

West Virginia Department of Environmental Protection

Austin Caperton

Cabinet Secretary

Permit to Operate



Pursuant to

Title V

of the Clean Air Act

Issued to:

Appalachia Midstream Services, LLC

Buffalo Compressor Station/Moundsville

R30-00900116-2019

A handwritten signature in blue ink, reading "Laura M. Crowder".

Laura M. Crowder

Acting Director, Division of Air Quality

Issued: January 8, 2019 • Effective: January 22, 2019
Expiration: January 8, 2024 • Renewal Application Due: July 8, 2023

Permit Number: **R30-00900116-2019**
Permittee: **Appalachia Midstream Services, LLC**
Facility Name: **Buffalo Compressor Station**
Permittee Mailing Address: **100 Teletech Drive, Suite 2, Moundsville, WV 26041-2352**

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45CSR30 — Requirements for Operating Permits. The permittee identified at the above-referenced facility is authorized to operate the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Facility Location:	Moundsville, Brooke County, West Virginia
Facility Mailing Address:	Same as Above
Telephone Number:	(304) 843-3100
Type of Business Entity:	LLC
Facility Description:	Oil and Gas Field Services
SIC Codes:	Primary 1389; Secondary NA; Tertiary NA
UTM Coordinates:	540.71 km Easting • 4449.70 km Northing • Zone 17

Permit Writer: Frederick Tipane

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.

Issuance of this Title V Operating Permit does not supersede or invalidate any existing permits under 45CSR13, 14 or 19, although all applicable requirements from such permits governing the facility's operation and compliance have been incorporated into the Title V Operating Permit.

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1.0 Emission Units and Active R13, R14, and R19 Permits

1.1 Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
EUCE-1	EPCE-1	Compressor Engine 01 - CAT G3516B (CE-01)	2015	1,380 bhp	OxCat-01
EUCE-2	EPCE-2	Compressor Engine 02 - CAT G3516B (CE-02)	2015	1,380 bhp	OxCat-02
EUCE-3	EPCE-3	Compressor Engine 03 - CAT G3516B (CE-03)	2015	1,380 bhp	OxCat-03
EUCE-4	EPCE-4	Compressor Engine 04 - CAT G3516B (CE-04)	2015	1,380 bhp	OxCat-04
EUCE-5	EPCE-5	Compressor Engine 05 - CAT G3516B (CE-05)	2015	1,380 bhp	OxCat-05
EUCE-6	EPCE-6	Compressor Engine 06 - CAT G3516B (CE-06)	2015	1,380 bhp	OxCat-06
EUCE-7	EPCE-7	Compressor Engine 07 - CAT G3516B (CE-07)	2015	1,380 bhp	OxCat-07
EUCE-8	EPCE-8	Compressor Engine 08 - CAT G3516B (CE-08)	2015	1,380 bhp	OxCat-08
EUCE-9	EPCE-9	Compressor Engine 09 - CAT G3516B (CE-09)	2015	1,380 bhp	OxCat-09
EUCE-10	EPCE-10	Compressor Engine 10 - CAT G3516B (CE-10)	2015	1,380 bhp	OxCat-10
EUCE-11	EPCE-11	Compressor Engine 11 - CAT G3516B (CE-11)	2015	1,380 bhp	OxCat-11
EUCE-12	EPCE-12	Compressor Engine 12 - CAT G3516B (CE-12)	2015	1,380 bhp	OxCat-12
EUCRP	EPCRP	Compressor Rod Packing (CRP)	2015	12 Units	None
EUGEN-1	EPGEN-1	Generator - Capstone C600 Microturbine (GEN)	2015	805 bhp	None
EUDHY-1	EPSTL-1	Dehydrator 01 - BTEX Buster (DHY-01)	2015	55.0 MMscfd	BTEX-01
EUDHY-2	EPSTL-2	Dehydrator 02 - BTEX Buster (DHY-02)	2015	110.0 MMscfd	BTEX-02
EURBL-1	EPRBL-1	Reboiler 01 (BLR-01)	2015	1.00 MMBtu/hr	None
EURBL-2	EPRBL-2	Reboiler 02 (BLR-02)	2015	2.00 MMBtu/hr	None
EUHT-1	EPHT-1	Heater Treater Burner 01 (HTR-01)	2015	0.50 MMBtu/hr	None
EUHT-2	EPHT-2	Heater Treater Burner 02 (HTR-02)	2015	0.50 MMBtu/hr	None
EUTK-1 through EUTK-8	EPTK-1 through EPTK-8	Stabilized Condensate Storage Tanks 01 through 08 (TK-01 through TK-08)	2015	400 bbl each (16,800 gal)	VRU ¹
EUWTK-9	EPWTK-9	Produced Water Storage Tank W01 (WTK-01)	2015	400 bbl (16,800 gal)	None

