KEEP PERMIT AT SITE

CONTROL NO. B - 06156

State of *Maryland*

Lawrence J. Hogan, Jr.
Governor

Boyd K. Rutherford
Lieutenant Governor

Ben Grumbles
Secretary

DEPARTMENT OF THE ENVIRONMENT

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

[ ] Construction Permit

[X] Part 70 Operating Permit

PERMIT NO. 24-005-00812

DATE ISSUED October 1, 2017

PERMIT FEE To be paid in accordance with COMAR 26.11.02.19B(b)

EXPIRATION DATE September 30, 2022

LEGAL OWNER & ADDRESS

Mayor and City Council of Baltimore
200 N. Holiday Street, Suite 600
Baltimore, MD 21202
Attn: Marshall Phillips, Plant Manager

SITE

Back River Wastewater Treatment Plant
8201 Eastern Avenue
Baltimore, MD 21224
Baltimore City
AI # 8449

SOURCE DESCRIPTION

One (1) Wastewater Treatment Plant.

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

Program Manager

Director, Air and Radiation Administration

(NOT TRANSFERABLE)

BACK RIVER WASTEWATER TREATMENT PLANT
8201 EASTERN AVE, BALTIMORE, MD 21224
PART 70 OPERATING PERMIT NO. 24-005-00812

SECTION I SOURCE IDENTIFICATION

1. DESCRIPTION OF FACILITY

The Back River Wastewater Treatment Plant (Back River) is owned and operated by Baltimore City. The treatment plant is rated at 180 million gallons per day but currently treats approximately 150 million gallons of predominately domestic wastewater per day and produces approximately 95 dry tons of biosolids per day. The biosolids are anaerobically digested, dewatered and either heat-dried and pelletized or composted. The pelletizing and composting facilities are privatized operations. The SIC for this facility is 4952

The treatment units include screening, grit removal, primary sedimentation, secondary treatment by activated sludge, sand filtration, disinfection by addition of hypochlorous acid, dechlorination with sodium bisulfite, and reaeration prior to discharge to Back River. Nutrients in the wastewater are controlled by a combination of biological nitrogen removal and chemical precipitation for phosphorus removal.

The treatment plant has a number of stationary air pollution sources, which consist of flares, boilers, space heaters, gasoline storage tanks, odor scrubbers and digester gas-fired engine powered generators. The boilers and space heaters are capable of burning digester gas and natural gas. Two boilers are capable of burning No. 2 fuel oil as backup during times of gas shortage or curtailment.

2. FACILITY INVENTORY LIST

Emissions Unit No.	MDE Registration No.	Emission Unit Description	Installation Date
EU-0511	005-0812-5-0511	Two (2) waste gas flares for combusting excess digester gas.	1974
EU-1426	005-0812-5-1426	One (1) Weil-McLain digester gas-fired boiler Model P-1188-W, rated at 1.33 MMBtu/hr.	1986
EU-1427	005-0812-5-1427	One (1) H. B. Smith digester gas-fired boiler rated at 2.1 MMBtu/hr.	1984
EU-1428	005-0812-5-1428	One (1) Gordon Piatt digester gas-fired boiler rated at 2.05 MMBtu/hr.	1983
EU-2312	005-0812-5-2312	One (1) H. B. Smith digester gas and oil-fired boiler rated at 3.5 MMBtu/hr.	2007
EU-2313	005-0812-5-2313	One (1) H. B. Smith digester gas and oil-fired boiler rated at 3.5 MMBtu/hr.	2007
EU-1434	005-0812-5-1434	One (1) Gordon Piatt Co. digester gas-fired boiler rated at 2.05 MMBtu/hr.	1975
EU-1438	005-0812-5-1438	One (1) Cleaver Brooks digester gas and natural gas fired boiler Model NCB-200-800, rated at 33.45 MMBtu/hr.	1991
EU-1439	005-0812-5-1439	One (1) Cleaver Brooks digester gas and natural gas fired boiler Model NCB-200-800, rated at 33.45 MMBtu/hr.	1991
EU-1465	005-0812-5-1465	One (1) H. B. Smith digester gas and No. 2 fuel oil-fired boiler Model 28W7 rated at 1.49 MMBtu/hr.	January 1993
EU-1563	005-0812-5-1563	One (1) H. B. Smith digester gas -fired boiler Model B-29A-W7-CI, rated at 1.3 MMBtu/hr.	October 30, 1996
EU-0884	005-0812-9-0884	Two (2) 8, 000 gallon gasoline underground storage tanks equipped with Stage I VRS.	March 1985
EU-0105	005-0812-9-0105	Eight (8) 15,000 gallon VOC storage tanks with attached vapor recovery systems associated with an Enhanced Nutrient Removal (ENR) system.	2012
EU-0105M	005-0812-9-0105M	Four (4) single-stage wet scrubbers to control odors from Influent Conduit (Mechanical Screen Building) Sludge Loading Facility, Influent Meter Flumes, DAFT Units 1 & 2, and DAFT 3 & 4 and two (2) two-stage wet scrubbers, which control odors from the Head Chambers, PST#2, and GSTs.	1984, 1990, 1992, 1992, 1991, and 1998 respectively
EU-2047 N	005-0812-5-2047	One (1) Broad digester gas-fired heater/chiller rated at 4.2 MMBtu/hr. heat input.	November 2003
EU-2201	005-0812-5-2201	One (1) H. B. Smith digester gas-fired boiler rated at 2.1 MMBtu/hr. heat input.	2003
EU-2202	005-0812-5 2202	One (1) H. B. Smith digester gas-fired boiler rated at 2.1 MMBtu/hr. heat input.	2003
EU-2255	005-0812-5-2255	One (1) York digester gas-fired heater/chiller rated at 4.3 MMBtu/hr.	September 2007

EU-2294	005-0812-5-2294	One (1) Weather Rite-ID-175 digester gas-fired furnace rated at 2.2 MMBtu/hr. heat input.	2001
EU-2295	005-0812-5-2295	One (1) Weather Rite-ID-175 digester gas-fired furnace rated at 2.2 MMBtu/hr. heat input.	2001
EU-1317	005-0812-9-1317	One (1) digester gas-fired spark ignition IC Waukesha Enginator generator rated at 1050 kW	2009
EU-1319	005-0812-9-1319	One (1) digester gas-fired spark ignition IC Waukesha Enginator generator rated at 1050 kW	2009
EU-1320	005-0812-9-1320	One (1) digester gas-fired spark ignition IC Waukesha Enginator generator rated at 1050 kW	2009

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

ARMA	Air and Radiation Management Administration
BACT	Best Available Control Technology
Btu	British thermal unit
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEM	Continuous Emissions Monitor
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COMAR	Code of Maryland Regulations
EPA	United States Environmental Protection Agency
FR	Federal Register
gr	grains
HAP	Hazardous Air Pollutant
MACT	Maximum Achievable Control Technology
MDE	Maryland Department of the Environment
MVAC	Motor Vehicle Air Conditioner
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NO_x	Nitrogen Oxides
NSPS	New Source Performance Standards
NSR	New Source Review
OTR	Ozone Transport Region
PM	Particulate Matter
PM10	Particulate Matter with Nominal Aerodynamic Diameter of 10 micrometers or less
ppm	parts per million
ppb	parts per billion
PSD	Prevention of Significant Deterioration
PTC	Permit to construct
PTO	Permit to operate (State)
SIC	Standard Industrial Classification
SO_2	Sulfur Dioxide

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

3. EFFECTIVE DATE

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

4. PERMIT EXPIRATION

[COMAR 26.11.03.13B(2)]

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

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

5. PERMIT RENEWAL

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

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

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

6. CONFIDENTIAL INFORMATION

[COMAR 26.11.02.02G]

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

7. PERMIT ACTIONS

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

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

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

a. Additional requirements of the Clean Air Act become applicable to this facility and the remaining permit term is 3 years or more;

b. The Department or the EPA determines that this Part 70 permit contains a material mistake, or is based on false or inaccurate information supplied by or on behalf of the Permittee;

c. The Department or the EPA determines that this Part 70 permit must be revised or revoked to assure compliance with applicable requirements of the Clean Air Act; or

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

8. PERMIT AVAILABILITY

[COMAR 26.11.02.13G]

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

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

[COMAR 26.11.03.20B]

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

10. TRANSFER OF PERMIT

[COMAR 26.11.02.02E]

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

11. REVISION OF PART 70 PERMITS – GENERAL CONDITIONS

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

a. The Permittee shall submit an application to the Department to revise this Part 70 permit when required under COMAR 26.11.03.15 -.17.

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

c. The Permittee may not change any provision of a compliance plan or schedule in a Part 70 permit as an administrative permit amendment or as a minor permit modification unless the change has been approved by the Department in writing.

d. A permit revision is not required for a change that is provided for in this permit relating to approved economic incentives, marketable permits, emissions trading, and other similar programs.

12. SIGNIFICANT PART 70 OPERATING PERMIT MODIFICATIONS

[COMAR 26.11.03.17]

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

a. A significant modification is a revision to the federally enforceable provisions in the permit that does not qualify as an administrative permit amendment under COMAR 26.11.03.15 or a minor permit modification as defined under COMAR 26.11.03.16.

b. This permit does not preclude the Permittee from making changes, consistent with the provisions of COMAR 26.11.03, that would make the permit or particular terms and conditions of the permit irrelevant, such as by shutting down or reducing the level of operation of a source or of an emissions unit within the source. Air pollution control equipment shall not be shut down or its level of operation reduced if doing so would violate any term of this permit.

c. Significant permit modifications are subject to all requirements of COMAR 26.11.03 as they apply to permit issuance and renewal, including the requirements for applications, public participation, and review by affected states and EPA, except:

(1) An application need include only information pertaining to the proposed change to the source and modification of this permit, including a description of the change and modification, and any new applicable requirements of the Clean Air Act that will apply if the change occurs;

(2) Public participation, and review by affected states and EPA, is limited to only the application and those federally enforceable

terms and conditions of the Part 70 permit that are affected by the significant permit modification.

d. As provided in COMAR 26.11.03.15B(5), an administrative permit amendment may be used to make a change that would otherwise require a significant permit modification if procedures for enhanced preconstruction review of the change are followed that satisfy the requirements of 40 CFR 70.7(d)(1)(v).

e. Before making a change that qualifies as a significant permit modification, the Permittee shall obtain all permits-to-construct and approvals required by COMAR 26.11.02.

f. The Permittee shall not make a significant permit modification that results in a violation of any applicable requirement of the Clean Air Act.

g. The permit shield in COMAR 26.11.03.23 applies to a final significant permit modification that has been issued by the Department, to the extent applicable under COMAR 26.11.03.23.

13. MINOR PERMIT MODIFICATIONS

[COMAR 26.11.03.16]

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

a. A minor permit modification is a Part 70 permit revision that:

(1) Does not result in a violation of any applicable requirement of the Clean Air Act;

(2) Does not significantly revise existing federally enforceable monitoring, including test methods, reporting, record keeping, or compliance certification requirements except by:

(a) Adding new requirements,

(b) Eliminating the requirements if they are rendered meaningless because the emissions to which the requirements apply will no longer occur, or

(c) Changing from one approved test method for a pollutant and source category to another;

(3) Does not require or modify a:

(a) Case-by-case determination of a federally enforceable emissions standard,

(b) Source specific determination for temporary sources of ambient impacts, or

(c) Visibility or increment analysis;

(4) Does not seek to establish or modify a federally enforceable permit term or condition for which there is no corresponding underlying applicable requirement of the Clean Air Act, but that the Permittee has assumed to avoid an applicable requirement to which the source would otherwise be subject, including:

(a) A federally enforceable emissions standard applied to the source pursuant to COMAR 26.11.02.03 to avoid classification as a Title I modification; and

(b) An alternative emissions standard applied to an emissions unit pursuant to regulations promulgated under Section 112(i)(5) of the Clean Air Act

(5) Is not a Title I modification; and

(6) Is not required under COMAR 26.11.03.17 to be processed as a significant modification to this Part 70 permit.

b. Application for a Minor Permit Modification

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

(1) A description of the proposed change, the emissions resulting from the change, and any new applicable requirements that will apply if the change is made;

(2) The proposed minor permit modification;

(3) Certification by a responsible official, in accordance with COMAR 26.11.02.02F, that:

(a) The proposed change meets the criteria for a minor permit modification, and

(b) The Permittee has obtained or applied for all required permits-to-construct required by COMAR 26.11.03.16 with respect to the proposed change;

(4) Completed forms for the Department to use to notify the EPA and affected states, as required by COMAR 26.11.03.07-.12.

c. Permittee's Ability to Make Change

(1) For changes proposed as minor permit modifications to this permit that will require the applicant to obtain a permit to construct, the permit to construct must be issued prior to the new change.

(2) During the period of time after the Permittee applies for a minor modification but before the Department acts in accordance with COMAR 26.11.03.16F(2):

(a) The Permittee shall comply with applicable requirements of the Clean Air Act related to the change and the permit terms and conditions described in the application for the minor modification.

(b) The Permittee is not required to comply with the terms and conditions in the permit it seeks to modify. If the Permittee fails to comply with the terms and conditions in the application during this time, the terms and conditions of both this permit and the application for modification may be enforced against it.

d. The Permittee is subject to enforcement action if it is determined at any time that a change made under COMAR 26.11.03.16 is not within the scope of this regulation.

e. Minor permit modification procedures may be used for Part 70 permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, but only to the extent that the minor permit modification procedures are explicitly

provided for in regulations approved by the EPA as part of the Maryland SIP or in other applicable requirements of the Clean Air Act.

