543 horsepower (MDE Registration No. 510-0077-9-1379). This generator was installed in 2007 and unpermitted until the Department was made aware of its existence in 2018.
- One (1) diesel fired Detroit Diesel, model 6063HK35 emergency generator rated at 685 horsepower (MDE Registration No. 510-0077-9-1380). This generator was installed in 2003 and unpermitted until the Department was made aware of its existence in 2018.
- One (1) diesel fired Kohler, model KTTA19G emergency generator rated at 685 horsepower (MDE Registration No. 510-0077-9-1381). This generator was installed in 1989 and unpermitted until the Department was made aware of its existence in 2018.
- One (1) diesel fired Cummins, model QSX15-G9 emergency generator rated at 755 horsepower (MDE Registration No. 510-0077-9-1382). This generator was installed in 2011 and unpermitted until the Department was made aware of its existence in 2018.

Removal from the facility

No emission units have been removed from the facility since the previous Title V – Part 70 Operating Permit renewal.

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APPLICABLE FEDERAL REGULATIONS

The emission units from Johns Hopkins University – Homewood Campus are subject to the following Federal Regulations:

New Source Performance Standards (NSPS) – 40 CFR Part 60

Several emission units at Johns Hopkins University – Homewood Campus are subject to the following NSPS Requirements:

Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

Subpart IIII - Stationary Compression Ignition Internal Combustion Engines

Subpart KKKK - Standards of Performance for Stationary Combustion Turbines

National Emission Standard for Hazardous Air Pollutants (NESHAP) – 40 CFR Part 63

Johns Hopkins University – Homewood Campus is not a major HAP Emissions Source. Instead it is an area HAP emission source and is subject to the following MACTs:

Subpart JJJJJJ - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

Subpart ZZZZ - Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions

COMPLIANCE ASSURANCE MONITORING

Johns Hopkins University – Homewood Campus does not have any emission units that have any control devices, therefore the CAM requirements do not apply.

GREENHOUSE GAS (GHG) EMISSIONS

The Johns Hopkins University (JHU) – Homewood Campus emits greenhouse gases, carbon dioxide and nitrous oxide, with associated requirements in the Clean Air Act. These greenhouse gases (GHGS) are produced almost exclusively from fuel burning equipment contained within the facility premises applicable to JHU – Homewood Campus. The facility has not triggered Prevention of Significant Deterioration (PSD) requirements for GHG emissions; therefore, there are no applicable GHG Clean Air Act requirements. Emission certification reports for the years 2015, 2016, 2017, show that JHU – Homewood Campus does not exceed the major source threshold of 100,000 tons per year of CO_{2e} for GHGs (see Table 2 shown below). The Permittee shall quantify facility wide GHG emissions and report them in accordance with Section 3 of the Part 70 permit.

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The following table summarizes the actual emissions from JHU-Homewood Campus based on Annual Emission Certification Reports:

Table 2: Greenhouse Gases Emissions Summary

GHG	Conversion factor	2015 tpy CO₂e	2016 tpy CO₂e	2017 tpy CO₂e
Carbon dioxide CO ₂	1	35,284	33,150	33,568
Methane CH ₄	25	2.03	1.65	1.64
Nitrous Oxide N ₂ O	298	0.73	0.63	0.55
Total GHG CO₂eq		35,554	33,380	33,774

EMISSION UNIT IDENTIFICATION

JHU-Homewood Campus 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	ARA Registration Number	Emissions Unit Name and Description	Date of Installation
5-0763	5-0763	One (1) Keeler natural gas fired boiler rated at 98 MMBtu/hr heat input with diesel as backup equipped with low NO _x burners. Boiler #1.	1980 Modified 12/2003
5-0533	5-0533	One (1) Babcock & Wilcox natural gas fired boiler rated at 62 MMBtu/hr heat input with diesel as backup equipped with low NO _x burners. Boiler #2	1962 Modified 05/2006
5-0534	5-0534	One (1) Babcock & Wilcox natural gas fired boiler rated at 62 MMBtu/hr heat input with diesel as backup equipped with low NO _x burners. Boiler #3	1948 Modified 12/2002
5-0535	5-0535	One (1) Babcock & Wilcox natural gas fired boiler rated at 62 MMBtu/hr heat input with diesel as backup equipped with low NO _x burners. Boiler #4.	1954 Modified 01/2008

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Emissions Unit Number	ARA Registration Number	Emissions Unit Name and Description	Date of Installation
5-0964 & 5-0965	5-0964 & 5-0965	Two (2) HB Smith hot water natural gas fired boilers each rated at 1.6 MMBtu/hr heat input.	1982
5-2040 & 5-2041	5-2040 & 5-2041	Two (2) RayPak hot water heaters fired on natural gas and rated 1.069 MMBtu/hr heat input	1989
5-2024 & 5-2025	5-2024 & 5-2025	Two (2) Peerless natural gas-fired boilers each rated at 2.1 MMBtu/hr heat input	1991
5-2026 & 5-2027	5-2026 & 5-2027	Two (2) Teledyne-Laars natural gas-fired boiler rated at 1.2 MMBtu/hr heat input	1991
5-2028 & 5-2029	5-2028 & 5-2029	Two (2) Teledyne-Laars natural gas-fired hot water heaters each rated at 1.43 MMBtu/hr heat input	1993
5-2030	5-2030	One (1) Teledyne-Laars natural gas fired hot water heaters rated at 1.2 MMBtu/hr heat input	1993
5-2031 & 5-2032	5-2031 & 5-2032	Two (2) Teledyne-Laars natural gas-fired boilers each rated at 1.67 MMBtu/hr heat input	1993
5-2033 & 5-2034	5-2033 & 5-2034	Two (2) Jarco natural gas-fired hot water heaters each rated at 1.4 MMBtu/hr heat input	1996
5-2035 & 5-2036	5-2035 & 5-2036	Two (2) Teledyne Laars natural gas-fired boilers each rated at 3.05 MMBtu/hr heat input	1996
5-1728 & 5- 1729	5-1728 & 5- 1729	Two (2) Cleaver Brooks natural gas-fired boilers each rated at 10.206 MMBtu/hr equipped with low NO _x burners and flue gas recirculation	2004
5-1867 & 5-1868	5-1867 & 5-1868	Two (2) HB Smith natural gas-fired hot water boilers each rated at 17.6 MMBtu/hr	2006
5-1861 & 5-1862 & 5-1863	5-1861 & 5-1862 & 5-1863	Three (3) TurboPower Gas Water Heaters Model 1500N500A-TP fired on natural gas and rated at 1.2 MMBtu/hr heat input.	2007
5-1864 & 5-1865 & 5-1866	5-1864 & 5-1865 & 5-1866	Three (3) TurboPower Gas Water Heaters Model 2000N750A-TP fired on natural gas and rated at 1.6 MMBtu/hr heat input.	2007
5-1885	5-1885	One (1) Columbia Boiler Co. natural gas fired boiler rated at 1.26 MMBtu/hr heat input.	2007