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
EUWTK-10	EPWTK-10	Produced Water Storage Tank W02 (WTK-02)	2015	400 bbl (16,800 gal)	None
EULOAD-1	EPLOAD-1	Stabilized Condensate Truck Loading (TLO)	2015	9,965 Mgal/yr	Carbon Canister
EULOAD-2	EPLOAD-2	Produced Water Truck Loading (WTLO)	2015	1,533 Mgal/yr	None
EUBD	EPBD	Compressor Blowdown/Emergency Shutdown Tests (CBD/ESD)	2015	1,249 events/yr	None
EUFUG	EPFUG	Piping & Equipment Leaks – Gas (FUG-G)	2015	7,472 Units	None
		Piping & Equipment Leaks - Light Liquid (FUG-O)	2015	3,407 Units	None
EUECC	EPECC	Engine Crankcase Fugitives (ECC)	2015	17,365 bhp	None

1 – Working, Breathing, and Flashing losses routed to Vapor Recovery Unit for recirculation back into the process.

1.2. Active R13, R14, and R19 Permits

The underlying authority for any conditions from R13, R14, and/or R19 permits contained in this operating permit is cited using the original permit number (e.g. R13-1234). The current applicable version of such permit(s) is listed below.

Permit Number	Date of Issuance
R13-3048B	May 15, 2018

2.0 General Conditions

2.1 Definitions

- 2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.
- 2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.
- 2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.12.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.
- 2.1.4. Unless otherwise specified in a permit condition or underlying rule or regulation, all references to a "rolling yearly total" shall mean the sum of the monthly data, values or parameters being measured, monitored, or recorded, at any given time for the previous twelve (12) consecutive calendar months.

2.2. Acronyms

CAAA	Clean Air Act Amendments	NSPS	New Source Performance Standards
CBI	Confidential Business Information	PM	Particulate Matter
CEM	Continuous Emission Monitor	PM₁₀	Particulate Matter less than 10µm in diameter
CES	Certified Emission Statement	pph	Pounds per Hour
C.F.R. or CFR	Code of Federal Regulations	ppm	Parts per Million
CO	Carbon Monoxide	PSD	Prevention of Significant Deterioration
C.S.R. or CSR	Codes of State Rules	psi	Pounds per Square Inch
DAQ	Division of Air Quality	SIC	Standard Industrial Classification
DEP	Department of Environmental Protection	SIP	State Implementation Plan
FOIA	Freedom of Information Act	SO₂	Sulfur Dioxide
HAP	Hazardous Air Pollutant	TAP	Toxic Air Pollutant
HON	Hazardous Organic NESHAP	TPY	Tons per Year
HP	Horsepower	TRS	Total Reduced Sulfur
lbs/hr or lb/hr	Pounds per Hour	TSP	Total Suspended Particulate
LDAR	Leak Detection and Repair	USEPA	United States Environmental Protection Agency
m	Thousand	UTM	Universal Transverse Mercator
MACT	Maximum Achievable Control Technology	VEE	Visual Emissions Evaluation
mm	Million	VOC	Volatile Organic Compounds
mmBtu/hr	Million British Thermal Units per Hour		
mmft³/hr or mmcf/hr	Million Cubic Feet Burned per Hour		
NA or N/A	Not Applicable		
NAAQS	National Ambient Air Quality Standards		
NESHAPS	National Emissions Standards for Hazardous Air Pollutants		
NO_x	Nitrogen Oxides		