14. ADMINISTRATIVE PART 70 OPERATING PERMIT AMENDMENTS

[COMAR 26.11.03.15]

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

a. An application for an administrative permit amendment shall:

(1) Be in writing;

(2) Include a statement certified by a responsible official that the proposed amendment meets the criteria in COMAR 26.11.03.15 for an administrative permit amendment, and

(3) Identify those provisions of this part 70 permit for which the amendment is requested, including the basis for the request.

b. An administrative permit amendment:

(1) Is a correction of a typographical error;

(2) Identifies a change in the name, address, or phone number of a person identified in this permit, or a similar administrative change involving the Permittee or other matters which are not directly related to the control of air pollution;

(3) requires more frequent monitoring or reporting by the Permittee;

(4) Allows for a change in ownership or operational control of a source for which the Department determines that no other revision to the permit is necessary and is documented as per COMAR 26.11.03.15B(4);

(5) Incorporates into this permit the requirements from preconstruction review permits or approvals issued by the Department in accordance with COMAR 26.11.03.15B(5), but only if it satisfies 40 CFR 70.7(d)(1)(v);

(6) Incorporates any other type of change, as approved by the EPA, which is similar to those in COMAR 26.11.03.15B(1)—(4);

(7) Notwithstanding COMAR 26.11.03.15B(1)—(6), all modifications to acid rain control provisions included in this Part 70 permit are governed by applicable requirements promulgated under Title IV of the Clean Air Act; or

(8) Incorporates any change to a term or condition specified as State-only enforceable, if the Permittee has obtained all necessary permits-to-construct and approvals that apply to the change.

c. The Permittee may make the change addressed in the application for an administrative amendment upon receipt by the Department of the application, if all permits-to-construct or approvals otherwise required by COMAR 26.11.02 prior to making the change have first been obtained from the Department.

d. The permit shield in COMAR 26.11.03.23 applies to administrative permit amendments made under Section B(5) of COMAR 26.11.03.15 , but only after the Department takes final action to revise the permit.

e. The Permittee is subject to enforcement action if it is determined at any time that a change made under COMAR 26.11.03.15 is not within the scope of this regulation.

15. OFF-PERMIT CHANGES TO THIS SOURCE

[COMAR 26.11.03.19]

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

a. The Permittee may make a change to this permitted facility that is not addressed or prohibited by the federally enforceable conditions of this Part 70 permit without obtaining a Part 70 permit revision if:

(1) The Permittee has obtained all permits and approvals required by COMAR 26.11.02 and .03;

(2) The change is not subject to any requirements under Title IV of the Clean Air Act;

(3) The change is not a Title I modification; and

(4) The change does not violate an applicable requirement of the Clean Air Act or a federally enforceable term or condition of the permit.

b. For a change that qualifies under COMAR 26.11.03.19, the Permittee shall provide contemporaneous written notice to the Department and the EPA, except for a change to an emissions unit or activity that is exempt from the Part 70 permit application, as provided in COMAR 26.11.03.04. This written notice shall describe the change, including the date it was made, any change in emissions, including the pollutants emitted, and any new applicable requirements of the Clean Air Act that apply as a result of the change.

c. Upon satisfying the requirements of COMAR 26.11.03.19, the Permittee may make the proposed change.

d. The Permittee shall keep a record describing:

(1) Changes made at the facility that result in emissions of a regulated air pollutant subject to an applicable requirement of the Clean Air Act , but not otherwise regulated under this permit; and

(2) The emissions resulting from those changes.

e. Changes that qualify under COMAR 26.11.03.19 are not subject to the requirements for Part 70 revisions.

f. The Permittee shall include each off-permit change under COMAR 26.11.03.19 in the application for renewal of the part 70 permit.

g. The permit shield in COMAR 26.11.03.23 does not apply to off-permit changes made under COMAR 26.11.03.19.

h. The Permittee is subject to enforcement action if it is determined that an off-permit change made under COMAR 26.11.03.19 is not within the scope of this regulation.

16. ON-PERMIT CHANGES TO SOURCES

[COMAR 26.11.03.18]

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

a. The Permittee may make a change to this facility without obtaining a revision to this Part 70 permit if:

(1) The change is not a Title I modification;

(2) The change does not result in emissions in excess of those expressly allowed under the federally enforceable provisions of the Part 70 permit for the permitted facility or for an emissions unit within the facility, whether expressed as a rate of emissions or in terms of total emissions;

(3) The Permittee has obtained all permits and approvals required by COMAR 26.11.02 and .03;

(4) The change does not violate an applicable requirement of the Clean Air Act;

(5) The change does not violate a federally enforceable permit term or condition related to monitoring, including test methods, record keeping, reporting, or compliance certification requirements;

(6) The change does not violate a federally enforceable permit term or condition limiting hours of operation, work practices, fuel usage, raw material usage, or production levels if the term or condition has been established to limit emissions allowable under this permit;

(7) If applicable, the change does not modify a federally enforceable provision of a compliance plan or schedule in this Part 70 permit unless the Department has approved the change in writing; and

(8) This permit does not expressly prohibit the change under COMAR 26.11.03.18.

b. The Permittee shall notify the Department and the EPA in writing of a proposed on-permit change under COMAR 26.11.03.18 not later than 7 days before the change is made. The written information shall include the following information:

(1) A description of the proposed change;

(2) The date on which the change is proposed to be made;

(3) Any change in emissions resulting from the change, including the pollutants emitted;

(4) Any new applicable requirement of the Clean Air Act; and

(5) Any permit term or condition that would no longer apply.

c. The responsible official of this facility shall certify in accordance with COMAR 26.11.02.02F that the proposed change meets the criteria for the use of on-permit changes under COMAR 26.11.03.18.

d. The Permittee shall attach a copy of each notice required by condition b. above to this Part 70 permit.

e. On-permit changes that qualify under COMAR 26.11.03.18 are not subject to the requirements for part 70 permit revisions.

f. Upon satisfying the requirements under COMAR 26.11.03.18, the Permittee may make the proposed change.

g. The permit shield in COMAR 26.11.03.23 does not apply to on-permit changes under COMAR 26.11.03.18.

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

17. FEE PAYMENT

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

a. The fee for this Part 70 permit is as prescribed in Regulation .19 of COMAR 26.11.02.

b. The fee is due on and shall be paid on or before each 12-month anniversary date of the permit.

c. Failure to pay the annual permit fee constitutes cause for revocation of the permit by the Department.

18. REQUIREMENTS FOR PERMITS-TO-CONSTRUCT AND APPROVALS

[COMAR 26.11.02.09.]

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

a. New Source Review source, as defined in COMAR 26.11.01.01, approval required, except for generating stations constructed by electric companies;

b. Prevention of Significant Deterioration source, as defined in COMAR 26.11.01.01, approval required, except for generating stations constructed by electric companies;

c. New Source Performance Standard source, as defined in COMAR 26.11.01.01, permit to construct required, except for generating stations constructed by electric companies;

d. National Emission Standards for Hazardous Air Pollutants source, as defined in COMAR 26.11.01.01, permit to construct required, except for generating stations constructed by electric companies;

e. A stationary source of lead that discharges one ton per year or more of lead or lead compounds measured as elemental lead, permit to construct required, except for generating stations constructed by electric companies;

f. All stationary sources of air pollution, including installations and air pollution control equipment, except as listed in COMAR 26.11.02.10, permit to construct required;

g. In the event of a conflict between the applicability of (a.— e.) above and an exemption listed in COMAR 26.11.02.10, the provision that requires a permit applies.

h. Approval of a PSD or NSR source by the Department does not relieve the Permittee obtaining an approval from also obtaining all permits-to-construct required b y (c.— g.) above.

19. CONSOLIDATION OF PROCEDURES FOR PUBLIC PARTICIPATION

[COMAR 26.11.02.11C] and [COMAR 26.11.03.01K]

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

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

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

20. PROPERTY RIGHTS

[COMAR 26.11.03.06E(4)]

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

21. SEVERABILITY

[COMAR 26.11.03.06A(5)]

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

22. INSPECTION AND ENTRY

[COMAR 26.11.03.06G(3)]

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

a. Enter at a reasonable time without delay and without prior notification the Permittee's property where a Part 70 source is located, emissions-related activity is conducted, or records required by this permit are kept;

b. Have access to and make copies of records required by the permit;

c. Inspect all emissions units within the facility subject to the permit and all related monitoring systems, air pollution control equipment, and practices or operations regulated or required by the permit; and

d. Sample or monitor any substances or parameters at or related to the emissions units at the facility for the purpose of determining compliance with the permit.

23. DUTY TO PROVIDE INFORMATION

[COMAR 26.11.03.06E(5)]

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

Permittee shall also furnish to the Department records required to be kept under the permit.

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

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

24. COMPLIANCE REQUIREMENTS

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

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

a. Enforcement action,

b. Permit revocation or revision,

c. Denial of the renewal of a Part 70 permit, or

d. Any combination of these actions.

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

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

25. CREDIBLE EVIDENCE

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

26. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE

[COMAR 26.11.03.06E(2)]

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

27. CIRCUMVENTION

[COMAR 26.11.01.06]

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

28. PERMIT SHIELD

[COMAR 26.11.03.23]

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

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

b. The liability of the Permittee for a violation of an applicable requirement of the Clean Air Act before or when this permit is issued or for a violation that continues after issuance;

c. The requirements of the Acid Rain Program, consistent with Section 408(a) of the Clean Air Act;

d. The ability of the Department or EPA to obtain information from a source pursuant to Maryland law and Section 114 of the Clean Air Act; or

e. The authority of the Department to enforce an applicable requirement of the State air pollution control law that is not an applicable requirement of the Clean Air Act.

29. ALTERNATE OPERATING SCENARIOS

[COMAR 26.11.03.06A(9)]

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

SECTION III PLANT WIDE CONDITIONS

1. PARTICULATE MATTER FROM CONSTRUCTION AND DEMOLITION

[COMAR 26.11.06.03D]

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

2. OPEN BURNING

[COMAR 26.11.07]

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

3. AIR POLLUTION EPISODE

[COMAR 26.11.05.04]

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

4. REPORT OF EXCESS EMISSIONS AND DEVIATIONS

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

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

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

b. Promptly report all occurrences of excess emissions that are expected to last for one hour or longer by orally notifying the Department of the onset and termination of the occurrence;

c. When requested by the Department the Permittee shall report all deviations from permit conditions, including those attributed to malfunctions as defined in COMAR 26.11.01.07A, within 5 days of the request by submitting a written description of the deviation to the Department. The written report shall include the cause, dates and times of the onset and termination of the deviation, and an account of all actions planned or taken to reduce, eliminate, and prevent recurrence of the deviation;

d. The Permittee shall submit to the Department semi-annual monitoring reports that confirm that all required monitoring was performed, and that provide accounts of all deviations from permit requirements that occurred during the reporting periods. Reporting periods shall be January 1 through June 30 and July 1 through December 31, and reports shall be submitted within 30 days of the end of each reporting period. Each account of deviation shall include a description of the deviation, the dates and times of onset and termination, identification of the person who observed or discovered the deviation, causes and corrective actions taken, and actions taken to prevent recurrence. If no deviations from permit conditions occurred during a reporting period, the Permittee shall submit a written report that so states.

e. When requested by the Department, the Permittee shall submit a written report to the Department within 10 days of receiving the request concerning an occurrence of excess emissions. The report shall contain the information required in COMAR 26.11.01.07D(2).

5. ACCIDENTAL RELEASE PROVISIONS

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

The Permittee shall submit risk management plans by the date specified in 40 CFR 68.150.

The Permittee shall certify compliance with the requirements of 40 CFR 68 as part of the annual compliance certification as required by 40 CFR 70.

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

6. GENERAL TESTING REQUIREMENTS

[COMAR 26.11.01.04]

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

7. EMISSIONS TEST METHODS

[COMAR 26.11.01.04]

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

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

a. 40 CFR 60, appendix A

b. 40 CFR 51, appendix M

c. The Department's Technical Memorandum 91-01 "Test Methods and Equipment Specifications for Stationary Sources", (January 1991), as amended through Supplement 3, (October 1, 1997)

8. EMISSIONS CERTIFICATION REPORT

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

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

a. The certification shall be on forms obtained from the Department and submitted to the Department not later than April 1 of the year following the year for which the certification is required;

b. The individual making the certification shall certify that the information is accurate to the individual's best knowledge. The individual shall be:

(1) Familiar with each source for which the certifications forms are submitted, and

(2) Responsible for the accuracy of the emissions information;

c. The Permittee shall maintain records necessary to support the emissions certification including the following information if applicable:

(1) The total amount of actual emissions of each regulated pollutant and the total of all regulated pollutants;

(2) An explanation of the methods used to quantify the emissions and the operating schedules and production data that were used to determine emissions, including significant assumptions made;

(3) Amounts, types and analyses of all fuels used;

(4) Emissions data from continuous emissions monitors that are required by this permit, including monitor calibration and malfunction information;

(5) Identification, description, and use records of all air pollution control equipment and compliance monitoring equipment including:

(a) Significant maintenance performed,
(b) Malfunctions and downtime, and
(c) Episodes of reduced efficiency of all equipment;

(6) Limitations on source operation or any work practice standards that significantly affect emissions; and

(7) Other relevant information as required by the Department.

9. COMPLIANCE CERTIFICATION REPORT

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

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

a. The compliance certification shall include:

(1) The identification of each term or condition of this permit which is the basis of the certification;

(2) The compliance status;

(3) Whether the compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of each source, currently and over the reporting period; and

(5) Any other information required to be reported to the Department that is necessary to determine the compliance status of the Permittee with this permit.

b. The Permittee shall submit the compliance certification reports to the Department and EPA simultaneously.