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Emissions Unit Number	ARA Registration Number	Emissions Unit Name and Description	Date of Installation
5-2067	5-2067	One (1) Combined Heat and Power (CHP) system consisting of 4.6 MW natural gas combustion turbine generator with Heat Recovery Steam Generator (HRSG)	2010
5-2173	5-2173	One (1) Tecogen/CM75 natural gas-fired boiler rated at 1.0 MMBtu/hr heat input. General Permit issued 12/11/2013	2013
5-2206	5-2206	One (1) Cleaver Brooks CBEX Elite natural gas fired boiler rated at 12.5 MMBtu/hr	2015
9-1179	9-1179	One (1) 650 kW Emergency Generator	2006
9-1282	9-1282	One (1) Kohler diesel-fired emergency generator rated at 1000 kW	2013
9-1379	9-1379	One (1) Detroit Diesel, Series 60 diesel fired emergency generator rated at 543 horsepower. (Manufacture Date: 9/2006)	2007
9-1380	9-1380	One (1) Detroit Diesel, model 6063HK35 diesel fired emergency generator rated at 685 horsepower. (Manufacture Date: 2/2003)	2003
9-1381	9-1381	One (1) Kohler, model KTTA19G diesel fired emergency generator rated at 685 horsepower. (Manufacture Date: 3/1989)	1989
9-1382	9-1382	One (1) Cummins, model QSX15-G9 diesel fired emergency generator rated at 755 horsepower. (Manufacture Date: 5/2011)	2011

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,

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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.

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

**Emissions Unit Number(s): Natural gas fired boilers with fuel oil backup rated
between 10 and 100 MMBtu/hr constructed before June 9, 1989**

5-0763: One (1) Keeler natural gas fired boiler rated at 98 MMBtu/hr heat input with diesel as backup equipped with low NO_x burners. Boiler #1.

5-0533 thru 5-0535: Three (3) Babcock & Wilcox natural gas fired boilers each rated at 62 MMBtu/hr heat input with diesel as backup equipped with low NO_x burners. Boiler #2, #3, & #4 respectively.

Note: *These boilers were previously permitted as dual-fueled No.2 fuel oil/Natural gas fired boilers. The Permittee requested in a previous application that these boilers be classified as natural gas-fired boilers; burning fuel oil only during periods of gas curtailment. Per 40 CFR §63.11195(e), these boilers are exempt from additional requirements of Subpart JJJJJJ so long as they are “gas fired boilers.” 40 CFR Part 63, Subpart JJJJJJ defines a “gas-fired boiler” as follows: “Gas-fired boiler includes any boiler that burns gaseous fuels not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment, gas supply interruption, startups, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year.”*
[Reference: 40 CFR §63.11237]

Compliance Status:

The four (4) boilers are in compliance with all regulations. Annual Emission certification report (ECR) submitted yearly with the latest ECR received on March 31, 2017 along with their Compliance Certification Report. No excess emissions were reported. While these boilers were previously permitted as dual-fuel fired boilers, the facility ceased burning diesel as fuel; thus the boilers were reclassified as natural gas fired boilers with fuel oil backup.

Applicable Standards/Limits:

A. Visible Emissions Limitations

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

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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:
 - 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 each 168 hours that the boiler burns oil or at a minimum of once per year.
[Authority: COMAR 26.11.03.06C]

***Note:** If a unit burns No. 2 fuel oil for less than 100 hours in a calendar year, this requirement is waived for that unit for that calendar year.*
- 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 boiler; and
 - d. After 48 hours, if the required adjustments and/or repairs had not eliminated the visible emissions, perform Method 9 observations once daily for 18 minutes until corrective actions have eliminated the visible emissions. **[Authority: COMAR 26.11.03.06C]**
- The Permittee shall:
 - a. Maintain an operation manual and prevention maintenance plan on site;
 - b. Maintain a record of the maintenance performed that relates to combustion performance;
 - c. Maintain a log of visible emissions observations performed and make it available to the Department’s representative upon request; and

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d. Maintain a record of the hours that No. 2 fuel oil is burned.
[Reference: COMAR 26.11.03.06C]

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

Rationale for Periodic Monitoring

Boilers that burn natural gas fuel or No. 2 fuel oil with a rated heat input capacity of more than 10 MM Btu/hr and less than 250 MM Btu/hr rarely have visible emissions if properly operated and maintained. The Permittee is required to maintain on site an operations manual, a preventative maintenance plan, and records of maintenance performed that relate to combustion performance. If visible emissions occur, it will happen when burning No. 2 fuel oil. The Permittee is required to perform a visual observation of the exhaust gases from the boiler stack for a 6-minute period, once each 168 hours that No. 2 fuel oil is burned. This is waived for any unit that burns No. 2 fuel oil less than 100 hours in a calendar year for that calendar year. If a unit burns No. 2 fuel oil for less than 100 hours in a calendar year, this requirement is waived for that calendar year. The Permittee is required to maintain a record of the results of the observations and number of hours that No. 2 fuel oil is burned.

B. Control of Sulfur Oxides

COMAR 26.11.09.07A(2), 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: In Areas III and IV: (b) Distillate fuel oils, 0.3 percent.”