2.3. Permit Expiration and Renewal

- 2.3.1. Permit duration. This permit is issued for a fixed term of five (5) years and shall expire on the date specified on the cover of this permit, except as provided in 45CSR§30-6.3.b. and 45CSR§30-6.3.c.
[45CSR§30-5.1.b.]
- 2.3.2. A permit renewal application is timely if it is submitted at least six (6) months prior to the date of permit expiration.
[45CSR§30-4.1.a.3.]
- 2.3.3. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with 45CSR§30-6.2. and 45CSR§30-4.1.a.3.
[45CSR§30-6.3.b.]
- 2.3.4. If the Secretary fails to take final action to deny or approve a timely and complete permit application before the end of the term of the previous permit, the permit shall not expire until the renewal permit has been issued or denied, and any permit shield granted for the permit shall continue in effect during that time.
[45CSR§30-6.3.c.]

2.4. Permit Actions

- 2.4.1. This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
[45CSR§30-5.1.f.3.]

2.5. Reopening for Cause

- 2.5.1. This permit shall be reopened and revised under any of the following circumstances:
 - a. Additional applicable requirements under the Clean Air Act or the Secretary's legislative rules become applicable to a major source with a remaining permit term of three (3) or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 45CSR§§30-6.6.a.1.A. or B.
 - b. Additional requirements (including excess emissions requirements) become applicable to an affected source under Title IV of the Clean Air Act (Acid Deposition Control) or other legislative rules of the Secretary. Upon approval by U.S. EPA, excess emissions offset plans shall be incorporated into the permit.
 - c. The Secretary or U.S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
 - d. The Secretary or U.S. EPA determines that the permit must be revised or revoked and reissued to assure compliance with the applicable requirements.

[45CSR§30-6.6.a.]

2.6. Administrative Permit Amendments

- 2.6.1. The permittee may request an administrative permit amendment as defined in and according to the procedures specified in 45CSR§30-6.4.
[45CSR§30-6.4.]

2.7. Minor Permit Modifications

- 2.7.1. The permittee may request a minor permit modification as defined in and according to the procedures specified in 45CSR§30-6.5.a.
[45CSR§30-6.5.a.]

2.8. Significant Permit Modification

- 2.8.1. The permittee may request a significant permit modification, in accordance with 45CSR§30-6.5.b., for permit modifications that do not qualify for minor permit modifications or as administrative amendments.
[45CSR§30-6.5.b.]

2.9. Emissions Trading

- 2.9.1. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in the permit and that are in accordance with all applicable requirements.
[45CSR§30-5.1.h.]

2.10. Off-Permit Changes

- 2.10.1. Except as provided below, a facility may make any change in its operations or emissions that is not addressed nor prohibited in its permit and which is not considered to be construction nor modification under any rule promulgated by the Secretary without obtaining an amendment or modification of its permit. Such changes shall be subject to the following requirements and restrictions:
- a. The change must meet all applicable requirements and may not violate any existing permit term or condition.
 - b. The permittee must provide a written notice of the change to the Secretary and to U.S. EPA within two (2) business days following the date of the change. Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change.
 - c. The change shall not qualify for the permit shield.
 - d. The permittee shall keep records describing all changes made at the source that result in emissions of regulated air pollutants, but not otherwise regulated under the permit, and the emissions resulting from those changes.
 - e. No permittee may make any change subject to any requirement under Title IV of the Clean Air Act (Acid Deposition Control) pursuant to the provisions of 45CSR§30-5.9.

- f. No permittee may make any changes which would require preconstruction review under any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) pursuant to the provisions of 45CSR§30-5.9.

[45CSR§30-5.9.]