10. CERTIFICATION BY RESPONSIBLE OFFICIAL

[COMAR 26.11.02.02F]

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

The certification shall be in the following form:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate

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

11. SAMPLING AND EMISSIONS TESTING RECORD KEEPING

[COMAR 26.11.03.06C(5)]

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

a. The location as specified in this permit, and the date and time that samples and measurements are taken;

b. All pertinent operating conditions existing at the time that samples and measurements are taken;

c. The date that each analysis of a sample or emissions test is performed and the name of the person taking the sample or performing the emissions test;

d. The identity of the Permittee, individual, or other entity that performed the analysis;

e. The analytical techniques and methods used; and

f. The results of each analysis.

12. GENERAL RECORDKEEPING

[COMAR 26.11.03.06C(6)]

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

These records and support information shall include:

a. All calibration and maintenance records;

b. All original data collected from continuous monitoring instrumentation;

c. Records which support the annual emissions certification; and

d. Copies of all reports required by this permit.

13. GENERAL CONFORMITY

[COMAR 26.11.26.09]

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

14. ASBESTOS PROVISIONS

[40 CFR 61, Subpart M]

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

15. OZONE DEPLETING REGULATIONS

[40 CFR 82, Subpart F]

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

a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the prohibitions and required practices pursuant to 40 CFR 82.154 and 82.156.

b. Equipment used during the maintenance, service, repair or disposal of appliances shall comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

c. Persons performing maintenance, service, repairs or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.

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

e. Persons disposing of small appliances, MVACS, and MVAC-like appliances as defined in 40 CFR 82.152, shall comply with record keeping requirements pursuant to 40 CFR 82.166.

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

g. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

16. ACID RAIN PERMIT

Not applicable

SECTION IV PLANT SPECIFIC CONDITIONS

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

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

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

Table IV – 1	
1.0	**Emissions Unit EU-0511** EU-0511 consists of two waste gas flares each with two burners for combusting excess digester gas.
1.1	**Applicable Standards/Limits:** A. Visible Emissions Limitations 1. **COMAR 26.11.06.02C(2)** – Visible Emissions – " In Areas III and IV a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is visible to human observers." 2. **COMAR 26.11.06.02A(2)** – Visible Emissions Exemption – "The visible emissions standards in §C of this regulation does not apply to emissions during start-up and process modifications 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 60-minute period".

Table IV – 1	
	B. Control of Nitrogen Oxides 1. **COMAR 26.11.09.08J** – Control of NOx Emissions for Major Stationary Sources. Requirement s for Industrial Furnaces and Other Miscellaneous Installations that Cause Emissions of NOx. "A person who owns or operates any installation other than fuel-burning equipment that causes NOx emissions shall: a. Maintain good operating practices as recommended by the equipment vendor to minimize NOx emissions; b. Prepare and implement a written in-house training program for all operators of these installations that include instruction on good operating and maintenance practices for the particular installation; c. Maintain and make available to the Department, upon request, the written in-house operator training program; d. Burn only gas in each installation, where gas is available, during the period May 1 through September 30 of each year; and e. Maintain operator training attendance records for each operator at the site for at least two years and make these records available to the Department upon request." 2. **COMAR 26.11.09.08B(5)(a)** - Operator Training. For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation. 3. **COMAR 26.11.09.08B(5)(b)** - Operator Training. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.
1.2	**Testing Requirements:** A. See monitoring B. See monitoring

Table IV – 1	
1.3	**Monitoring Requirements:** A. The Permittee shall: 1. Properly operate and maintain the waste gas flares, and 2. Maintain an operations manual and preventative maintenance plan which relates to combustion performance. **[Authority: COMAR 26.11.03.06C]** B. A person who owns or operates any installation other than fuel-burning equipment that causes NOx emissions shall: 1. "Maintain good operating practices as recommended by the equipment vendor to minimize NOx emissions;" **[Authority: COMAR 26.11.09.08J(1)]** 2. "Prepare and implement a written in-house training program for all operators of these installations that include instruction on good operating and maintenance practices for the particular installation; **[Authority: COMAR 26.11.09.08J(2)]**
1.4	**Record Keeping Requirements:** A. The Permittee shall maintain a record of maintenance performed on the waste gas flares for at least 5 years and make it available to the Department upon request. **[Authority: COMAR 26.11.03.06C]** B. The Permittee shall: 1. Maintain and make available to the Department, upon request, the written in-house operator training program. **[Reference: COMAR 26.11.09.08J(3)]** 2. Maintain operator training attendance records for each operator on site for at least two years and make these records available to the Department upon request. Note: Title V permits records must be maintained for five years. **[Reference: COMAR 26.11.09.08J(5)]** 3. Maintain annual fuel use records on site for at least three years and make records available to the Department upon request. Note: For Title V permit records must be maintained for five years. **[Authority: COMAR 26.11.09.08K(3)]**

Table IV – 1	
1.5	**Reporting Requirements:** A. 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." **[Authority: COMAR 26.11.01.07 and COMAR 26.11.03.06C(7)]** B. The Permittee shall: 1. Make available to the Department, upon request, the written in-house operator training program. **[Reference: COMAR 26.11.09.08J(3)]** 2. Make available to the Department upon request, records of operator training attendance for each operator. **[Reference: COMAR 26.11.09.08J(5)]** 3. Maintain annual fuel use records on site for not less than 3 years, and make these records available to the Department upon request. **[Authority: COMAR 26.11.09.08K(3)]**

A Permit Shield shall cover the applicable requirements identified for the emission units listed in the table above

Table IV – 2	
2.0	**Emissions Unit Number(s)** **Non-NSPS digester gas fired boilers/space heaters** Emission Units consist of the following 12 non-NSPS digester gas fired boilers which have rated heat input capacities of less than 10 MMBtu/hr each: These EU's are: 1426, 1427, 1428, 2312*, 2313*, 1434, 1465, 1563, 2201, 2202, 2294, and 2295. *Note: EU 2312 and EU 2313 are the only boilers currently permitted to burn No. 2 fuel oil during periods of gas curtailment.
2.1	**Applicable Standards/Limits:** A. Visible Emissions Limitations 1. **COMAR 26.11.09.05(2)** – 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

Table IV – 2

demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity."

2. **COMAR 26.11.09.05A(3)** – Exceptions. "Section A(2) does not apply to emissions during the periods of 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 60-minute period."

B. Control of Sulfur Oxides (applies only to EU-2312 and EU-2313)

1. **COMAR 26.11.09.07A(2)(b) –** Sulfur Content Limitations for Fuel. In Areas II and IV. "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: (b) Distillate fuel oils, 0.3 percent."

C. Control of Nitrogen Oxides

1. **COMAR 26.11.09.08F(1) –** Requirements for Space Heaters. The Permittee shall:

   a. Submit to the Department a list of each affected installation on the premises and the types of fuel used in each installation;

   b. Develop an operating and maintenance plan to minimize NOx emissions based on the recommendations of equipment vendors and other information including the source's operating and maintenance experience;

   c. Implement the operating and maintenance plan and maintain the plan at the premises for review upon request by the Department;

   d. 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

Table IV – 2	
	e. Prepare and maintain a record of training program attendance for each operator at the site and make these records available to the Department upon request. 2. **COMAR 26.11.09.08F(2) -** Requirements for Space Heaters. "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." Note: "Space heater" means fuel-burning equipment that consumes more than 60 percent of its annual fuel during the period from October 31 of one year through March 31 of the following year. 3. **COMAR 26.11.09.08B(5)(a)** - Operator Training. For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation. 4. **COMAR 26.11.09.08B(5)(b)** - Operator Training. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department. D. Operational Limit (EU 2312 and EU 2313 only) 1. The Permittee shall burn only gaseous fuels not combined with any solid fuels and burn liquid fuel only during periods of gas curtailment, gas supply interruption, startups, or for periodic testing, maintenance, or operator training on liquid fuel. Periodic testing, maintenance, or operator training on liquid fuel shall not exceed a combined total of 48 hours during any calendar year. **[Authority: 40 CFR 63.11195(e) and 63.11236]**
2.2	**Testing Requirements:** A. See monitoring B. See monitoring C. See monitoring D. See monitoring

Table IV – 2	
2.3	**Monitoring Requirements:** A. The Permittee shall: 1. Properly operate and maintain the boilers. 2. Maintain an operations manual and preventive maintenance plan which relates to combustion performance. 3. When burning waste digester gas, no visible emissions observations are required. For EU 2312 and EU 2313 when burning No. 2 fuel oil, visible emissions observations are required using EPA Reference Method 9 according to the following schedule: if boiler hours exceed 168 during a calendar year conduct a method 9 at least once during every 168 hours of operation burning No. 2 fuel oil that year. If the hours of burning No. 2 fuel oil are less than 168 hours in a calendar year, the requirement for a visible emissions observation is waived for the calendar year. 4. Perform the following if emissions are visible to human observer: a. Inspect combustion control system and boiler operations; b. Perform all necessary adjustments and/or repairs to the boilers within 48 hours, so that visible emissions are eliminated; c. Document in writing the results of the inspections, adjustments and/or repairs to the boilers; and d. Perform a Method 9 observation once daily for 18 minutes until corrective action has achieved compliance – if the required adjustments and/or repairs have not eliminated the visible emissions within the stipulated 48 hours. **[Authority: COMAR 26.11.03.06C]** B. The Permittee shall obtain fuel oil supplier certifications that includes the following information: 1. The name of the fuel supplier; and 2. Certified statement from the supplier verifying that the oil complies with the 0.3% by weight sulfur content. **[Authority: COMAR 26.11.03.06C]**

Table IV – 2	
	C. The Permittee shall: 1. Develop an operating and maintenance plan to minimize NOx emissions based on the recommendations of equipment vendors and other information including the source's operating and maintenance experience. **[Authority: COMAR 26.11.09.08F(1)(b)]** 2. Implement the operating the maintenance plan and maintain the plan at the premises for the review upon request by the Department. **[Authority: COMAR 26.11.09.08F(1)(c)]**
2.4	**<u>Record Keeping Requirements</u>:** A. The Permittee shall maintain a record of the results of the observations for at least 5 years and make them available to the Department upon request. **[Authority: COMAR 26.11.03.06C]** B. The Permittee shall maintain records of fuel suppliers' certification for at least 5 years. **[Authority: COMAR 26.11.03.06C]** C. The Permittee shall: 1. Maintain records of the operating and maintenance plan at the site for at least 5 years and make the results available to the Department upon request. **[Authority: COMAR 26.11.09.08F(1)(c)]** 2. Prepare and maintain a record of training program attendance for each operator at the site and make the record available to the Department upon request. **[Authority: COMAR 26.11.09.08F(1)(e)]** 3. Maintain annual fuel use records on site for at least three years and shall make these records available to the Department upon request. **[Reference: COMAR 26.11.09.08K(3)]**
2.5	**<u>Reporting Requirements</u>:** A. The Permittee shall report those periods when visible emissions are observed as requires by Permit Condition 4 of Section III, "Report Excess Emissions and Deviations." B. The Permittee shall make the records of fuel suppliers' certification available to the Department upon request.

Table IV – 2	
	C. The Permittee shall: 1. Make the operating and maintenance plan available to the Department upon request. **[Authority: COMAR 26.11.09.08F(1)(c)]** 2. Make the records of training program attendance for each operator available at the site and make the record available to the Department upon request. **[Authority: COMAR 26.11.09.08F(1)(e)]** 3. Maintain annual fuel use records on site for not less than 3 years, and make these records available to the Department upon request. **[Authority: COMAR 26.11.09.08K(3)]**

A Permit Shield shall cover the applicable requirements identified for the emission units listed in the table above

Table IV – 3	
3.0	**Emissions Unit – EU 1438 and 1439** Emission Units EU-1438 and 1439 are Cleaver Brooks boilers Model # NCB-200-800 each rated at 33.45 MMBtu/hr and installed in 1991. These NSPS boilers use both digester and natural gas as fuel.
3.1	**Applicable Standards/Limits:** A. Visible Emissions Limitations 1. **COMAR 26.11.09.05(2)** – Areas III and IV. "In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity." 2. **COMAR 26.11.09.05A(3)** – Exceptions. "Section A(2) does not apply to emissions during the periods of 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 60-minute period."