Note: *Condition B applies only while burning fuel oil which may only occur during times of natural gas curtailment.*

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.
[Reference: COMAR 26.11.03.06C]
- The Permittee shall report fuel supplier certification to the Department upon request. **[Reference: COMAR 26.11.09.07C]**

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Rationale for Periodic Monitoring

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

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 MMBtu/hr or Less. A person who owns or operates fuel-burning equipment with a rated heat input capacity of 100 MMBtu/hr 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.

Compliance Demonstration

- The Permittee shall perform a combustion analysis once a year. **[Reference: COMAR 26.11.09.08E(2)]**

- The Permittee shall optimize combustion based on the annual combustion analysis. **[Reference: COMAR 26.11.09.08E(2)]**

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- The Permittee shall maintain:
 - a. Records of the results of the annual combustion analysis on site.
 - b. Record of training program attendance for each operator at the site. **[Reference: COMAR 26.11.09.08E(5)]**

- The Permittee shall submit:
 - a. The results of combustion analysis to the department and the EPA upon request. **[Reference: COMAR 26.11.09.08E(3)]**
 - b. A record of training program attendance for each operator to the Department upon request. **[Reference: COMAR 26.11.09.08E(5)]**

D. Operational Limit

1. The Permittee shall burn only natural gas or No. 2 fuel oil in the boilers unless the Permittee applies for and obtains a Permit to Construct from the Department to burn an alternate fuel. **[Reference: COMAR 26.11.02.09A]**

2. The Permittee shall burn gaseous fuel in the boiler not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment, gas supply interruption, startups, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year. **[Reference: 40 CFR §63.11237]**

Compliance Demonstration

- The Permittee shall maintain records of the quantity and types of fuel burned. **[Reference: COMAR 26.11.02.19C(1)(c)]**

- 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. **[Reference: COMAR 26.11.03.06C]**

Emissions Unit Number(s): Boilers used for Space Heating

5-0964 & 5-0965: Two (2) natural gas-fired boilers each rated at 1.6 MMBtu/hr heat input.

5-1861 thru 5-1863: Three (3) TurboPower Gas Water Heaters Model 1500N500A-TP fired on natural gas and each rated at 1.2 MMBtu/hr heat input.

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5-1864 thru 5-1866: Three (3) TurboPower Gas Water Heaters Model 2000N750A-TP fired on natural gas and each rated at 1.6 MMBtu/hr heat input.

5-1885: One (1) Columbia Boiler Co. natural gas fired boiler rated at 1.26 MMBtu/hr heat input.

5-2024 & 5-2025: Two (2) Peerless natural gas fired boilers each rated at 2.1 MMBtu/hr heat input

5-2031 & 5-2032: Two (2) Teledyne-Laars natural gas fired boilers each rated at 1.67 MMBtu/hr heat input

5-2035 & 5-2036: Two (2) Teledyne Laars natural gas fired boilers each rated at 3.05 MMBtu/hr heat input

5-2040 & 5-2041: Two (2) Raychak hot water heaters fired on natural gas and each rated 1.069 MMBtu/hr heat input

Compliance Status:

The seventeen (17) space heating boilers are in compliance with all regulations. Annual Emission certification report (ECR) submitted yearly with the latest ECR received on March 31, 2017 along with their Compliance Certification Report. No excess emissions were reported.

Applicable Standards/Limits:

A. Visible Emissions Limitations

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.

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Compliance Demonstration

- The Permittee shall properly operate and maintain the boilers in a manner to prevent visible emissions. **[Reference: COMAR 26.11.03.06C]**
- The Permittee shall maintain an operations manual and preventive maintenance plan. The Permittee shall maintain a log of maintenance performed that relates to combustion performance. **[Reference: COMAR 26.11.03.06C]**
- 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”. **[Reference: COMAR 26.11.03.06C]**

Rationale for Periodic Monitoring

Boilers that burn natural gas fuel with a rated heat input capacity of less than 10 MM Btu/hr will not have visible emissions. Boilers in this size range are set up to operate in an automatic mode without oversight of an operator and require minimal preventative maintenance to maintain a level of combustion performance that does not cause visible emissions. Even though there is not a specific schedule to perform observations of the stack emissions, the Permittee is required under the general reporting requirement for excess emissions and deviations to report incidents when visible emissions are observed.

B. 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 26.11.09.08F - Requirements for Space Heaters.
 - a. A person who owns or operates a space heater as defined in Regulation .01B of this chapter shall:
 - i. Submit to the Department a list of each affected installation on the premises and the types of fuel used in each installation;

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- ii. Develop an operating and maintenance plan to minimize NO_x emissions based on the recommendations of equipment vendors and other information including the source's operating and maintenance experience;
 - iii. Implement the operating and maintenance plan and maintain the plan at the premises for review upon request by the Department;
 - iv. Require installation operators to attend in-State operator training programs once every 3 years on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and
 - v. 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.
- b. A person who owns or operates an installation that no longer qualifies as a space heater shall inform the Department not later than 60 days after the date when the fuel-burning equipment did not qualify, and shall meet the applicable fuel-burning equipment RACT requirement in this regulation.

Compliance Demonstration

- The Permittee shall develop and implement an operating and maintenance plan as recommended by the equipment vendor to minimize NO_x emissions. **[Reference: COMAR 26.11.09.08F(1)]**

Note: COMAR 26.11.09.08B(5)(a) states that “for the purpose of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.”