2.11. Operational Flexibility

- 2.11.1. The permittee may make changes within the facility as provided by § 502(b)(10) of the Clean Air Act. Such operational flexibility shall be provided in the permit in conformance with the permit application and applicable requirements. No such changes shall be a modification under any rule or any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) promulgated by the Secretary in accordance with Title I of the Clean Air Act and the change shall not result in a level of emissions exceeding the emissions allowable under the permit.

[45CSR§30-5.8]

- 2.11.2. Before making a change under 45CSR§30-5.8., the permittee shall provide advance written notice to the Secretary and to U.S. EPA, describing the change to be made, the date on which the change will occur, any changes in emissions, and any permit terms and conditions that are affected. The permittee shall thereafter maintain a copy of the notice with the permit, and the Secretary shall place a copy with the permit in the public file. The written notice shall be provided to the Secretary and U.S. EPA at least seven (7) days prior to the date that the change is to be made, except that this period may be shortened or eliminated as necessary for a change that must be implemented more quickly to address unanticipated conditions posing a significant health, safety, or environmental hazard. If less than seven (7) days notice is provided because of a need to respond more quickly to such unanticipated conditions, the permittee shall provide notice to the Secretary and U.S. EPA as soon as possible after learning of the need to make the change.

[45CSR§30-5.8.a.]

- 2.11.3. The permit shield shall not apply to changes made under 45CSR§30-5.8., except those provided for in 45CSR§30-5.8.d. However, the protection of the permit shield will continue to apply to operations and emissions that are not affected by the change, provided that the permittee complies with the terms and conditions of the permit applicable to such operations and emissions. The permit shield may be reinstated for emissions and operations affected by the change:

- a. If subsequent changes cause the facility's operations and emissions to revert to those authorized in the permit and the permittee resumes compliance with the terms and conditions of the permit, or
- b. If the permittee obtains final approval of a significant modification to the permit to incorporate the change in the permit.

[45CSR§30-5.8.c.]

- 2.11.4. "Section 502(b)(10) changes" are changes that contravene an express permit term. Such changes do not include changes that would violate applicable requirements or contravene enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.

[45CSR§30-2.39]

2.12. Reasonably Anticipated Operating Scenarios

- 2.12.1. The following are terms and conditions for reasonably anticipated operating scenarios identified in this permit.
- a. Contemporaneously with making a change from one operating scenario to another, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating and to document the change in reports submitted pursuant to the terms of this permit and 45CSR30.
 - b. The permit shield shall extend to all terms and conditions under each such operating scenario; and
 - c. The terms and conditions of each such alternative scenario shall meet all applicable requirements and the requirements of 45CSR30.

[45CSR§30-5.1.i.]

2.13. Duty to Comply

- 2.13.1. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

[45CSR§30-5.1.f.1.]

2.14. Inspection and Entry

- 2.14.1. The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:
- a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;
 - d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

[45CSR§30-5.3.b.]

2.15. Schedule of Compliance

- 2.15.1. For sources subject to a compliance schedule, certified progress reports shall be submitted consistent with the applicable schedule of compliance set forth in this permit and 45CSR§30-4.3.h., but at least every six (6) months, and no greater than once a month, and shall include the following:
- a. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when such activities, milestones or compliance were achieved; and
 - b. An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measure adopted.

[45CSR§30-5.3.d.]

2.16. Need to Halt or Reduce Activity not a Defense

- 2.16.1. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.

[45CSR§30-5.1.f.2.]

2.17. Emergency

- 2.17.1. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

[45CSR§30-5.7.a.]

- 2.17.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of 45CSR§30-5.7.c. are met.

[45CSR§30-5.7.b.]

- 2.17.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

- a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
- b. The permitted facility was at the time being properly operated;
- c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and
- d. Subject to the requirements of 45CSR§30-5.1.c.3.C.1, the permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice, report, and

variance request fulfills the requirement of 45CSR§30-5.1.c.3.B. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

[45CSR§30-5.7.c.]

2.17.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.