Table IV – 3	
	B. Control of Nitrogen Oxides 1. **COMAR 26.11.09.08E** – Requirements for Fuel-Burning Equipment with a Rated Heat Input Capacity of 100 Million Btu Per Hour or Less. A person who owns or operates fuel-burning equipment with a rated heat input capacity of 100 Million Btu per hour or less shall: a. Submit to the Department an identification of each affected installation, the rated heat input capacity, and type of fuel burned in each; b. Perform a combustion analysis for each installation at least once each year and optimize combustion based on the analysis; c. Maintain the results of the combustion analysis at the site for at least 2 years and make this data available to the Department and the EPA upon request; d. Once every 3 years, require each operator of the installation to attend operator training programs on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and e. Prepare and maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request. 2. **COMAR 26.11.09.08B(5)(a)** - Operator Training. For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation. 3. **COMAR 26.11.09.08B(5)(b)** - Operator Training. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.
3.2	**Testing Requirements:** A. See monitoring B. See monitoring

Table IV – 3	
3.3	**Monitoring Requirements:** A. The Permittee shall: 1. Properly operate and maintain the boilers; and 2. Maintain an operations manual and preventive maintenance plan which relates to combustion performance. **[Authority: COMAR 26.11.03.06C]** B. The Permittee shall perform a combustion analysis for each installation at least once each year and optimize combustion based on the analysis. **[Authority: COMAR 26.11.09.08E(2)]**
3.4	**Record Keeping Requirements:** A. The Permittee shall maintain a record of maintenance performed on the boilers for at least 5 years and make the records available to the Department upon request. B. The Permittee shall: 1. Maintain the results of the combustion analysis at the site for at least 2 years and make results available to the Department upon request. **[Authority: COMAR 26.11.09.08E(3)]** Note: For the Title V permits records must be maintained for five years. 2. Maintain a record of training program attendance for each operator at the site and make the record available to the Department upon request. **[Authority: COMAR 26.11.09.08E(5)]** 3. Maintain annual fuel use records on site for not less than 3 years, and make these records available to the Department upon request. **[Reference: COMAR 26.11.09.08K(3)]**
3.5	**Reporting Requirements:** A. The Permittee shall report those periods when visible emissions are observed to have occurred as required by Permit Condition 4 of Section III, “Report of Excess Emissions, and Deviations.” B. The Permittee shall:

Table IV – 3	
	1. Make the result of the combustion analysis available to the Department upon request. **[Authority: COMAR 26.11.09.08E(3)]** 2. Make records of training program attendance for each operator available to the Department upon request. **[Authority: COMAR 26.11.09.08E(5)]** 3. Maintain annual fuel use records on site for not less than 3 years, and make these records available to the Department upon request. **[Authority: COMAR 26.11.09.08K(3)]**

A Permit Shield shall cover the applicable requirements identified for the emissions unit listed in the table above

Table IV – 4	
4.0	**Emissions Units – EU 0884 (Tank Farm)** Gasoline Storage Tank – consist of two (2) 8,000-gallon underground gasoline storage tanks with vehicle refueling operation.
4.1	**Applicable Standards/Limits:** Control of VOC 1. **Stage I Vapor Recovery:** a. **COMAR 26.11.13.04C –** Small Storage Tanks. Owners and operators of gasoline storage tanks that have a tank capacity greater than 2,000 gallons but less than 40,000 gallons may not cause or permit gasoline to be loaded into a stationary tank unless the loading system is equipped with a vapor balance line that is properly installed, maintained, and used.
4.2	**Testing Requirements:** See monitoring
4.3	**Monitoring Requirements:** The Permittee shall: 1. At all times, operate in a manner consistent with safety and good air

Table IV – 4	
	pollution control practices for minimizing emissions. The Administrator shall decide if such procedures are being used. **[Authority: 40 CFR 63.11115(a)]** 2. Handle gasoline in a manner that reduces the release of vapor into the atmosphere. This includes, but is not limited to, measures that: a. Minimize gasoline spills; b. Clean up spills as quickly as practical; c. Cover all containers of gasoline when not in use; d. Minimize waste gasoline sent to open waste collectors. **[Reference: 40 CFR 63.11116(a)]** 3. Portable gasoline containers that meet the requirements of 40 CFR part 59, subpart F, are acceptable for the purpose of minimizing gasoline sent to open waste collection systems. **[Reference: 40 CFR 63.11116(d)]**
4.4	**<u>Record Keeping Requirements</u>:** The Permittee shall: 1. Keep applicable records and submit reports as specified in 40 CFR 63.11125(b) and 40 CFR 63.11126(b). **[Authority: 40 CFR 63.11115(b)]** 2. Have records available within 24 hours of a request by the Administrator to document gasoline throughput. **[Reference: 40 CFR 63.11116(b)]** 3. Keep records of the occurrence and duration of each malfunction of operation (*i.e.,* process equipment) of the air pollution control and monitoring equipment. **[Reference: 40 CFR §63.11125(d)(1)]** 4. Keep records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.11115(a), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. **[Reference: 40 CFR §63.11125(d)(2)]**

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4.5	**Reporting Requirements:** The Permittee shall report, by March 15 of each year, the number, duration, and a brief description of each type of malfunction which occurred during the previous calendar year and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.11115(a), including actions taken to correct a malfunction. No report is necessary for a calendar year in which no malfunctions occurred. **[Reference: 40 CFR §63.11126(b)]**

A Permit Shield shall cover the applicable requirements identified for the emissions unit listed in the table above.

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5.0	**Emissions Unit Number(s) – EU-2047 and EU-2255** EU-2047 and EU-2255 comprises one (1) Broad digester gas fired heater/chiller rated at 4.2 MMBtu/hr and one (1) York digester gas fired heater/chiller rated at 4.3 MMBtu/hr respectively.
5.1	**Applicable Standards/Limits:** A. Visible Emissions Limitations 1. **COMAR 26.11.09.05A(2)** – Areas III and IV. "In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity." 2. **COMAR 26.11.09.05A(3)** – Exceptions. "Section A(2) does not apply to emissions during the periods of 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 60-minute period."

Table IV – 5	
	B. Control of Nitrogen Oxides 1. **COMAR 26.11.09.08E** – Requirements for Fuel-Burning Equipment with a Rated Heat Input Capacity of 100 Million Btu Per Hour or Less. A person who owns or operates fuel-burning equipment with a rated heat input capacity of 100 Million Btu per hour or less shall: a. Submit to the Department an identification of each affected installation, the rated heat input capacity, and type of fuel burned in each; b. Perform a combustion analysis for each installation at least once each year and optimize combustion based on the analysis; c. Maintain the results of the combustion analysis at the site for at least 2 years and make this data available to the Department and the EPA upon request; d. Once every 3 years, require each operator of the installation to attend operator training programs on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and e. Prepare and maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request. 2. **COMAR 26.11.09.08B(5)(a)** - Operator Training. For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation. 3. **COMAR 26.11.09.08B(5)(b)** - Operator Training. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.
5.2	**Testing Requirements:** A. See monitoring B. See monitoring

Table IV – 5	
5.3	**Monitoring Requirements:** A. The Permittee shall: 1. Properly operate and maintain the heater/chiller units; and 2. Maintain an operations manual and preventive maintenance plan which relates to combustion performance. **[Authority: COMAR 26.11.03.06C]** B. The Permittee shall perform a combustion analysis for each installation at least once each year and optimize combustion based on the analysis. **[Authority: COMAR 26.11.09.08E(2)]**
5.4	**Record Keeping Requirements:** A. The Permittee shall maintain a record of the results of the observations for at least 5 years and make them available to the Department upon request. **[Authority: COMAR 26.11.03.06C]** B. The Permittee shall: 1. 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. **[Authority COMAR 26.11.09.08E(3)]** Note: For Title V permits, records must be maintained for five years. 2. Maintain a record of training program attendance for each operator at the site and make the record available to the Department upon request. **[Authority: COMAR 26.11.09.08E(5)]** 3. Maintain annual fuel use records on site for at least three years and make records available to the Department upon request. **[Authority COMAR 26.11.09.08K(3)]** Note: For Title V permits, records must be maintained for five years.
5.5	**Reporting Requirements:** A. 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.

Table IV – 5	
	B. The Permittee shall: 1. Make the result of the combustion analysis available to the Department upon request. **[Authority: COMAR 26.11.09.08E(3)]** 2. Make records of training program attendance for each operator available to the Department upon request. **[Authority: COMAR 26.11.09.08E(5)]** 3. Make annual fuel use records available to the Department upon request. **[Authority: COMAR 26.11.09.08K(3)]**

A Permit Shield shall cover the applicable requirements identified for the emissions unit listed in the table above.

Table IV – 6	
6.0	**<u>Emissions Unit Number(s) – EU-1317, EU-1319, and EU-1320</u>** EU's 1317, 1319, and 1320 comprises three (3) digester gas fired Waukesha Enginator spark ignition IC engine powered generators rated at 1050 kW.
6.**1**	**<u>Applicable Standards/Limits</u>:** A. <u>Visible Emissions Limitations</u> 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> a. Section E(2) of this regulation does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system. b. Section E(2) of this regulation does not apply to emissions

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resulting directly from cold engine start-up and warm-up for the following maximum periods:

i. Engines that are idled continuously when not in service: 30 minutes;

ii. All other engines: 15 minutes.

c. Section E(2) and (3) of this regulation do not apply while maintenance, repair, or testing is being performed by qualified mechanics.

B. Control of Nitrogen Oxides

1. **COMAR 26.11.09.08E** – Requirements for Fuel-Burning Equipment with a Rated Heat Input Capacity of 100 Million Btu Per Hour or Less. A person who owns or operates fuel-burning equipment with a rated heat input capacity of 100 Million Btu per hour or less shall:

   a. Submit to the Department an identification of each affected installation, the rated heat input capacity, and type of fuel burned in each;

   b. Perform a combustion analysis for each installation at least once each year and optimize combustion based on the analysis;

   c. Maintain the results of the combustion analysis at the site for at least 2 years and make this data available to the Department and the EPA upon request;

   d. Once every 3 years, require each operator of the installation to attend operator training programs on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and

   e. Prepare and maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request.

2. **COMAR 26.11.09.08B(5)(a)** - Operator Training. For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.

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	3. **COMAR 26.11.09.08B(5)(b)** - Operator Training. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department. C. Operational Limitations 1. The Permittee shall limit fuel use by the Waukesha engines to digester gas only. **[Authority: Permit-to-Construct No. 005-0812-9-1317, 1319, and 1320]** 2. The Permittee shall limit the total NOx emissions from all three of the Waukesha spark ignition engines combined to less than 25 tons for any rolling 12-month period unless the Permittee applies for and obtains a New Source Review approval. **[Authority: Permit-to-Construct No. 005-0812-9-1317, 1319, and 1320]**
6.2	**Testing Requirements:** A. See monitoring. B. See monitoring. C. See record keeping.
6.3	**Monitoring Requirements:** A. The Permittee shall properly operate and maintain the engines and perform routine and preventive maintenance procedures which relate to combustion and emissions in accordance with the manufacturer's written instructions and recommendations on each of the Waukesha spark ignition engines. **[Authority: Permit to Construct 005-0812-9-1317, 1319, and 1320]** B. The Permittee shall: 1. Perform a combustion analysis for each Waukesha spark ignition engine at least once each year and optimize combustion based on the analysis. **[Authority: COMAR 26.11.09.08E(2)]** 2. Monitor emission of NOx with a calibrated portable analyzer at least once every month of operation of each of the Waukesha spark ignition engines. To maintain calibration of the portable analyzer, the

Table IV – 6	
	Permittee shall follow the manufacturer's instructions and recommendations for servicing and calibrating the portable analyzer. **[Authority: Permit to Construct 005-0812-9-1317, 1319, and 1320]** C. See Recordkeeping
6.4	**<u>Record Keeping Requirements</u>:** A. The Permittee shall maintain records of the dates and description of maintenance performed which relate to combustion and emissions for at least 5 years. **[Authority: Permit to Construct 005-0812-9-1317, 1319, and 1320]** B. The Permittee shall: 1. Maintain the results of the combustion analysis at the site for at least 2 years and make the results available to the Department upon request. **[Authority: COMAR 26.11.09.08E(3)]** Note: For Title V permits records must be maintained for five years. 2. Prepare and maintain a record of training program attendance for each operator at the site and make the record available to the Department upon request. **[Authority: COMAR 26.11.09.08E(5)]** **3.** Maintain annual fuel use records on site for at least three years and make records available to the Department upon request. **[Reference: COMAR 26.11.09.08K(3)]** Note: For Title V permits records must be maintained for five years. C. The Permittee shall maintain monthly records of the hours of operation, fuel utilization (ft3/month), heat input (or capacity factor) for the Waukesha spark ignition engines on site for a period of at least five years and make the records available to the Department upon request. Additionally, the Permittee shall maintain on a rolling 12-month basis the hours of operation and NOx emissions for the Waukesha spark ignition engines. **[Authority: Permit to Construct 005-0812-9-1317, 1319, and 1320]**
6.5	**<u>Reporting Requirements</u>:** A. The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, "Report of Excess Emissions and Deviations."

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	B. The Permittee shall: 1. Make the result of the combustion analysis available to the Department upon request. **[Authority: COMAR 26.11.09.08E(3)]** 2. Make records of training program attendance for each operator available to the Department upon request. **[Authority: COMAR 26.11.09.08E(5) & COMAR 26.11.09.08B(5)(a) and (b)]** 3. Make annual fuel use records available to the Department upon request. **[Authority: COMAR 26.11.09.08K(3)]** C. The Permittee shall make available monthly records of the hours of operation, fuel utilization (FT3/month), heat input (or capacity factor) for the Waukesha spark ignition engines to the Department upon request. Additionally, the Permittee shall make available, to the Department upon request, the rolling 12-month hours of operation for the Waukesha spark ignition engines and premise- wide NOx emissions. **[Authority: Permit to Construct 005-0812-9-1317, 1319, and 1320]**

A Permit Shield shall cover the applicable requirements identified for the emissions unit listed in the table above.