- The Permittee shall maintain:
 - a. Records of maintenance performed that relates to combustion performance in keeping with the requirements of an operations and maintenance plan. **[Reference: COMAR 26.11.09.08F(1)(c)]**
 - b. Record of training program attendance for each operator. **[Reference: COMAR 26.11.09.08F(1)(e)]**
 - c. An operations manual and preventive maintenance plan. **[Reference: COMAR 26.11.09.08F(1)(b)]**
 - d. Records of fuel use that demonstrate that the boiler meets the definition of a space heater. **[Reference: COMAR 26.11.09.08K(3) and COMAR 26.11.03.06C]**

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- The Permittee shall submit: a record of training program attendance for each operator to the Department upon request. **[Reference: COMAR 26.11.09.08F(1)(e)]**

C. Operational Limits

The Permittee shall burn natural gas only in the boilers unless the Permittee applies for and obtains a Permit to Construct from the Department to burn an alternate fuel. **[Reference: COMAR 26.11.02.09A]**

Compliance Demonstration

- The Permittee shall maintain records of the quantity and types of fuel burned. **[Reference: COMAR 26.11.02.19C(1)(c)]**
- The Permittee shall submit a record of the quantity of each type of fuel burned with the annual emission certification report that is due April 1 of each year. **[Reference: COMAR 26.11.02.19C(2)]**

Emissions Unit Number(s) – NSPS Boilers

5-1728 & 5- 1729: Two (2) Cleaver Brooks natural gas fired boilers each rated at 10.206 MMBtu/hr with diesel as backup equipped with low NO_x burners and flue gas recirculation.

5-1867 & 5-1868: Two (2) HB Smith natural gas-fired hot water boilers each rated at 17.6 MMBtu/hr.

5-2206: One (1) Cleaver Brooks CBEX Elite Boiler natural gas boiler rated at 12.5 MMBtu/hr.

Compliance Status:

The five (5) NSPS applicable boilers are in compliance with all state and federal regulations. Annual Emission certification report (ECR) submitted yearly with the latest ECR received on March 31, 2017 along with their Compliance Certification Report. No excess emissions were reported.

Applicable Standards/Limits:

A. Control of Visible Emissions

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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 boilers in a manner to prevent visible emissions. **[Reference: COMAR 26.11.03.06C]**
- The Permittee shall maintain an operations manual and preventive maintenance plan. The Permittee shall maintain a log of maintenance performed that relates to combustion performance. **[Reference: COMAR 26.11.03.06C]**
- 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”. **[Reference: COMAR 26.11.03.06C]**

Rationale for Periodic Monitoring

Boilers that burn Natural Gas fuel or No. 2 Fuel Oil with a rated heat input capacity of more than 10 MM Btu/hr and less than 250 MM Btu/hr rarely have visible emissions if properly operated and maintained. The Permittee is required to maintain on site an operations manual, a preventative maintenance plan, and records of maintenance performed that relate to combustion performance. If visible emissions occur, it will happen when burning No. 2 fuel oil. The Permittee is required to perform a visual observation of the exhaust gases from the boiler stack for a 6-minute period, once each 168 hours that No. 2 fuel oil is burned. 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 number of hours that No. 2 fuel oil is burned.

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B. 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 MMBtu/hr or Less. A person who owns or operates fuel-burning equipment with a rated heat input capacity of 100 MMBtu/hr 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.

Compliance Demonstration

- The Permittee shall perform a combustion analysis once a year. The Permittee shall optimize combustion based on the annual combustion analysis. **[Reference: COMAR 26.11.09.08E(2)]**

- The Permittee shall maintain:
 - a. Records of the results of the annual combustion analysis on site.
 - b. Record of training program attendance for each operator at the site. **[Reference: COMAR 26.11.09.08E(5)]**

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- The Permittee shall submit:
 - a. The results of combustion analysis to the department and the EPA upon request. **[Reference: COMAR 26.11.09.08E(3)]**
 - b. A record of training program attendance for each operator to the Department upon request. **[Reference: COMAR 26.11.09.08E(5)]**

Condition C applies to ARA Registration Nos. 510-0077-5-1728 and 5-1729 only.

C. Control of Sulfur Oxides

COMAR 26.11.09.07A(2) - 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: In Areas III and IV: (b) Distillate fuel oils, 0.3 percent.”

Note: *This condition only applies when these boilers are firing No. 2 fuel oil which may only occur during times of natural gas curtailment.*

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. **[Reference: COMAR 26.11.03.06C]**
- The Permittee shall maintain records of fuel supplier’s certification and shall make records available to the Department upon request. **[Reference: COMAR 26.11.03.06C]**
- The Permittee shall report fuel supplier certification to the Department upon request. **[Reference: COMAR 26.11.09.07C]**

D. Operational Limitations

1. The Permittee shall burn only natural gas in the two HB Smith and one Cleaver Brooks CBEX boilers (ARA Registration Nos. 510-0077-5-1867, 5-1868, and 5-2206) unless the Permittee applies for and obtains an approval from the Department to burn an alternate fuel. **[Reference: COMAR 26.11.02.09A]**
2. The Permittee shall burn gaseous fuel in the two HB Smith boilers (ARA Registration Nos. 510-0077-5-1867 and 5-1868) not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment, gas supply interruption, startups, or periodic testing on liquid fuel. Periodic

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testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year. **[Reference: 40 CFR §63.11237]**

Compliance Demonstration

- The Permittee may elect to record and maintain records of the amount of each fuel combusted during each calendar month as an alternative to the fuel certification in 40 CFR §60.48c(f) to demonstrate compliance with the SO₂ standard. **[Reference: 40 CFR §60.48c(g)(2)]**
- The Permittee shall maintain records of the quantity and types of fuel burned in each boiler. **[Reference: COMAR 26.11.02.19C(1)(c)]**
- The Permittee shall submit all reports to the Administrator and all reports shall be postmarked by the 30th day following the end of the reporting period. The reporting period for the reports required under 40 CFR Part 60, Subpart Dc is each six-month period. **[Reference: 40 CFR §60.48c(j)]**
- 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.

Emissions Unit Number(s): Boilers rated less than 10 MMBtu/hr

5-2026 & 5-2027: Two (2) Teledyne-Laars natural gas-fired boiler rated at 1.2 MMBtu/hr heat input

5-2028 & 5-2029: Two (2) Teledyne-Laars natural gas-fired hot water heaters each rated at 1.43 MMBtu/hr heat input

5-2030: One (1) Teledyne-Laars natural gas-fired hot water heaters rated at 1.2 MMBtu/hr heat input

5-2033 & 5-2034: Two (2) Jarco natural gas-fired hot water heaters each rated at 1.4 MMBtu/hr heat input.