[45CSR§30-5.7.d.]

2.17.5. This provision is in addition to any emergency or upset provision contained in any applicable requirement.

[45CSR§30-5.7.e.]

2.18. Federally-Enforceable Requirements

2.18.1. All terms and conditions in this permit, including any provisions designed to limit a source's potential to emit and excepting those provisions that are specifically designated in the permit as "State-enforceable only", are enforceable by the Secretary, USEPA, and citizens under the Clean Air Act.

[45CSR§30-5.2.a.]

2.18.2. Those provisions specifically designated in the permit as "State-enforceable only" shall become "Federally-enforceable" requirements upon SIP approval by the USEPA.

2.19. Duty to Provide Information

2.19.1. The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records required to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.

[45CSR§30-5.1.f.5.]

2.20. Duty to Supplement and Correct Information

2.20.1. Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.

[45CSR§30-4.2.]

2.21. Permit Shield

2.21.1. Compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance provided that such applicable requirements are included and are specifically identified in this permit or the Secretary has determined that other requirements specifically identified are not applicable to the source and this permit includes such a determination or a concise summary thereof.

[45CSR§30-5.6.a.]

2.21.2. Nothing in this permit shall alter or affect the following:

- a. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance; or
- b. The applicable requirements of the Code of West Virginia and Title IV of the Clean Air Act (Acid Deposition Control), consistent with § 408 (a) of the Clean Air Act.
- c. The authority of the Administrator of U.S. EPA to require information under § 114 of the Clean Air Act or to issue emergency orders under § 303 of the Clean Air Act.

[45CSR§30-5.6.c.]

2.22. Credible Evidence

- 2.22.1. Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee including but not limited to any challenge to the credible evidence rule in the context of any future proceeding.

[45CSR§30-5.3.e.3.B. and 45CSR38]

2.23. Severability

- 2.23.1. The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid by a court of competent jurisdiction, the remaining permit terms and conditions or their application to other circumstances shall remain in full force and effect.

[45CSR§30-5.1.e.]

2.24. Property Rights

- 2.24.1. This permit does not convey any property rights of any sort or any exclusive privilege.

[45CSR§30-5.1.f.4]

2.25. Acid Deposition Control

- 2.25.1. Emissions shall not exceed any allowances that the source lawfully holds under Title IV of the Clean Air Act (Acid Deposition Control) or rules of the Secretary promulgated thereunder.

- a. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid deposition control program, provided that such increases do not require a permit revision under any other applicable requirement.
- b. No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement.
- c. Any such allowance shall be accounted for according to the procedures established in rules promulgated under Title IV of the Clean Air Act.

[45CSR§30-5.1.d.]

- 2.25.2. Where applicable requirements of the Clean Air Act are more stringent than any applicable requirement of regulations promulgated under Title IV of the Clean Air Act (Acid Deposition Control), both provisions shall be incorporated into the permit and shall be enforceable by the Secretary and U. S. EPA.

[45CSR§30-5.1.a.2.]

3.0 Facility-Wide Requirements

3.1 Limitations and Standards

- 3.1.1. **Open burning.** The open burning of refuse by any person is prohibited except as noted in 45CSR§6-3.1.
[45CSR§6-3.1.]
- 3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause or allow any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.
[45CSR§6-3.2.]
- 3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. §61.145, 40 C.F.R. §61.148, and 40 C.F.R. §61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. §61.145(b)(3)(i). The USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them.
[40 C.F.R. §61.145(b) and 45CSR34]
- 3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.
[45CSR§4-3.1 State-Enforceable only.]
- 3.1.5. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11.
[45CSR§11-5.2]
- 3.1.6. **Emission inventory.** The permittee is responsible for submitting, on an annual basis, an emission inventory in accordance with the submittal requirements of the Division of Air Quality.
[W.Va. Code § 22-5-4(a)(14)]
- 3.1.7. **Ozone-depleting substances.** For those facilities performing maintenance, service, repair or disposal of appliances, the permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 C.F.R. Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the prohibitions and required practices pursuant to 40 C.F.R. §§82.154 and 82.156.
 - b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 C.F.R. §82.158.