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7.0	**<u>Emissions Unit Number(s) – EU-0105</u>** EU-0105 consists of eight (8) 15,000 gallon VOC storage tanks with attached vapor recovery systems associated with an Enhanced Nutrient Removal (ENR) system.
7.1	<u>Applicable Standards/Limits</u>: <u>Control of VOC</u> 1. **COMAR 26.11.13.04D** - <u>General Standards.</u> A person may not cause or permit gasoline or VOC having a TVP of 1.5 psia (10.3 kilonewtons / square meter) or greater to be loaded into any tank truck, railroad tank car, or other contrivance unless the: a. Loading connections on the vapor lines are equipped with fittings that have no leaks and that automatically and immediately close upon disconnection to prevent release of gasoline or VOC from these fittings; and

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	b. Equipment is maintained and operated in a manner to prevent avoidable liquid leaks during loading or unloading operations.
7.2	**Testing Requirements:** See Record Keeping and Reporting requirements.
7.3	**Monitoring Requirements:** The Permittee shall conduct routine inspections of tank truck unloading operations to ensure that the loading connections on the vapor lines are equipped with fittings that have no leaks and that automatically and immediately close upon disconnection to prevent release of gasoline or VOC from these fittings and the unloading operations avoid liquid leaks. The inspections shall be conducted while the tank truck is being unloaded. The Permittee shall record the results of the inspections and make these results available to the Department upon request. **[Authority: COMAR 26.11.13.04D and COMAR 26.11.03.06C]**
7.4	**Record Keeping Requirements:** The Permittee shall maintain a log that includes the name of the person conducting the inspection, the date of the inspection, the results of the inspection, a list of leaks observed and corrective actions taken with a date corrective action was completed. **[Authority: COMAR 26.11.13.04D and COMAR 26.11.03.06C]**
7.5	**Reporting Requirements:** The Permittee shall make the leak inspection log available to the Department upon request. **[Authority: COMAR 26.11.13.04D and COMAR 26.11.03.06C]**

A Permit Shield shall cover the applicable requirements identified for the emissions unit listed in the table above.

SECTION V INSIGNIFICANT ACTIVITIES

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

(1) No. 3 Fuel burning equipment using gaseous fuels or no. 1 or no. 2 fuel oil, and having a heat input less than 1,000,000 Btu (1.06 gigajoules) per hour;

The following affected fuel burning units are subject to the following requirements:

- One (1) hot water generator rated at 0.42 MMBtu/hr.
- One (1) furnace rated at 0.437 MMBtu/hr.
- One (1) heating boiler rated at 0.105 MMBtu/hr.

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.

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.

(2) No. 2 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 following affected units are subject to the following requirements:

- One (1) diesel fired emergency generator rated at 60 kW.
- One (1) diesel fired emergency generator rated at 25 kW.

(A) COMAR 26.11.09.05E(2), Emissions During Idle Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.

(B) COMAR 26.11.09.05E(3), Emissions During Operating Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.

(C) Exceptions:

(i) COMAR 26.11.09.05E(2) does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.

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

(a) Engines that are idled continuously when not in service: 30 minutes
(b) all other engines: 15 minutes.

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

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

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

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

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

(a) ✓ Storage of butane, propane, or liquefied petroleum, or natural gas;

(b) No. 1 Storage of lubricating oils;

(c) No. 7 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel.

(5) ✓ Laboratory fume hoods and vents.

SECTION VI STATE-ONLY ENFORCEABLE CONDITIONS

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

A. Applicable Regulations:

1. COMAR 26.11.06.08 and 26.11.06.09, which generally prohibit the discharge of emissions beyond the property line in such a manner that a nuisance or air pollution is created.

2. COMAR 26.11.15.05, which requires that the Permittee implement "Best Available Control Technology for Toxics" (T – BACT) to control emissions of toxic air pollutants.

3. COMAR 26.11.15.06, which prohibits the discharge of toxic air pollutants to the extent that such emissions will unreasonably endanger human health.

The following State-Only enforceable conditions apply only to the scrubbers associated with Emission Units: EU-0105M, EU-1005N, and EU-1036 detailed below.

Emissions Unit No.	MDE Registration No.	Emission Unit Description	Installation Date
EU-0105M	005-0812-9-0105M	EU-0105M consists of six (6) scrubbers: four (4) single stage wet scrubbers to control odors from the Influent Conduit Sludge Loading Facility, Influent Meter Flumes, Dissolved Air Floatation Thickening (DAFT) Units 1 & 2, and DAFT units 3 & 4 and two (2) two-stage wet scrubbers, which control odors from the Head Chamber, Primary Settling Tank (PST) #2, and Gravity Sludge Thickeners (GST). Each scrubber and associated equipment was installed in 1984, 1990, 1992, and 1992, 1991, and 1998 respectively.	1984, 1990, 1992, 1992, 1991, and 1998 respectively
EU-1005N	005-0812-9-1005	One (1) two-stage packed tower scrubber to control hydrogen sulfide gas from Gravity Belt Thickener.	May 1996
EU-1036M	005-0812-9-1036	Three (3) two-stage scrubbers to control hydrogen sulfide gas from Primary Settling Tanks.	January 1998

B. Operating Conditions:

1. Odor control scrubbers (EU-0105M, EU-1005N and EU-1036M):

a. The Permittee shall monitor once per shift the flow switch in the water line to each scrubber and a warning flashing light to assure that scrubbing solution to each scrubber is running through the scrubber when a scrubber is operating;

b. The Permittee shall visually inspect each scrubber at the start of each shift and at least once during each shift while the scrubbers are running to ensure they are functioning as intended.

c. The Permittee shall perform preventive maintenance once per month on scrubbers.

d. The Permittee shall maintain records of the results of the scrubber visual inspections and a log of maintenance performed on the scrubbers. The records and log shall be kept on site for at least 5 years and made available to the Department upon request.

2. Facility perimeter odor control requirements:

a. The Permittee shall perform a daily community odor survey by measuring concentrations of hydrogen sulfide (H_2S) along the perimeter of the facility with use of a portable H_2S analyzer. When H2S readings by the analyzer indicate a potential odor problem for the community, the facility shall inject hydrogen peroxide into the influent waste stream to reduce potential odor problems.

b. The Permittee shall perform a daily community odor survey by measuring concentrations of hydrogen sulfide (H_2S) along the perimeter of the facility with use of a portable H_2S analyzer. When H2S readings by the analyzer indicate a potential odor problem for the community, the facility shall inject hydrogen peroxide into the influent waste stream to reduce potential odor problems.

C. 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:

1. a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or

2. 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.

BACK RIVER WASTEWATER TREATMENT PLANT
8201 EASTERN AVENUE, BALTIMORE MD 21224
PERMIT NO. 24-005-00812
PART 70 OPERATING PERMIT FACT SHEET

BACKGROUND

The Back River Wastewater Treatment Plant (Back River) is owned and operated by Baltimore City. The treatment plant is rated at 180 million gallons per day but currently treats approximately 150 million gallons of predominately domestic wastewater per day and produces approximately 95 dry tons of biosolids per day. The biosolids are anaerobically digested, dewatered and either heat-dried and pelletized or composted. The pelletizing and composting facilities are privatized operations. The SIC for this facility is 4952.

The treatment units include screening, grit removal, primary sedimentation, secondary treatment by activated sludge, sand filtration, disinfection by addition of hypochlorous acid, dechlorination with sodium bisulfite, and reaeration prior to discharge to Back River. Nutrients in the wastewater are controlled by a combination of biological nitrogen removal and chemical precipitation for phosphorus removal.

The treatment plant has a number of stationary air pollution sources, which consist of flares, boilers, space heaters, gasoline storage tanks, odor scrubbers and digester gas-fired engine powered generators. The boilers and space heaters are capable of burning digester gas and either natural gas or No. 2 fuel oil as backup fuel. However, only one boiler is currently dedicated to burn No. 2 fuel oil as a backup.

The following Table 1 summarizes the most recent five years actual emissions from Back River Wastewater Treatment Plant. The primary sources of criteria pollutants from the facility are the combustion process such as boilers, digester gas flares, etc.

Table 1: Actual Emissions

Year	NO_x (TPY)	SO_x (TPY)	PM (TPY)	CO (TPY)	VOC (TPY)	Total HAP (TPY)
2016	9.76	0.06	0.08	23.13	6.59	1.55
2015	9.56	0.16	0.30	22.96	6.82	1.55
2014	25.11	0.14	1.30	42.22	8.42	2.82
2013	28.13	0.15	1.46	47.03	10.83	3.12
2012	28.49	0.15	1.57	44.61	9.94	2.76

The major source threshold for triggering Title V permitting requirements in Baltimore County is 25 tons per year for VOC, 25 tons for NOx, 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 NOx emission from the facility are greater than the major source threshold, Back River Wastewater Treatment Plant is required to obtain a Title V – Part 70 Operating Permit under COMAR 26.11.03.01.

As a major source of NOx, the facility is also subject to the NOx RACT (Reasonable Available Control Technology) requirements of COMAR 26.11.09.08.

Pursuant to COMAR 26.11.03, Back River submitted a Part 70 Operating Permit application on September 29, 2016. An administrative completeness review was conducted and the application was found to be complete. The Permittee was notified of the application completeness in a letter dated October 17, 2016.

This Part 70 Permit is a renewal of the Part 70 permit to operate issued in 2012. Since 2012 the facility has added an Enhanced Nutrient Remover (EU-0105) and Stage II vapor recovery was decommissioned. The two (2) 8,000 gallon gasoline storage tanks (EU-0884), already on the premises, are no longer subject to Stage II vapor recovery under COMAR 26.11.24 but are now subject to a NESHAP under 40 CFR Part 63 Subpart CCCCCC for Gasoline Dispensing Facilities.

EMISSION UNIT IDENTIFICATION

Back River Wastewater Treatment Plant has identified the following emission units as being subject to Title V permitting requirements and having applicable requirements.

Table 2: Emission Unit Identification

MDE Registration No.	Emissions Unit No.	Emission Unit Description	Installation Date
005-0812-5-0511	EU-0511	Two (2) waste gas flares for combusting excess digester gas.	1974
005-0812-5-0677	EU-0677	One (1) Peerless Co., digester gas-fired boiler Model GO-713-FD-WUP rated at 1.832 MMBtu/hr.	June 1977 Now out of service
005-0812-5-1426	EU-1426	One (1) Weil-McLain digester gas-fired boiler Model P-1188-W, rated at 1.33 MMBtu/hr.	1986
005-0812-5-1427	EU-1427	One (1) H. B. Smith digester gas-fired boiler rated at 2.1 MMBtu/hr.	1984
005-0812-5-1428	EU-1428	One (1) Gordon Piatt digester gas-fired boiler rated at 2.05 MMBtu/hr.	1983
005-0812-5-1429	EU-1429	One (1) Webster/Burnham digester gas-fired boiler rated at 5.2 MMBtu/hr.	1986 Now out of service
005-0812-5-1430	EU-1430	One (1) H. B. Smith digester gas-fired boiler rated at 2.1 MMBtu/hr.	1981 Now out of service
005-0812-5-2312	EU-2312	One (1) H. B. Smith digester gas and oil-fired boiler rated at 3.5 MMBtu/hr.	2007

005-0812-5-2313	EU-2313	One (1) H. B. Smith digester gas and oil-fired boiler rated at 3.5 MMBtu/hr.	2007
005-0812-5-1434	EU-1434	One (1) Gordon Piatt Co. digester gas-fired boiler rated at 2.05 MMBtu/hr.	1975
005-0812-5-1435	EU-1435	One (1) Power Flame/H. B. Smith digester gas-fired boiler, rated at 2.16 MMBtu/hr.	1975 Now out of service
005-0812-5-1438	EU-1438	One (1) Cleaver Brooks digester gas and natural gas fired boiler Model NCB-200-800, rated at 33.45 MMBtu/hr.	1991
005-0812-5-1439	EU-1439	One (1) Cleaver Brooks digester gas and natural gas fired boiler Model NCB-200-800, rated at 33.45 MMBtu/hr.	1991
005-0812-5-1465	EU-1465	One (1) H. B. Smith digester gas and No. 2 fuel oil-fired boiler Model 28W7 rated at 1.49 MMBtu/hr.	January 1993
005-0812-5-1504	EU-1504	One (1) H. B. Smith digester gas-fired boiler rated at 2.1 MMBtu/hr.	1981 Now out of service
005-0812-5-1554	EU-1554	One (1) PVI Industries digester gas-fired boiler Model 375BHE75ATP rated at 3.5 MMBtu/hr.	May 14, 1996 Now out of service
005-0812-5-1555	EU-1555	One (1) H. B. Smith digester gas-fired boiler rated at 2.836 MMBtu/hr.	May 14, 1996 Now out of service
005-0812-5-1563	EU-1563	One (1) H. B. Smith digester gas-fired boiler Model B-29A-W7-CI, rated at 1.3 MMBtu/hr.	October 30, 1996
005-0812-9-0884	EU-0884	Two (2) 8,000 gallon gasoline underground storage tanks equipped with Stage I VRS.	March 1985
005-0812-9-0105	EU-0105	Eight (8) 15,000 gallon VOC methanol storage tanks with attached vapor recovery systems associated with an Enhanced Nutrient Removal (ENR) system.	2012
005-0812-9-0105M	EU-0105M	Four (4) single-stage wet scrubbers to control odors from Influent Conduit (Mechanical Screen Building) Sludge Loading Facility, Influent Meter Flumes, DAFT Units 1 & 2, and DAFT 3 & 4 and two (2) two-stage wet scrubbers, which control odors from the Head Chambers, PST#2, and GSTs. ***State Only requirements***	1984, 1990, 1992, 1992, 1991, and 1998 respectively
005-0812-9-1005	EU-1005 N	One (1) two-stage packed tower scrubber to control H2S gas from Gravity Belt Thickener. ***State Only requirements***	May 1996
005-0812-9-1036	EU-1036 M	Three (3) two-stage scrubbers to control H2S gas from Primary Settling Tanks. ***State Only requirements***	January 1998

005-0812-5-2047	EU-2047 N	One Broad digester gas-fired heater/chiller rated at 4.2 MMBtu/hr. heat input.	November 2003
005-0812-5 2201	EU-2201	One (1) H. B. Smith digester gas fired boiler rated at 2.1 MMBtu/hr. heat input.	2003
005-0812-5-2202	EU-2202	One (1) H. B. Smith digester gas fired boiler rated at 2.1 MMBtu/hr. heat input.	2003
005-0812-5-2255	EU-2255	One (1) York digester gas-fired heater/chiller rated at 4.3 MMBtu/hr.	September 2007
005-0812-5-2294	EU-2294	One (1) Weather Rite-ID-175 digester gas fired heater/chiller rated at 2.2 MMBtu/hr. heat input.	2001
005-0812-5-2295	EU-2295	One (1) Weather Rite-ID-175 digester gas fired heater/chiller rated at 2.2 MMBtu/hr. heat input.	2001
005-0812-9-1317	EU-1317	One (1) digester gas-fired spark ignition IC Waukesha Enginator generator rated at 1050 kW.	2009
005-0812-9-1319	EU-1319	One (1) digester gas-fired spark ignition IC Waukesha Enginator generator rated at 1050 kW.	2009
005-0812-9-1320	EU-1320	One (1) digester gas-fired spark ignition IC Waukesha Enginator generator rated at 1050 kW.	2009

NSPS AND NESHAP APPLICABILITY DETERMINATIONS

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

Emission Units EU-1438 and EU-1439 are subject to the NSPS in 40 CFR Part 60 Subpart Dc although there are no emissions standards that apply to gas fired boilers. These Emission Units are only required to comply with the recordkeeping, reporting, and initial notification regulations under Subpart Dc. Although EU-2201 and 2202 were installed after the NSPS 40 CFR Part 60 Subpart Dc applicability date of June 9, 1989, the units are each rated under 10 MMBtu/hr. Therefore, they are not subject to the requirements.