5-2173: One (1) Tecogen/CM75 natural gas-fired boiler rated at 1.0 MMBtu/hr heat input.

Compliance Status:

The eight (8) boilers, which are not used for space heating, are in compliance with all regulations. Annual Emission certification report (ECR) submitted yearly

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with the latest ECR received on March 31, 2017 along with their Compliance Certification Report. No excess emissions were reported.

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 boilers in a manner to prevent visible emissions. **[Reference: COMAR 26.11.03.06C]**
- The Permittee shall maintain an operations manual and preventive maintenance plan. The Permittee shall maintain a log of maintenance performed that relates to combustion performance. **[Reference: COMAR 26.11.03.06C]**
- 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”. **[Reference: COMAR 26.11.03.06C]**

B. 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.

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- 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 MMBtu/hr or Less. A person who owns or operates fuel-burning equipment with a rated heat input capacity of 100 MMBtu/hr 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.

Compliance Demonstration

- The Permittee shall perform a combustion analysis once a year. **[Reference: COMAR 26.11.09.08E(2)]**
- The Permittee shall optimize combustion based on the annual combustion analysis. **[Reference: COMAR 26.11.09.08E(2)]**
- The Permittee shall maintain:
 - a. Records of the results of the annual combustion analysis on site.
 - b. Record of training program attendance for each operator at the site. **[Reference: COMAR 26.11.09.08E(5)]**
- The Permittee shall submit:
 - a. The results of combustion analysis to the department and the EPA upon request. **[Reference: COMAR 26.11.09.08E(3)]**
 - b. A record of training program attendance for each operator to the Department upon request. **[Reference: COMAR 26.11.09.08E(5)]**

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C. Operational Limits

The Permittee shall burn natural gas only in the boilers unless the Permittee applies for and obtains an approval from the Department to burn an alternate fuel. **[Reference: COMAR 26.11.02.09A]**

Compliance Demonstration

- The Permittee shall maintain records of the quantity and types of fuel burned. **[Reference: COMAR 26.11.02.19C(1)(c)]**
- 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.

Emissions Unit Number(s): Emergency generators exempt from NSPS

9-1179: One (1) diesel fired emergency generator rated at 660 kW

9-1380: One (1) diesel fired Detroit Diesel emergency generator rated at 685 horsepower.

9-1381: One (1) diesel fired Kohler emergency generators rated at 685 horsepower.

Compliance Status:

The three (3) diesel fired emergency generators are in compliance with all regulations. Annual Emission certification report (ECR) submitted yearly with the latest ECR received on March 31, 2017 along with their Compliance Certification Report. No excess emissions were reported.

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

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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) 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) 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) does not apply while maintenance, repair, or testing is being performed by qualified mechanics.”

Compliance Demonstration

- The Permittee shall properly operate and maintain the engine in a manner to minimize visible emissions. **[Reference: COMAR 26.11.03.06C]**
- The Permittee shall retain records of preventive maintenance on site for at least five years and make these records available to the Department upon request. **[Reference: COMAR 26.11.03.06C]**
- The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, Plant Wide Condition, “Report of Excess Emissions and Deviations” **[Reference: COMAR 26.11.03.06C]**

B. Control of Sulfur Oxides

COMAR 26.11.09.07A(2), 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: 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 fuel oil complies with the limitation on sulfur content of the fuel oil. **[Reference: COMAR 26.11.03.06C]**

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- The Permittee shall retain annual fuel supplier certifications stating that the fuel oil is in compliance with this regulation must be maintained for at least 5 years. **[Reference: COMAR 26.11.09.07C]**
- The Permittee shall report annual fuel supplier certification to the Department upon request. **[Reference: COMAR 26.11.09.07C]**

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 – Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 Percent or Less.**
 - 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. 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
 - v. 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 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)]**

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- For engines that operate more than 500 hours during a calendar year, the Permittee shall perform a combustion analysis and optimize combustion. **[Reference: COMAR 26.11.03.06C]**.
- The Permittee shall:
 - a. Maintain the results of the combustion analysis at the site for at least 5 years and make these results available to the Department and the EPA upon request. **[Reference: COMAR 26.11.09.08G(1)(c) & COMAR 26.11.03.06C]**.
 - b. Retain records of training program attendance for each operator at the site for at least 5 years and make these records available to the Department upon request. **[Reference: COMAR 26.11.09.08G(1)(e) and COMAR 26.11.03.06C]**.
- The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing as part of the April 1 certification report. **[Reference: COMAR 26.11.09.08G(1)(a) & COMAR 26.11.03.06C]**
- The Permittee shall submit a list of trained operators to the Department upon request. **[Reference: COMAR 26.11.09.08G(e) and COMAR 26.11.03.06C]**

D. Operational Limits

1. The Permittee shall use diesel fuel only in the emergency generator unless the Permittee applies for and obtain approval from the Department to burn an alternate fuel. **[Reference: COMAR 26.11.02.09A]**
2. The Permittee must operate emergency stationary RICE according to the requirements in the paragraphs of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year is prohibited. If you do not operate the engine according to the requirements in the paragraphs of this section, the engine will not be considered an emergency engine under 40 CFR Part 63 Subpart ZZZZ and must meet all requirements for non-emergency engines.
 - a. There is no limit on emergency operation of the engine.

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- b. The Permittee may operate the emergency engines for the purpose of 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 for a maximum of 100 hours per calendar year.

- c. The Permittee may operate the emergency engine for up to 50 hours per year in non-emergency situations, but those 50 hours are counted toward the 100 hours per year provided for the maintenance and testing and emergency response. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. **[Reference: 40 CFR §63.6640(f)(1), (2), and (4)]**

Compliance Demonstration

- The Permittee shall monitor fuel usage for the generator. **[Reference: COMAR 26.11.03.06C]**

- The Permittee shall maintain a log for the emergency generator indicating the amount of fuel oil combusted, the hours of operation and the reason for generator operation. **[Reference: COMAR 26.11.03.06C].**

- The Permittee shall maintain on site for the life of the source the following records for the emergency diesel generator(s):
 - a. Documentation of the manufacture date of the diesel engine, if manufactured prior to April 1, 2006 and the manufacturer model year of the diesel engine; and
 - b. The installation date of the emergency diesel generator. **[Reference: COMAR 26.11.03.06C]**

- The Permittee shall send a copy of the log for the emergency generator indicating the amount of fuel oil combusted, the hours of operation and the reason for generator operation to the Department in the annual emission certification report due on April 1 of each year. **[Reference: COMAR 26.11.03.06C]**

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Emissions Unit Number(s): NSPS emergency generators

9-1282: One (1) Kohler diesel fired emergency generator rated at 900 kW.