- c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 C.F.R. §82.161.

[40 C.F.R. 82, Subpart F]

- 3.1.8. **Risk Management Plan.** Should this stationary source, as defined in 40 C.F.R. §68.3, become subject to Part 68, then the owner or operator shall submit a risk management plan (RMP) by the date specified in 40 C.F.R. §68.10 and shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by 40 C.F.R. Part 70 or 71.

[40 C.F.R. 68]

- 3.1.9. **Minor Source of Hazardous Air Pollutants (HAP).** HAP emissions from the facility shall be less than 10 tons/year of any single HAP or 25 tons/year of any combination of HAPs. Compliance with this Section shall ensure that the facility is a minor HAP source.

[45CSR13, R13-3048 §4.1.2.]

- 3.1.10. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.

[45CSR13, R13-3048 §4.1.3.]

- 3.1.11. Only those emission units/sources as identified in Table 1.1., with the exception of any *de minimis* sources as identified under Table 45-13B of 45CSR13, are authorized at the permitted facility.

[45CSR13, R13-3048 §4.1.5.]

3.2. Monitoring Requirements

- 3.2.1. Reserved.

3.3. Testing Requirements

- 3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

- a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63, if applicable, in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable.

- b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit.
- c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.
- d. The permittee shall submit a report of the results of the stack test within 60 days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:
 1. The permit or rule evaluated, with the citation number and language.
 2. The result of the test for each permit or rule condition.
 3. A statement of compliance or non-compliance with each permit or rule condition.

[WV Code §§ 22-5-4(a)(14-15) and 45CSR13]

3.4. Recordkeeping Requirements

- 3.4.1. **Monitoring information.** The permittee shall keep records of monitoring information that include the following:
 - a. The date, place as defined in this permit and time of sampling or measurements;
 - b. The date(s) analyses were performed;
 - c. The company or entity that performed the analyses;
 - d. The analytical techniques or methods used;
 - e. The results of the analyses; and
 - f. The operating conditions existing at the time of sampling or measurement.

[45CSR§30-5.1.c.2.A. 45CSR13, R13-3048 §4.1.1.]

- 3.4.2. **Retention of records.** The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of monitoring sample, measurement, report, application, or record creation date. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Where appropriate, records may be maintained in computerized form in lieu of the above records.

[45CSR§30-5.1.c.2.B., 45CSR13, R13-3048 §3.4.1.]

- 3.4.3. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.

[45CSR§30-5.1.c. State-Enforceable only.]

- 3.4.4. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

- a. The equipment involved.
- b. Steps taken to minimize emissions during the event.
- c. The duration of the event.
- d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

- e. The cause of the malfunction.
- f. Steps taken to correct the malfunction.
- g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

[45CSR13, R13-3048 §4.1.4.]

3.5. Reporting Requirements

- 3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

[45CSR§§30-4.4. and 5.1.c.3.D.]

- 3.5.2. A permittee may request confidential treatment for the submission of reporting required under 45CSR§30-5.1.c.3. pursuant to the limitations and procedures of W. Va. Code § 22-5-10 and 45CSR31.

[45CSR§30-5.1.c.3.E.]

- 3.5.3. Except for the electronic submittal of the annual compliance certification and semi-annual monitoring reports to the DAQ and USEPA as required in 3.5.5 and 3.5.6 below, all notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class or by private carrier with postage prepaid to the address(es), or submitted in electronic format by e-mail as set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

DAQ:

Director
WVDEP
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

US EPA:

Associate Director
Office of Air Enforcement and Compliance
Assistance (3AP20)
U. S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

DAQ Compliance and Enforcement¹:

DEPAirQualityReports@wv.gov

¹For all self-monitoring reports (MACT, GACT, NSPS, etc.), stack tests and protocols, Notice of Compliance Status reports, Initial Notifications, etc.