40 CFR Part 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

No Emission Unit that is registered to Premise Number 24-005-00812 is subject to 40 CFR Part 60 Subpart JJJJ. Emission Units EU-1317, EU-1319, and EU-1320 are not subject to the NSPS despite being spark ignition engines because they do not meet the applicability requirements under §60.4230(a)(4). The text of this section reads “owners and operators of stationary SI ICE that commence construction after June 12, 2006, where the stationary SI ICE are manufactured on or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP.” The Waukesha SI ICEs were manufactured in December 2006. Even though the engines in question were

constructed after June 12, 2006, but they were manufactured before July 1, 2007. Therefore, they are not subject to the requirements of 40 CFR Part 60, Subpart JJJJ.

40 CFR Part 63 Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

No Emission Unit that is registered to Premise Number 24-005-00812 is subject to 40 CFR Part 63 Subpart ZZZZ. Emission Units EU-1317, EU-1319, and EU-1320 are reciprocating internal combustion engines; however the engines meet the definition of a "new" source under NESHAP in 40 CFR Part 63, Subpart ZZZZ. "New" SI engines under NESHAP Subpart ZZZZ, are required to meet the limitations and requirements in 40 CFR Part 60, Subpart JJJJ. However, the Emission Units do not have any applicable limitations and requirements under Subpart JJJJ as mentioned above so therefore the Waukesha engines have no requirements under NESHAP Subpart ZZZZ.

40 CFR Part 63 Subpart CCCCCC – National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities

Emission Unit EU-0884 is subject to the NESHAP in 40 CFR Part 63 Subpart CCCCCC. EU-0884, which consists of two (2) 8,000-gallon underground gasoline storage tanks, qualifies as a gasoline dispensing facility (GDF) with a monthly throughput of less than 10,000 gallons and therefore is subject to the regulations under §63.11116. Due to the relatively low throughput of this GDF, the regulations from this Subpart merely pertain to operating practices and recordkeeping. The subpart does not impose any emission standards on the Emission Unit. Throughput for the two (2) gasoline storage tanks was calculated using the Emission Reports for 2011 through 2015 averaged out over a monthly period. The monthly average over this period was 4422 gallons.

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

No emission unit that is registered to Premise Number 24-005-00812 is subject to 40 CFR Part 63 Subpart JJJJJJ. All boilers on the premise meet exemption criteria under §63.11195 (e) as gas-fired boilers. A gas-fired boiler is defined in §63.11237 to "include any boiler that burns gaseous fuels not combined with any solid fuels, burns liquid fuel oil only during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel. Digester gas meets the definition of a gaseous fuel. Back River burns primarily digester gas and has an uninterruptable gas supply contract for a back up fuel. Two (2) boilers at the facility, EU-2312 and 2313 are capable of burning No. 2 fuel oil. These two (2) boilers are permitted to burn liquid fuel oil only during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel.

GREENHOUSE GAS (GHG) EMISSIONS

Back River reported the following greenhouse gases (GHGs) as shown in Table 2. These GHGs are emitted predominantly from combustion sources. The facility has not triggered Prevention of Significant Deterioration (PSD) requirements for GHG emissions. Therefore, there are no applicable GHG Clean Air Act requirements.

Table 3: Greenhouse Gases Emissions Summary

GHG	Conversion factor	2013 tpy CO_2e	2014 tpy CO_2e	2015 tpy CO_2e
Carbon dioxide CO_2	1	28,868	25,881	8,485
Methane CH_4	25	69.5	62.7	44.2
Nitrous Oxide N_2O	300	0.62	0.55	0.21
Total GHG CO_{2eq}		28,938	25,945	8,529

COMPLIANCE ASSURANCE MONITORING (CAM) REQUIREMENTS

CAM is intended to provide a reasonable assurance of compliance with applicable requirements under the Clean Air Act for large emission units that rely on air pollution control (APC) equipment to achieve compliance. The CAM approach establishes monitoring for the purpose of: (1) documenting continued operation of the control measures within ranges of specified indicators of performance (such as emissions, control device parameters, and process parameters) that are designed to provide a reasonable assurance of compliance with applicable requirements; (2) indicating any excursions from these ranges; and (3) responding to the data so that the cause or causes of the excursions are corrected. In order for a unit to be subject to CAM, the unit must be located at a major source, be subject to an emission limitation or standard; use a control device to achieve compliance; have pre-control emissions of at least 100% of the major source amount; and must not otherwise be exempt from CAM. Applicability determinations are made on a pollutant-by-pollutant basis for each emissions unit. The installations at Back River are not subject to CAM because they do not use a control device to achieve compliance.

AN OVERVIEW OF THE PART 70 PERMIT

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

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

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

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

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

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

Section VI of the Part 70 Permit contains State-only enforceable requirements. [Upon issuance of the Part 70 Permit, the Part 70 permit supersedes the facility's current State Permit to Operate- delete for renewals]. Section VI identifies requirements that are not based on the Clean Air Act, but solely on Maryland air pollution regulations. These requirements generally relate to the prevention of nuisances and implementation of Maryland's Air Toxics Program.

REGULATORY REVIEW/TECHNICAL REVIEW/COMPLIANCE METHODOLOGY

1.0 Emissions Unit – EU-0511

Emissions Unit EU-0511 comprises of two waste gas flares each equipped with two burners for combusting excess digester gases. The flares are of the enclosed type. They are operated when the Waukesha engines are off line and there is surplus digester gas. The flares consumed a total of 70.2 million cubic feet of digester gas in 2015 and generated 3.5 tons of NOx emissions. The applicable requirements that the units are subject to are listed below.

1.1 Applicable Regulations/Limits:

A. Visible Emissions Limitations

1. The Permittee may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is visible to human observers. **[Reference: COMAR 26.11.06.02C(2)]**

2. COMAR 26.11.06.02C does not apply to emissions during start-up and process modifications 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 60-minute period". **[Reference: COMAR 26.11.06.02A(2)]**

Compliance Demonstration

The Permittee shall properly operate and maintain the waste gas flares and maintain an operations manual and preventive maintenance plan which relate to combustion performance. ***[Authority: COMAR 26.11.03.06C Periodic Monitoring]***

The Permittee shall maintain a record of maintenance performed on the waste gas flares for at least 5 years and make it available to the Department upon request. The Permittee shall report on a calendar quarter basis those periods when visible emissions are observed to have occurred as required by Permit Condition 4 of Section III, "Report of Excess Emissions and Deviations". ***[Authority: COMAR 26.11.03.06 Periodic Monitoring]***

Rationale

The installations are a minor source for PM-10. Visible emissions associated with burning digester gas will only occur during periods of improper combustion, which would not be allowed to continue due to safety considerations. Rather than visible emission observations the Permittee is required to properly operate and maintain the flares and maintain an operations and maintenance manual. Whenever visible emissions are observed, the Permittee is required to report the incident in accordance with Permit Condition 4 of Section III "Report of Excess Emissions and Deviations."

B. Control of Nitrogen Oxides

1. **COMAR 26.11.09.08J** – Control of NOx Emissions for Major Stationary Sources. Requirement s for Industrial Furnaces and Other Miscellaneous Installations that Cause Emissions of NOx.

   A person who owns or operates any installation other than fuel-burning equipment that causes NOx emissions shall:

   a. Maintain good operating practices as recommended by the equipment vendor to minimize NOx emissions;

   b. Prepare and implement a written in-house training program for all operators of these installations that include instruction on good operating and maintenance practices for the particular installation;

   c. Maintain and make available to the Department, upon request, the written in-house operator training program;

   d. Burn only gas in each installation, where gas is available, during the period May 1 through September 30 of each year;

   e. Maintain operator training attendance records for each operator at the site for at least two years and make these records available to the Department upon request; and

   f. Maintain annual fuel use records on site for at least three years and make records available to the Department upon request.

2. **COMAR 26.11.09.08B(5)(a)** - Operator Training. For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.

3. **COMAR 26.11.09.08B(5)(b)** - Operator Training. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.

Compliance Status (Compliance Report 03/28/2016)

- *Good operating practices are maintained per the manufacturer's recommendations to minimize NOx emissions.*

- *In-House training program was done by a consultant in 2013 and operators were trained individually on the job.*

- *Written In-House training program is available to the Department upon request. The consultant's training manual is available to the Department.*

- *Only gas is burned at this installation. These units were operated 12 months per year because of the continuous nature of the operation; however flaring is now intermittent due to the Co-Gen Facility.*

- *Operator training attendance records are available to the Department upon request.*

- *Fuel records are in the plant's monthly and annual operating reports, are maintained on site for three years and are available to the Department upon request.*

- *Operational and Maintenance plan is maintained. The flares are operated according to vendor recommendation. A written in-house operator training program is kept on site.*

- *Incidents of visible emissions will be reported as required. Fuel use records are maintained and available to the Department upon request. Operator training records are maintained.*

- *The Permittee is in compliance with the requirements of these regulations according to the report of the most recent compliance inspection conducted on March 28, 2016. The inspection report indicates that the Permittee maintains all equipment properly and has a formalized in-house training for the waste gas flare operators for whom it maintains attendance records.*

2.0 Emission Units - Non-NSPS Waste Digester Gas Boilers

Location	Emission Unit	Description	Year
Chemical Building	EU-1426	Weil-McLain Boiler – 1.33 MMBtu/hr	1986
Sludge PS#3	EU-1427	HB Smith Boiler – 2.1 MMBtu/hr	1984
DAF Thickener Factory	EU-1428	Gordon Piatt Boiler #1 – 2.05 MMBtu/hr	1983
DAF Thickener Factory	EU-1434	Gordon Piatt Boiler #2 – 2.05 MMBtu/hr	1975
Sludge Control Building	EU-1563	HB Smith Boiler – 1.3 MMBtu/hr	1996
Sludge PS#4	EU-1465	HB Smith Boiler – 1.49 MMBtu/hr	1993
Rapid Sludge Loading Factory	EU-2201	HB Smith Boiler #1 (Bottom) – 2.1 MMBtu/hr	2003
Rapid Sludge Loading Factory	EU-2202	HB Smith Boiler #2 (Top) – 2.1 MMBtu/hr	2003
New Centrifuge Building	EU-2294	Weather Rite Furnace MAU-1 – 2.18 MMBtu/hr	2001
New Centrifuge Building	EU-2295	Weather Rite Furnace MAU-2 – 2.18 MMBtu/hr	2001
Maintenance Building	EU-2312	HB Smith Boiler #1 – 3.5 MMBtu/hr	2007
Maintenance Building	EU-2313	HB Smith Boiler #2 – 3.5 MMBtu/hr	2007

Emissions Units consist of the following 12 non-NSPS digester gas and fuel oil-fired boilers, which have rated heat input capacities of less than 10 MMBtu/hr each: These EUs are: 1426, 1427, 1428, 2312, 2313*, 1434, 1465, 1563, 2201, 2202, 2294, and 2295. The EUs 1429, 1430, and 1504 are out-of-service, but remain at the premises. * Note: EU 2312 and 2313 are the only boilers currently allowed to use No. 2 fuel oil as a backup fuel. EU-2201 and 2202 were added in 2003.

These boilers are used to provide comfort heat in buildings around the plant operating predominantly during the colder weather. These units were in operation an average of 344 days per year with an average annual fuel usage of 170 million cubic feet from 2011 to 2014. However, according to the 2015 emission certification these units were in operation for only 1 day and no gas was burned. As the lowest unit of gas in the certification is 1000 cubic feet, it can be inferred that the units burned less than 1000 cubic feet of gas on the one day of operation in 2015. None of these units have burned liquid fuel in from 2011 to 2015.

2.1 Applicable Requirements/Limits

A. Control of Visible Emissions

1. 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. **[Reference: COMAR 26.11.09.05A(2)]**

2. COMAR 26.11.09.05A(2) does not apply to emissions during the periods of 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 60-minute period. **[Reference: COMAR 26.11.09.05A(3)]**

Compliance Demonstration

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

The Permittee shall perform the following, if emissions are visible:

1. *Inspect combustion control system and boiler operations,*

2. *Perform all necessary adjustments and/or repairs to the boiler within 48 hours, so that visible emissions are eliminated;*

3. *Document in writing the results of the inspections, adjustments and/or repairs to the boiler; and*

4. *After 48 hours, if the required adjustments and/or repairs had not eliminated the visible emissions, perform Method 9 observations once daily for 18 minutes until corrective actions have eliminated the visible emissions.*

The Permittee shall maintain operations manual and preventive maintenance plan.