9-1379: One (1) diesel fired Detroit Diesel, Series 60 emergency generator rated at 543 horsepower. (Manufacture Date: 9/2006)

9-1382: One (1) diesel fired Cummins, model QSX15-G9 emergency generator rated at 755 horsepower. (Manufacture Date: 5/2011)

Compliance Status:

The three (3) NSPS applicable diesel fired emergency generators are in compliance with all regulations. Annual Emission certification report (ECR) submitted yearly with the latest ECR received on March 31, 2017 along with their Compliance Certification Report. No excess emissions were reported.

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) 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) 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) does not apply while maintenance, repair, or testing is being performed by qualified mechanics.”

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Compliance Demonstration

- The Permittee shall properly operate and maintain the engine in a manner to minimize visible emissions. **[Reference: COMAR 26.11.03.06C]**
- The Permittee shall retain records of preventive maintenance on site for at least five years and make these records available to the Department upon request. **[Reference: COMAR 26.11.03.06C]**
- The Permittee shall report incidents of visible emissions in accordance with Permit Condition 4, Section III, Plant Wide Condition, “Report of Excess Emissions and Deviations” **[Reference: COMAR 26.11.03.06C]**

B. Control of Sulfur Oxides

COMAR 26.11.09.07A(2), 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: In Areas III and IV: (b) Distillate fuel oils, 0.3 percent.”

***Note:** Installations subject to 40 CFR Part 60 Subpart IIII must comply with the diesel fuel standards of §60.4207 which limits the maximum sulfur content of fuel to 15 ppm.*

Compliance Demonstration

The Permittee shall obtain a certification from the fuel supplier indicating that the fuel oil complies with the limitation on sulfur content of the fuel oil.

[Reference: COMAR 26.11.03.06C]

The Permittee shall retain annual fuel supplier certifications stating that the fuel oil is in compliance with this regulation must be maintained for at least 5 years. **[Reference: COMAR 26.11.09.07C]**

The Permittee shall report annual fuel supplier certification to the Department upon request. **[Reference: COMAR 26.11.09.07C]**

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.

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- 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, Requirements for Fuel-Burning Equipment with a Capacity Factor of 15 Percent or Less.**
- 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. 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
 - v. 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 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)]**
- For engines that operate more than 500 hours during a calendar year, the Permittee shall perform a combustion analysis and optimize combustion. **[Reference: COMAR 26.11.03.06C].**
- The Permittee shall calculate the capacity factor of the engine within 30 days after the end of each month. **[Reference: COMAR 26.11.03.06C]**
- The Permittee shall maintain records of the results of the combustion analyses and any stack tests on site for at least five years and make them available to the Department and EPA upon request. **[Reference: COMAR 26.11.09.08G(1)(c) & COMAR 26.11.03.06C].**

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- The Permittee shall maintain a record of the calculated capacity factor. **[Reference: COMAR 26.11.09.08G(1)(c)].**
- The Permittee shall maintain record of training program attendance for each operator on site for at least five years and make the records available to the Department upon request. **[Reference: COMAR 26.11.09.08G(e) & COMAR 26.11.03.06C]**
- The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing as part of the April 1 certification report. **[Reference: COMAR 26.11.03.06C].**
- The Permittee shall submit a list of trained operators to the Department upon request. **[Reference: COMAR 26.11.09.08G(e) and COMAR 26.11.03.06C]**

D. Operational Limits

1. The Permittee shall use diesel fuel only in the emergency generator unless the Permittee applies for and obtains a Permit to Construct from the Department to burn alternate fuel. **[Reference: COMAR 26.11.02.09A]**
2. The Permittee must operate and maintain the generators in a manner that achieve the emissions standards over the entire life of the engine. **[Reference: 40 CFR §60.4206]**
3. The Permittee must meet the non-road diesel fuel sulfur requirements of 40 CFR §80.510(b) as follows:
 - a. Maximum sulfur content 15 ppm and
 - b. Minimum cetane index of 40; or
 - c. Maximum aromatic content of 35 volume percent. **[Reference: 40 CFR §60.4207(b) and 40 CFR §80.510(b)]**
4. The Permittee must operate and maintain the stationary compression ignition internal combustion engines and control devices according to the manufacturer's emission related written instruction. **[Reference: 40 CFR §60.4211(a)(1)]**
5. The Permittee may change only those emission related settings that are permitted by the manufacturer. **[Reference: 40 CFR §60.4211(a)(2)]**

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6. The Permittee must purchase an engine certified to the emission standards in 40 CFR §60.4205(b). The engine must be installed and configured according to the manufacturer's emissions related specifications. **[Reference: 40 CFR §60.4211(c)]**
7. The Permittee must not exceed the following opacity emission standards:
 - (a) 20 percent during the acceleration mode;
 - (b) 15 percent during the lugging mode; and
 - (c) 50 percent during the peaks in either the acceleration or lugging modes. **[Reference: 40 CFR §60.4205(b), §60.4202(a)(2), and §89.113(a)]**

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

8. There is no time limit on the use of emergency stationary ICE (internal combustion engine) in emergency situations. **[Reference: 40 CFR §60.4211(f)(1)]**
9. The Permittee may operate the emergency stationary ICE for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine for a maximum of 100 hours per calendar year. The Permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year. **[Reference: 40 CFR §60.4211(f)(2)(i)]**
10. The Permittee may operate the emergency stationary ICE for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in the previous paragraph of this section. The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. **[Reference: 40 CFR §60.4211(f)(3)]**