- 3.5.4. **Certified emissions statement.** The permittee shall submit a certified emissions statement and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality.
[45CSR§30-8.]

- 3.5.5. **Compliance certification.** The permittee shall certify compliance with the conditions of this permit on the forms provided by the DAQ. In addition to the annual compliance certification, the permittee may be required to submit certifications more frequently under an applicable requirement of this permit. The annual certification shall be submitted to the DAQ and USEPA on or before March 15 of each year, and shall certify compliance for the period ending December 31. The permittee shall maintain a copy of the certification on site for five (5) years from submittal of the certification. The annual certification shall be submitted in electronic format by e-mail to the following addresses:

DAQ:

DEPAirQualityReports@wv.gov

US EPA:

R3_APD_Permits@epa.gov

[45CSR§30-5.3.e.]

- 3.5.6. **Semi-annual monitoring reports.** The permittee shall submit reports of any required monitoring on or before September 15 for the reporting period January 1 to June 30 and on or before March 15 for the reporting period July 1 to December 31. All instances of deviation from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with 45CSR§30-

4.4. The semi-annual monitoring reports shall be submitted in electronic format by e-mail to the following address:

DAQ:
DEPAirQualityReports@wv.gov

[45CSR§30-5.1.c.3.A.]

3.5.7. **Emergencies.** For reporting emergency situations, refer to Section 2.17 of this permit.

3.5.8. **Deviations.**

a. In addition to monitoring reports required by this permit, the permittee shall promptly submit supplemental reports and notices in accordance with the following:

1. Any deviation resulting from an emergency or upset condition, as defined in 45CSR§30-5.7., shall be reported by telephone or telefax within one (1) working day of the date on which the permittee becomes aware of the deviation, if the permittee desires to assert the affirmative defense in accordance with 45CSR§30-5.7. A written report of such deviation, which shall include the probable cause of such deviations, and any corrective actions or preventative measures taken, shall be submitted and certified by a responsible official within ten (10) days of the deviation.
2. Any deviation that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to the Secretary immediately by telephone or telefax. A written report of such deviation, which shall include the probable cause of such deviation, and any corrective actions or preventative measures taken, shall be submitted by the responsible official within ten (10) days of the deviation.
3. Deviations for which more frequent reporting is required under this permit shall be reported on the more frequent basis.
4. All reports of deviations shall identify the probable cause of the deviation and any corrective actions or preventative measures taken.

[45CSR§30-5.1.c.3.C.]

b. The permittee shall, in the reporting of deviations from permit requirements, including those attributable to upset conditions as defined in this permit, report the probable cause of such deviations and any corrective actions or preventive measures taken in accordance with any rules of the Secretary.

[45CSR§30-5.1.c.3.B.]

3.5.9. **New applicable requirements.** If any applicable requirement is promulgated during the term of this permit, the permittee will meet such requirements on a timely basis, or in accordance with a more detailed schedule if required by the applicable requirement.

[45CSR§30-4.3.h.1.B.]

3.6. Compliance Plan

3.6.1. Reserved.

3.7. Permit Shield

- 3.7.1. The permittee is hereby granted a permit shield in accordance with 45CSR§30-5.6. The permit shield applies provided the permittee operates in accordance with the information contained within this permit.
- 3.7.2. The following requirements specifically identified are not applicable to the source based on the determinations set forth below. The permit shield shall apply to the following requirements provided the conditions of the determinations are met.
 - a. None Requested

4.0 Engines, Microturbine Generator, Compressor Rod Packing [emission point ID(s): EPCE-1 - EPCE-12, EPGEN-1, EPCRCP]

4.1. Limitations and Standards

4.1.1. Maximum emissions from each of the 1,380 hp natural gas fired reciprocating engines equipped with oxidation catalyst, Caterpillar G3516B (EPCE-1 – EPCE-12) shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	1.52	6.66
Carbon Monoxide	1.41	6.20
Volatile Organic Compounds (includes formaldehyde)	0.82	3.60
Formaldehyde	0.16	0.72

[45CSR13, R13-3048 §5.1.1.]