The Permittee shall maintain a log of maintenance performed that relates to combustion performance. The Permittee shall report incidents of visible emissions in accordance with permit condition 4 of Section III, Plant Wide Conditions, "Report of Excess Emissions and Deviations". The basis for these monitoring, record keeping, and reporting requirements is the Department's authority to create periodic monitoring requirements, COMAR 26.11.03.06C.

Rationale for Periodic Monitoring

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

If visible emissions occur, it will happen when burning No. 2 fuel oil during periods of interruptible gas. 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 fuel oil is burned. In mild winters, the hours of interrupted gas service may be less than 168 hours. If the hours of burning No. 2 fuel oil are less than 168 hours in a calendar year, the requirement for a visible emissions observation is waived for the 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 (applies to EU-2312 and 2313 boilers only)

1. **COMAR 26.11.09.07A (2) (b)** "In Areas III and IV - 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 0.3 percent by weight."

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 fuel oil. The Permittee shall retain fuel supplier certifications of sulfur content in fuel. The Permittee shall report fuel supplier certifications of sulfur content in fuel to the Department upon request. The basis for these monitoring, record keeping, and reporting requirements is the department's authority to create periodic monitoring requirements, COMAR 26.11.03.06C.

Rationale

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 26.11.09.08F –** Requirements for Space Heaters. The Permittee shall:

    a. Submit to the Department a list of each affected installation on the premises and the types of fuel used in each installation;

    b. Develop an operating and maintenance plan to minimize NOx emissions based on the recommendations of equipment vendors and other information including the source's operating and maintenance experience;

    c. Implement the operating and maintenance plans and maintain the plans at the premises for review upon request by the Department;

    d. Require installation operators to attend an in-state operators training program once every three years on combustion optimization that is sponsored by the Department, U.S. EPA, or equipment vendors;

    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; and

    f. Maintain annual fuel use records on site for at least three years and make records available to the Department upon request.

2. **COMAR 26.11.09.08F(2) -** Requirements for Space Heaters. 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. Note: "Space heater" means fuel-burning equipment that consumes more than 60 percent of its annual fuel during the period from October 31 of one year through March 31 of the following year.

3. **COMAR 26.11.09.08B(5)(a)** - Operator Training. For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.

4. **COMAR 26.11.09.08B(5)(b)** - Operator Training. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.

Compliance Demonstration

The Permittee shall develop and maintain an operating and maintenance plan to minimize NOx. The Permittee shall maintain records of maintenance for combustion performance in keeping with the requirements of an operations and maintenance plan. The Permittee shall keep records of training program attendance for each operator and report attendance to the Department upon request. The Permittee shall maintain an operations manual and preventive maintenance plan. The Permittee shall maintain records of fuel use that demonstrate that the boiler meets the definition of a space heater.

D. Operational Limit (EU 2312 and EU 2313 only)

1. The Permittee shall burn only gaseous fuels not combined with any solid fuels and burn liquid fuel only during periods of gas curtailment, gas supply interruption, startups, or for periodic testing, maintenance, or operator training on liquid fuel. Periodic testing, maintenance, or operator training on liquid fuel shall not exceed a combined total of 48 hours during any calendar year. **[Authority: 40 CFR 63.11195(e) and 63.11236]**

Compliance Demonstration

The Permittee is required maintain records of the types and quantity of fuel burned to support the annual emissions certification report (permit condition 8 of Section III, Plant Wide Conditions "Emissions Certification Report). The annual certification report must contain the type, quantities, and analyses of all fuels burned. No additional requirements are needed to show compliance with this operational limitation.

Compliance Status (Compliance Report 03/28/2016)

- *Operator training was last conducted in May 2013. The next training session is scheduled for April 2016.*

- *Boilers are properly operated and maintained. Operations manuals are kept on site.*

- *Method 9 performed on EU-2313 every 168 hours of operation while burning No. 2 fuel oil.*

- *No visible emission observed for EU-2313 operated less than 100 hours in the calendar year.*

- *Fuel sulfur certification from fuel supplier kept on site for five years.*

- *Annual fuel use records are kept on site for three years and are available to the Department upon request.*

3.0 Emissions Units - EU 1438 and 1439 (Digester gas-fired NSPS boilers)

Emission Units EU-1438 and 1439 are Cleaver Brooks boilers Model # NCB-200-800, each rated at 33.45 MMBtu/hr, and installed in 1991. These boilers are operated to produce steam for maintaining the temperature of the anaerobic digestion process. They burn digester gas with natural gas as back-up. In 2015, 2.9 million cubic feet of digester gas were consumed and 0.15 tons of NOx emissions were generated.

The boilers are subject to the NSPS in 40 CFR 60 Subpart Dc although there are no emissions standards that apply to gas fired boilers. Additionally, these boilers are exempt from the requirements of the boiler area source MACT promulgated under 40 CFR Part 63 Subpart JJJJJJ because they meet exemption criteria under §63.11195 (e) as gas-fired boilers. A gas-fired boiler is defined in §63.11237 to "include any boiler that burns gaseous fuels not combined with any solid fuels, burns liquid fuel oil only during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel. Digester gas meets the definition of a gaseous fuel. Back River burns primarily digester gas and has an uninterruptable gas supply contract for a back up fuel.

3.1 Applicable Requirement/Limits

A. Control of Visible Emissions

1. **COMAR 26.11.09.05A(2)** - Areas III and IV. In Areas III and IV, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers except that, for the purpose of demonstrating compliance using COM data, emissions that are visible to a human observer are those that are equal to or greater than 10 percent opacity.

2. **COMAR 26.11.09.05A(3)** – Exceptions. Section A (2) does not apply to emissions during the periods of 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 60-minute period.

Compliance Demonstration

The Permittee shall properly operate and maintain the boilers and maintain an operations manual and preventive maintenance plan. ***[Authority: COMAR 26.11.03.06C Periodic monitoring]***

Rationale for Periodic Monitoring

The installations are a minor source for PM-10. The boilers are not subject to a particulate matter emissions limitation by COMAR. Visible emissions while burning waste digester gas will only occur during periods of improper combustion, which would not be allowed to continue due to safety considerations. Therefore, no observation will be required. Rather than visible emission observations, the Permittee is required to properly operate and maintain the boilers and maintain an operations and maintenance manual. Whenever visible emissions are observed, the Permittee is required to report the incident in accordance with Condition 4 of Section III "Report of Excess Emissions and Deviation

B. Control of Nitrogen Oxides

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

    a. Submit to the Department an identification of each affected installation, the rated heat input capacity, and type of fuel burned in each;

    b. Perform a combustion analysis for each combustion unit at least once each calendar year and optimize combustion based on analysis;

    c. Maintain records of the result of the combustion analysis at the site and make the records available to the Department and EPA upon request;

d. Once every three years, require each installation operators to attend operator training program on combustion optimization that are sponsored by the Department, U.S. EPA, or equipment vendors; and

e. Prepare and maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request;

2. **COMAR 26.11.09.08B(5)(a)** - Operator Training. For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.

3. **COMAR 26.11.09.08B(5)(b)** - Operator Training. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.

Compliance Demonstration

The Permittee shall develop and maintain an operating and maintenance plan to minimize NOx. The Permittee shall maintain records of maintenance for combustion performance in keeping with the requirements of an operations and maintenance plan. The Permittee shall keep records of training program attendance for each operator and report attendance to the Department upon request. The Permittee shall maintain an operations manual and preventive maintenance plan.

Compliance Status (Compliance Report 03/28/2016)

- *Last training was conducted in May 2013. Next one is scheduled for April 2016.*
- *The boilers are properly operated and maintained.*
- *An operations manual and preventative maintenance plan which relates to combustion performance is maintained.*
- *Combustion analysis is performed to optimize combustion once every year.*
- *Results of combustion analysis are on file at the Back River plant and are available to the Department upon request.*

- *The training records are maintained at the Back River plant and are available to the Department upon request.*

- *The city maintains annual fuel use records on site and is available to the Department upon request.*

4.0 Emissions Units - EU 0884

Gasoline Storage Tank - consists of two (2) 8,000-gallon underground gasoline storage tanks and gasoline dispensing units. The monthly throughput is less than 10,000 gallons.

4.1 Applicable Requirement/Limits

Control of Volatile Organic Compound

1. Stage I Vapor Recovery

a. **COMAR 26.11.13.04C** - Small Storage Tanks, which prohibits the operation or loading of gasoline storage tanks with a capacity greater than 2,000 gallons, but less than 40,000 gallons, or a gasoline tank truck used to transfer gasoline into a storage tank of the capacity stated above unless the loading system is equipped with a vapor balance line that is properly installed maintained, and used.

Compliance Demonstration

The Permittee must, at all times, operate in a manner consistent with safety and good air pollution control practices for minimizing emissions. The Administrator shall decide if such procedures are being used. ***[Authority: 40 CFR 63.11115(a)]***

The Permittee must handle gasoline in a manner that reduces the release of vapor into the atmosphere. This includes, but is not limited to, measures that:

1. *Minimize gasoline spills;*

2. *Clean up spills as quickly as practical;*

3. *Cover all containers of gasoline when not in use;*

4. *Minimize waste gasoline sent to open waste collectors.*
   [Authority: 40 CFR 63.11116(a)]

The Permittee shall keep records of and report the number, duration, and a brief description of each type of malfunction that occur. All record must be made available to the Department upon request. ***[Authority: 40 CFR §63.11125(d)(2) and 40 CFR §63.11126(b)]***

Compliance Status

The Permittee removed Stage II vapor recovery in September of 2016. The stage II vapor recovery system was decommissioned in accordance with COMAR 26.11.24.03-1B.

5.0 Emission Units - EU-2047 N, and EU-2255

Comprise of one (1) Broad heater/chiller rated at 4.2 MMBtu/hr. and one (1) York heater/chiller rated at 4.3 MMBtu/hr. EU-2047 N is the Broad heater/chiller and was installed in 2003. EU 2255 was installed in 2007 and is the York heater/chiller. The units operate more for heating purposes than cooling. These units are operated to heat or cool the area of the plant where they are located. They burn digester gas with natural gas as back-up. In 2015, these units consumed 2.64 million cubic feet of natural gas and operated for 141 days. The average use of these units for the past five years, 2011 to 2015, was 1.59 million cubic feet of natural gas with an average annual operation of 34.5 days.

5.1 Applicable Requirement/Limit

A. Visible Emissions Limitations

1. The Permittee may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is visible to human observers. **[Reference: COMAR 26.11.06.02C(2)]**

2. COMAR 26.11.06.02C does not apply to emissions during start-up and process modifications 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 60-minute period". **[Reference: COMAR 26.11.06.02A(2)]**

Compliance Demonstration

The Permittee shall properly operate and maintain the heater/chiller units and maintain an operations manual and preventive maintenance plan. ***[Authority: COMAR 26.11.03.06 Periodic Monitoring]***

The Permittee shall maintain a record of maintenance performed on the heater/chiller units for at least 5 years and make it available to the Department upon request. The Permittee shall report on a calendar quarter basis those periods when visible emissions are observed, to have occurred as required by Permit Condition 4 of Section III, "Report of Excess Emissions and Deviations" ***[Authority: COMAR 26.11.03.06 Periodic Monitoring].***

Rationale for Periodic Monitoring

The installations are a minor source for PM-10. The heater/chiller unit is not subject to a particulate matter emissions limitation. Visible emissions associated with burning digester gas will only occur during periods of improper combustion, which would not be allowed to continue due to safety considerations. Rather than visible emission observations the Permittee is required to properly operate and maintain the heater/chiller and maintain an operations and maintenance manual. Whenever visible emissions are observed, the Permittee is required to report the incident in accordance with Permit Condition 4 of Section III "Report of Excess Emissions and Deviations."

B. Control of Nitrogen Oxides

1. **COMAR 26.11.09.08E**- which requires the Permittee to:

   a. Submit to the Department an identification of each affected installation, the rated heat input capacity, and type of fuel burned in each;

   b. Perform a combustion analysis for each combustion unit at least once each calendar year and optimize combustion based on analysis;

   c. Maintain records of the result of the combustion analysis at the site and make the records available to the Department and EPA upon request;

   d. Once every three years, require each installation operators to attend operator training program on combustion optimization that

are sponsored by the Department, U.S. EPA, or equipment vendors; and

e. Prepare and maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request.

2. **COMAR 26.11.09.08B(5)(a)** - Operator Training. For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.

3. **COMAR 26.11.09.08B(5)(b)** - Operator Training. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.

Compliance Demonstration

The Permittee shall develop and maintain an operating and maintenance plan to minimize NOx. The Permittee shall maintain records of maintenance for combustion performance in keeping with the requirements of an operations and maintenance plan. The Permittee shall keep records of training program attendance for each operator and report attendance to the Department upon request. The Permittee shall maintain an operations manual and preventive maintenance plan.