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***Note:** Effective May 2, 2016, emergency generators are no longer allowed to participate in emergency demand response unless they meet the requirements of a non-emergency generator of the same model year. These engines do not meet the standards for a non-emergency generator, therefore, operation for demand response during periods of voltage deviation are no longer permitted.*

Compliance Demonstration

- The Permittee shall monitor fuel usage for the generator. **[Reference: COMAR 26.11.03.06C]**
- The Permittee shall maintain a log for the emergency generator indicating the amount of fuel oil combusted, the hours of operation and the reason for generator operation. **[Reference: COMAR 26.11.03.06C].**
- The Permittee shall maintain on site for the life of the source the following records for the emergency diesel generator(s):
 - a. Documentation of the manufacture date of the diesel engine, if manufactured prior to April 1, 2006 and the manufacturer model year of the diesel engine;
 - b. The installation date of each emergency diesel generator; and
 - c. The certifications of compliance or manufacturer engine test data required by 40 CFR §60.4211 and §60.4214(b). **[Reference: MDE Permit to Construct No. 510-0077-9-1282 issued June 21, 2013]**
- Permittee shall for each fuel delivery obtain from the fuel supplier a fuel supplier certification consisting of the name of the oil supplier, the date of delivery, the amount of fuel delivered, and a statement from the fuel supplier that the diesel fuel oil complies with the specifications of 40 CFR §80.510. The Permittee shall maintain the required records on site for at least five (5) years. **[Reference: MDE Permit to Construct No. 510-0077-9-1282 issued June 21, 2013 and MDE Permit to Construct No. 510-0077-9-1378 & 1382 issued October 20, 2018]**
- The Permittee shall report a copy of the log for the emergency generator indicating the amount of fuel oil combusted, the hours of operation and the reason for generator operation to the Department in the annual emission certification report due on April 1 of each year. **[Reference: MDE Permit to Construct No. 510-0077-9-1282 issued June 21, 2013 and MDE Permit to Construct No. 510-0077-9-1378 & 1382 issued October 20, 2018]**

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Emissions Unit Number(s): CHP and HRSG

5-2067 – One (1) Combined Heat and Power (CHP) system consisting of 4.6 MW natural gas combustion turbine generator with Heat Recovery Steam Generator (HRSG). (510-0077-5-2067)

Compliance Status:

The one (1) Combined Heat and Power (CHP) system is in compliance with all regulations. Annual Emission certification report (ECR) submitted yearly with the latest ECR received on March 31, 2017 along with their Compliance Certification Report. No excess emissions were reported.

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 CHP System in a manner to prevent visible emissions. **[Reference: COMAR 26.11.03.06C]**
- The Permittee shall maintain an operations manual and preventive maintenance plan. The Permittee shall maintain a log of maintenance performed that relates to combustion performance. **[Reference: COMAR 26.11.03.06C]**

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- The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, “Report of Excess Emissions and Deviations”. **[Reference: COMAR 26.11.03.06C]**

B. Control of Sulfur Oxides

1. The Permittee must not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain SO₂ in excess of 110 nanograms per Joule (ng/J) (0.90 pounds per megawatt-hour (lb/MWh)) gross output. **[Reference: 40 CFR §60.4330(a)(1)]**
2. The Permittee must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input. If your turbine simultaneously fires multiple fuels, each fuel must meet this requirement. **[Reference: 40 CFR §60.4330(a)(2)]**

Compliance Demonstration

- The Permittee shall conduct performance test for SO_x in accordance with the methodologies specified in 40 CFR §60.4415. **[Reference: 40 CFR §60.4415(a)]**
- The Permittee must monitor the total sulfur content of the fuel being fired in the turbine, except as provided in 40 CFR §60.4365. The sulfur content of the fuel must be determined using total sulfur methods described in 40 CFR §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 40 CFR §60.17), which measure the major sulfur compounds, may be used. **[Reference: 40 CFR §60.4360]**
- The Permittee may elect not to monitor the total sulfur content of the fuel combusted in the turbine, if the fuel is demonstrated not to exceed potential sulfur emissions of 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input for units located in continental areas and 180 ng SO₂/J (0.42 lb SO₂/MMBtu) heat input for units located in noncontinental areas or a continental area that the Administrator determines does not have access to natural gas and that the removal of sulfur compounds would cause more environmental harm than benefit. **[Reference: 40 CFR §60.4365]**

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- If the Permittee elects not to demonstrate sulfur content using options in 40 CFR §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]**
- The Permittee shall maintain records and results of fuel sulfur content monitoring and make them available to the Department upon request. **[Reference: MDE Permit to Construct No. 510-0077-5-2067 issued May 18, 2010]**
- 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. All reports required under §60.7(c) must be postmarked by the 30th day following the end of each 6-month period. **[Reference: 40 CFR §60.4375 and §60.4395]**

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 MMBtu/hr or Less. A person who owns or operates fuel-burning equipment with a rated heat input capacity of 100 MMBtu/hr 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. The Permittee may not cause to be discharged into the atmosphere from the stationary combustion turbine NO_x emissions in excess of 25 ppm at 15 percent O₂ or 150 ng/J of useful output (1.2 lb/MWh). **[Reference: 40 CFR §60.4320(a) and 40 CFR Part 60, Subpart KKKK Table 1]**
4. The Permittee must operate and maintain the stationary combustion turbine, 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 perform a combustion analysis once a year. **[Reference: COMAR 26.11.09.08E(2)]**
- The Permittee 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(a)]**
- As an alternative to the annual performance testing required in 40 CFR §60.4340(a), the Permittee may install, calibrate, maintain and operate one of the following continuous monitoring systems:
 - a. Continuous emission monitoring as described in §60.4335(b) and §60.4345, or
 - b. Continuous parameter monitoring as follows:
 - i. For a diffusion flame turbine without add-on selective catalytic reduction (SCR) controls, you must define parameters indicative of the unit's NO_x formation characteristics, and you must monitor these parameters continuously.
 - ii. For any lean premix stationary combustion turbine, you must continuously monitor the appropriate parameters to determine whether the unit is operating in low-NO_x mode.

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- iii. For any turbine that uses SCR to reduce NO_x emissions, you must continuously monitor appropriate parameters to verify the proper operation of the emission controls.
 - iv. For affected units that are also regulated under 40 CFR Part 75, with state approval you can monitor the NO_x emission rate using the methodology in appendix E to part 75 of chapter 40, or the low mass emissions methodology in 40 CFR §75.19, the requirements of this paragraph (b) may be met by performing the parametric monitoring described in Section 2.3 of part 75 appendix E or in 40 CFR §75.19(c)(1)(iv)(H).
- The Permittee shall optimize combustion based on the annual combustion analysis. **[Reference: COMAR 26.11.09.08E(2)]**
 - The Permittee shall demonstrate continuous compliance with NO_x in accordance with 40 CFR §60.4340 as follows:
 - a. If the Permittee is not using water or steam injection to control NO_x emissions, The Permittee must perform annual performance tests in accordance with 40 CFR §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, The Permittee 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, The Permittee must resume annual performance tests.
 - b. As an alternative, you may install, calibrate, maintain and operate one of the following continuous monitoring systems:
 - i. Continuous emission monitoring as described in 40 CFR §60.4335(b) and 40 CFR §60.4345, or
 - ii. For a diffusion flame turbine without add-on selective catalytic reduction (SCR) controls, the Permittee must define parameters indicative of the unit's NO_x formation characteristics, and you must monitor these parameters continuously.
 - 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:
 - a. Selection of indicators to be monitored,
 - b. Ranges of indicators,
 - c. Process used to obtain representative data,

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- d. Quality assurance,
 - e. Frequency of monitoring, and
 - f. Justification for the proposed elements of monitoring. **[Reference 40 CFR §60.4355]**
- The Permittee shall maintain:
 - a. Records of the results of the annual combustion analysis on site. **[Reference: COMAR 26.11.09.08E(5)]**
 - b. Record of training program attendance for each operator at the site. **[Reference: COMAR 26.11.09.08E(5)]**
 - The Permittee shall maintain:
 - a. Records and results of any tests performed in compliance with the NO_x emission standards as required under 40 CFR §60.8 and 40 CFR 60, Subpart KKKK.
 - b. Parametric monitoring plan in accordance with §60.4355 and submit a copy of the plan to the Department upon completion. **[Reference: MDE Permit to Construct No. 510-0077-5-2067 issued May 18, 2010]**
 - The Permittee shall submit:
 - a. The results of combustion analysis to the department and the EPA upon request. **[Reference: COMAR 26.11.09.08E(3)]**
 - b. (2) A record of training program attendance for each operator to the Department upon request. **[Reference: COMAR 26.11.09.08E(5)]**
 - 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]**
 - All reports required under §60.7(c) must be postmarked by the 30th day following the end of each 6-month period. **[40 CFR §60.4395]**

D. Operational Limits

The CHP System which comprise of a 4.6 MW combustion turbine (CT) driven generator equipped with a heat recovery steam generator shall fire only natural gas unless the Permittee applies for and obtains a Permit to Construct from the Department to burn an alternate fuel. **[Reference: MDE Permit to Construct No.510-0077-5-2067 issued May 18, 2010 & COMAR 26.11.02.09A]**

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Compliance Demonstration

- The Permittee shall maintain records of the quantity and types of fuel burned. **[Reference: COMAR 26.11.02.19C(1)(c)]**
 - The Permittee shall maintain logs of visible emissions observations performed during the annual stack test or at any other time and make available to the Department upon request. **[Reference: MDE Permit to Construct No. 510-0077-5-2067 issued May 18, 2010 & COMAR 26.11.03.06C]**
 - The Permittee shall submit records of the quantity and type of fuels burned with the annual emissions certification report. See permit condition 8 of Section III.
-

COMPLIANCE SCHEDULE

Johns Hopkins University – Homewood Campus is currently in compliance with all applicable air quality regulations.

TITLE IV – ACID RAIN

Johns Hopkins University – Homewood Campus is not subject to Acid Rain Program requirements.

TITLE VI – OZONE DEPLETING SUBSTANCES

Johns Hopkins University – Homewood Campus is not subject to Title VI requirements.

SECTION 112(r) – ACCIDENTAL RELEASE

Johns Hopkins University – Homewood Campus is not subject to the requirements of Section 112(r).

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PERMIT SHIELD

The Johns Hopkins University – Homewood Campus requested that a permit shield be expressly included in the Permittee’s Part 70 permit. Permit shields are granted on an emission unit by emission unit basis. If an emission unit is covered by a permit shield, a permit shield statement will follow the emission unit table in Section IV - Plant Specific Conditions of the permit. In this case, a permit shield was granted for each emission unit covered by the permit.

SECTION V INSIGNIFICANT ACTIVITIES

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

- (1) No. 21 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;

The affected fuel burning 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.

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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. 18 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.

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

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- (4) ✓ Confection cookers where the products are edible and intended for human consumption;
- (5) ✓ Photographic process equipment used to reproduce an image upon sensitized material through the use of radiant energy;
- (6) ✓ Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding, or disc sanding of wood or wood products;
- (7) Containers, reservoirs, or tanks used exclusively for:
- (a) No. 24 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel;
- (b) No. 1 Storage of motor vehicle gasoline and having individual tank capacities of 2,000 gallons (7.6 cubic meters) or less;
- (8) ✓ 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;
- (9) ✓ Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;
- (10) ✓ Laboratory fume hoods and vents;

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SECTION VI STATE-ONLY ENFORCEABLE CONDITIONS

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

1. Applicable Regulations:

- (A) **COMAR 26.11.06.08** – Nuisance. An installation or premises may not be operated or maintained in such a manner that nuisance or air pollution is created. Nothing in this regulation relating to the control of emissions may in any manner be construed as authorizing or permitting the creation of, or maintenance of, nuisance or air pollution.”
- (B) **COMAR 26.11.06.09** - Odors. “A person may not cause or permit the discharge into the atmosphere of gases, vapors, or odors beyond the property line in such a manner that a nuisance or air pollution is created.”

2. Record Keeping and Reporting:

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:

- (a) a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or
- (b) 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.