Compliance Status (Compliance Report 03/28/2016)

- *The heater/chiller units are properly operated. A preventative maintenance plan is available for inspection by the Department and operations manuals are on file in the plant's maintenance office.*

- *Combustion analysis and optimization on the heater/chillers is done annually.*

- *Maintenance records are available to the Department for at least five years.*

- *Combustion analysis results are maintained at the site for at least two years and made available to the Department upon request.*

- *The heater/chillers are operated and maintained by local union trained operators of Johnson Controls Inc, a contracted source which has their own training programs.*

- *Annual fuel use record is kept on site and is available to the Department upon request for the past three years.*

- *The Plant will report incidents of visible emissions and deviations as required by this permit.*

- *Results of combustion analysis will be available to the Department upon request.*

- *The heater/chiller are operated and maintained by local union trained operators of Johnson Controls Inc, which has their own training program.*

- *The facility maintains annual fuel use records on site and will make records available to the department upon request.*

6.0 Emissions Units - EU-1317, 1319, and 1320

On May 26, 2006, the Department issued Permit to Construct Nos. 005-9-1317, 1319, and 1320 N for the installation of three base-load Waukesha spark ignition internal combustion engine. Each engine is rated at 1050 kW and each has a rated heat input of 9.9 MMBtu/hr. The engines were ordered on August 30, 2006 and were shipped on December 29, 2006, January 4, 2007 and January 9, 2007. These units serve as base load electricity generating units. The electricity generated is consumed internally at Back River.

6.1 Applicable Standards/Limits/Requirements

A. Visible Emissions Limitations

1. **COMAR 26.11.09.05E (2)** Emissions During Idle Mode. A person may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.

2. **COMAR 26.11.09.05E (3)** Emissions During Operating Mode. A person may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.

3. **COMAR 26.11.09.05E (4)** Exceptions.

    a. Section E(2) of this regulation does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.

b. Section E(2) of this regulation does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:

i. Engines that are idled continuously when not in service: 30 minutes;

ii. All other engines: 15 minutes.

c. Section E(2) and (3) of this regulation do not apply while maintenance, repair, or testing is being performed by qualified mechanics

Compliance Demonstration

The Permittee shall properly operate and maintain the engines and shall maintain a record of routine preventive maintenance performed on the engines, which relate to combustion and emissions in accordance with the manufacturer's written instructions and recommendations for at least 5 years and make it available to the Department upon request. The Permittee shall also report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, "Report of Excess Emissions and Deviations. ***[Authority: COMAR 26.11.03.06 & Permit to Construct 005-0812-9-1317, 1319, and 1320]***

B. Control of Nitrogen Oxides

1. **COMAR 26.11.09.08E** - Requirements for Fuel-Burning Equipment with a Rated Heat Input Capacity of 100 Million Btu Per Hour or Less. A person who owns or operates fuel-burning equipment with a rated heat input capacity of 100 Million Btu per hour or less shall:

a. Submit to the Department an identification of each affected installation, the rated heat input capacity, and type of fuel burned in each;

b. Perform a combustion analysis for each combustion unit at least once each calendar year and optimize combustion based on analysis;

c. Maintain records of the result of the combustion analysis at the site and make the records available to the Department and EPA upon request;

d. Once every three years, require each installation operators to attend operator training program on combustion optimization that are sponsored by the Department, U.S. EPA, or equipment vendors; and

e. Prepare and maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request.

2. **COMAR 26.11.09.08B(5)(a)** - Operator Training. For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation.

3. **COMAR 26.11.09.08B(5)(b)** - Operator Training. The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department.

Compliance Demonstration

The Permittee is in compliance with the requirements of the regulation as evidenced by the results of the most recent compliance inspection conducted on March 28, 2016. The Department has the identification of each affected installation at the Permittee's facility, the rated heat input capacity, and the type of fuel burned in each. The Permittee performs combustion analysis for each combustion unit at least once a year, and maintains the records on site. The Permittee made records of the combustion analysis available to ARMA's compliance inspector for review during the recent compliance inspection conducted at the site.

The Permittee shall monitor emission of NOx with a calibrated portable analyzer at least once every month of operation of each of the Waukesha spark ignition engines. To maintain calibration of the portable analyzer, the Permittee shall follow the manufacturer's instructions and recommendations for servicing and calibrating the portable analyzer.

Operators attend training programs on combustion optimization that are sponsored by the Department, U.S. EPA, or equipment vendors once every three years. The Permittee maintains records of training program attendance for each operator at the site.

The Permittee is required to maintain records of training program attendance for each operator onsite for at least 5 years and make the records available to the Department upon request. The training program shall include an MDE approved training course. ***[Authority: COMAR 26.11.03.06C]***

C. Operational Limitations

1. The Permittee shall limit fuel use by the Waukesha engines to digester gas only. **[Authority: Permit-to-Construct No. 005-0812-9-1317, 1319, and 1320]**

2. The Permittee shall limit the total NOx emissions from all three of the Waukesha spark ignition engines combined to less than 25 tons for any rolling 12-month period unless the Permittee applies for and obtains a New Source Review approval. **[Authority: Permit-to-Construct No. 005-0812-9-1317, 1319, and 1320]**

Compliance Demonstration

The Permittee shall maintain monthly records of the hours of operation, fuel utilization (ft3/month), heat input (or capacity factor) for the Waukesha spark ignition engines on site for a period of at least five years and make the records available to the Department upon request. Additionally, the Permittee shall maintain on a rolling 12-month basis the hours of operation for the Waukesha spark ignition engines and premise-wide NOx emissions [Authority: COMAR 26.11.03.06 Periodic Monitoring].

Compliance Status (Compliance Report 03/28/2016)

- Engines are operated and maintained according to the manufacturer's recommendations. Combustion analysis performed on the engine at least once each year and combustion optimized.

- All maintenance records are kept at the Plant's Co-Gen facility for at least five years.

- Records of combustion analysis are kept at the Co-Gen facility for at least two years and will be made available to the Department upon request.

- The engines are operated and maintained by local union trained operators of Johnson Controls Inc, which has their own training program.

- Records of fuel use are kept on site for at least three years and will be made available to the Department.

- Monthly records of hours of operation, fuel utilization, heat input for engines are available on site for at least five years and will be made available to the Department upon request.

- Records of NOx emissions of the engines on a rolling 12 month basis are maintained on site.

- The Permittee properly maintains, and operates the engines. The Permittee also maintains monthly records of the hours of operation, fuel utilization (ft^3/month), heat input (or capacity factor) for the Waukesha spark ignition engines on site for a period of at least five years and makes the records available to the Department upon request. Additionally, the Permittee maintains on a rolling 12-month basis, the hours of operation for the Waukesha spark ignition engines and premise- wide NOx emissions.

7.0 Emission Units – EU-0105

On December 11, 2012, the Department issued ARMA Permit to Construct No. 005-0812-9-0105 which detailed the reconstruction of EU-0105. EU-0105 consists of eight (8) 15,000 gallon VOC storage tanks with attached vapor recovery systems associated with an Enhanced Nutrient Removal (ENR) system. These storage tanks are mainly used for the storage of methanol for the nitrification process however they may be used to store less volatile, non-methanol sources of carbon. The ENR system consists of four (4) denitrification quadrants (quads) each containing thirteen (13) denitrification filter cells each for a total of fifty-two (52) cells.

7.1 Applicable Standards/Limits/Requirements

Control of VOC

1. **COMAR 26.11.13.04D** - General Standards. A person may not cause or permit gasoline or VOC having a TVP of 1.5 psia (10.3 kilonewtons / square meter) or greater to be loaded into any tank truck, railroad tank car, or other contrivance unless the:

    a. Loading connections on the vapor lines are equipped with fittings that have no leaks and that automatically and immediately close upon disconnection to prevent release of gasoline or VOC from these fittings; and

    b. Equipment is maintained and operated in a manner to prevent avoidable liquid leaks during loading or unloading operations.

Compliance Demonstration

The Permittee shall conduct routine inspections of tank truck unloading operations to ensure that the loading connections on the vapor lines are equipped with fittings that have no leaks and that automatically and immediately close upon disconnection to prevent release of gasoline or VOC from these fittings and the unloading operations avoid liquid leaks. The inspections shall be conducted while the tank truck is being unloaded. The Permittee shall record the results of the inspections and make these results available to the Department upon request.

The Permittee shall maintain a log that includes the name of the person conducting the inspection, the date of the inspection, the results of the inspection, a list of leaks observed and corrective actions taken with a date corrective action was completed.

The Permittee shall make the leak inspection log available to the Department upon request. ***[Authority: COMAR 26.11.13.04D and COMAR 26.11.03.06C]***

COMPLIANCE SCHEDULE

Back River WWTP is currently in compliance with all applicable air quality regulations.

Section 112(r), Accidental Releases
The Permittee is subject to the requirements under Section 112 (r). The Permittee submitted a Risk Management Plan, which was received by EPA on June 18, 1999.

1990 CAAA, Title IV, Acid Rain
Not applicable since the facility is not an affected source under the 1990 CAAA, Title IV Acid Rain Program.

Asbestos Provisions
Not applicable.

Title VI, Ozone Depleting Substances
Not applicable the Facility does not service or repair its window air-conditioning units.

Compliance Schedule
Not applicable.

Permit Shield
A Permit Shield shall cover the applicable requirements identified for the emissions unit listed in the “Regulatory Review/Technical Review/Compliance Methodology” section above.

INSIGNIFICANT ACTIVITIES

Back River has identified the following emissions unit as insignificant activity units in accordance with the requirements of Part 70 Permit Program. This activity does not have any requirements under the Clean Air Act.

(1) No. 3 Fuel burning equipment using gaseous fuels (digester gas) 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 following affected fuel burning units are subject to the following requirements:

- One (1).hot water generator rated at 0.42 MMBtu/hr.
- One (1) furnace rated at 0.437 MMBtu/hr.
- One (1) heating boiler rated at 0.105 MMBtu/hr.

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.

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.

(2) No. 2 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 following affected units] are subject to the following requirements:
One (1).diesel engine emergency generator rated at 60 kW.
One (1) diesel engine emergency generator rated at 25 kW

(a) COMAR 26.11.09.05E(2), Emissions During Idle Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.

(b) COMAR 26.11.09.05E(3), Emissions During Operating Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.

(c) Exceptions:

(i) COMAR 26.11.09.05E(2) does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.

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

(a) Engines that are idled continuously when not in service: 30 minutes
(b) all other engines: 15 minutes.

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

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

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

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

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

(a) ✓ Storage of butane, **propane**, or liquefied petroleum, or natural gas;

(b) No. ✓ Storage of lubricating oils; Approximately 100 sealed 55 gallons drums and two (2) 500 gallon waste oil storage tanks and one (1) 500 virgin oil storage tank.

(c) No. 7 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel;

(5) ✓ Laboratory fume hoods and vents;

STATE ONLY ENFORCEABLE REQUIREMENTS

Applicable Regulations/limits

(A) The Permittee is subject to the following applicable regulation:

(1) **COMAR 26.11.06.08 –** Nuisance
"An installation or premises may not be operated or maintained in such a manner that a nuisance or air pollution is created. Nothing in this regulation relating to the control of emissions may in any manner be construed as authorizing or permitting the creation of, or maintenance of, nuisance or air pollution."

(2) **COMAR 26.11.06.09 –** Odors

(B) "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."

(C) **COMAR 26.11.15.06** which prohibits the discharge of toxic air pollutants to the extent that the emissions will unreasonably endanger human health.

By April 1 of each year, the Permittee shall certify in writing to the Department the results of an air toxics analysis for the previous calendar year. The air toxics analysis shall include either:

(1) A statement that the Permittee's previously submitted toxics compliance demonstrations remain valid; or

(2) A new toxics compliance demonstration developed in accordance with the requirements set forth under COMAR 26.11.15, if the Permittee has made changes to its operations that make the last submitted compliance demonstration invalid.

The following State-Only enforceable conditions apply only to the scrubbers associated with Emission Units: EU-0105, EU-1005N, and EU-1036 detailed below.

Emissions Unit No.	MDE Registration No.	Emission Unit Description	Installation Date
EU-0105M	005-0812-9-0105M	EU-0105M consists of six (6) scrubbers: four (4) single stage wet scrubbers to control odors from the Influent Conduit Sludge Loading Facility, Influent Meter Flumes, Dissolved Air Floatation Thickening (DAFT) Units 1 & 2, and DAFT units 3 & 4 and two (2) two-stage wet scrubbers, which control odors from the Head Chamber, Primary Settling Tank (PST) #2, and Gravity Sludge Thickeners (GST). Each scrubber and associated equipment was installed in 1984, 1990, 1992, and 1992, 1991, and 1998 respectively.	1984, 1990, 1992, 1992, 1991, and 1998 respectively
EU-1005N	005-0812-9-1005	One (1) two-stage packed tower scrubber to control hydrogen sulfide gas from Gravity Belt Thickener.	May 1996
EU-1036M	005-0812-9-1036	Three (3) two-stage scrubbers to control hydrogen sulfide gas from Primary Settling Tanks.	January 1998

(D) Odor Management Requirements

(1) Odor control scrubbers (EU-0105M, EU-1005N and EU-1036M)

(a) The Permittee shall monitor once per shift the flow switch in the water line to each scrubber and a warning flashing light to assure that scrubbing solution to each scrubber is running through the scrubber when a scrubber is operating;

(b) The Permittee shall visually inspect each scrubber at the start of each shift and at least once during each shift while the scrubbers are running to ensure they are functioning as intended.

(c) The Permittee shall perform preventive maintenance once per month on scrubbers; and

(d) The Permittee shall maintain records of the results of the scrubber visual inspections and a log of maintenance performed on the scrubbers. The records and log shall be kept on site for at least 5 years and made available to the Department upon request

(2) Facility perimeter odor control requirements

(a) The Permittee shall perform a daily community odor survey by measuring concentrations of hydrogen sulfide (H_2S) along the perimeter of the facility with use of a portable H_2S analyzer. When H_2S readings by the analyzer indicate a potential odor problem for

the community, the facility shall inject hydrogen peroxide into the influent waste stream to reduce potential odor problems.

(b) The Permittee shall maintain a record of the results of the odor surveys and dates on which hydrogen peroxide was injected into the influent and the quantity injected. The records shall be maintained for 5 years and made available to the Department upon request.