4.1.2. Maximum emissions from the 805 hp natural gas fired microturbine generator, Capstone C600 (EUGEN-1) shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	0.48	2.10
Carbon Monoxide	1.32	5.78
Volatile Organic Compounds (includes formaldehyde)	0.13	0.57
Formaldehyde	0.01	0.04

[45CSR13, R13-3048 §5.1.2.]

4.1.3. Maximum emissions from the compressor rod packing (EUCRP) shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Volatile Organic Compounds	10.96	48.02
Total HAPs	0.33	1.45

[45CSR13, R13-3048 §5.1.3.]

4.1.4. The emission limitations specified in permit conditions 4.1.1 – 4.1.3 shall apply at all times except during periods of start-up and shut-down provided that the duration of these periods does not exceed 30 minutes per occurrence. The permittee shall operate the engines in a manner consistent with good air pollution control practices for minimizing emissions at all times, including periods of start-up and shut-down. The emissions from start-up and shut-down shall be included in the twelve (12) month rolling total of emissions. The permittee shall comply with all applicable start-up and shut-down requirements in accordance with 40 CFR Part 60, Subpart JJJJ and 40 CFR Part 63, Subpart ZZZZ.

[45CSR13, R13-3048 §5.1.4.]

4.1.5. Requirements for Use of Oxidation Catalyst Reduction Devices

- a. Lean-burn natural gas compressor engines (EUCE-1 – EUCE-12) equipped with oxidation catalyst air pollution control devices shall be fitted with a closed-loop automatic air/fuel ratio feedback controller to ensure emissions of regulated pollutants do not exceed the emission limit listed in permit condition 4.1.1 for any engine/oxidation catalyst combination under varying load. The closed-loop, automatic air/fuel ratio controller shall control a fuel metering valve to ensure a lean-rich mixture.
- b. For natural gas compressor engines (EUCE-1 – EUCE-12), the permittee shall monitor the temperature to the inlet of the catalyst and in accordance with manufacturer's specifications; a high temperature alarm shall shut off the engine before thermal deactivation of the catalyst occurs. If the engine shuts off due to high temperature, the permittee shall also check for thermal deactivation of the catalyst before normal operations are resumed.
- c. The permittee shall follow a written operation and maintenance plan that provides the periodic and annual maintenance requirements.
- d. No person shall knowingly:
 1. Remove or render inoperative any air pollution or auxiliary air pollution control device installed subject to the requirements of this permit;
 2. Install any part or component when the principal effect of the part or component is to bypass, defeat or render inoperative any air pollution control device or auxiliary air pollution control device installed subject to the requirements of this permit; or
 3. Cause or allow engine exhaust gases to bypass any catalytic reduction device.

[45CSR13, R13-3048 §5.1.5.]

4.2. Monitoring Requirements

4.2.1. Oxidization Catalyst Control Devices

- a. The permittee shall regularly inspect, properly maintain and/or replace catalytic reduction devices and auxiliary air pollution control devices to ensure functional and effective operation of the engine's physical and operational design. The permittee shall ensure proper operation, maintenance and performance of catalytic reduction devices and auxiliary air pollution control devices by:
 1. Maintaining proper operation of the automatic air/fuel ratio controller or automatic feedback controller.
 2. Following operating and maintenance recommendations of the catalyst element manufacturer.

[45CSR13, R13-3048 §5.2.1.]

4.3. Testing Requirements

- 4.3.1. See Facility-Wide Testing Requirements Section 3.3 and Testing Requirements of Sections 5.3.1. and 6.1.3.
[45CSR13, R13-3048 §5.3.1.]

4.4. Recordkeeping Requirements

- 4.4.1. To demonstrate compliance with section 4.1.5 the permittee shall maintain records of all catalytic reduction device maintenance. Said records shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.
[45CSR13, R13-3048 §5.4.1.]

4.5. Reporting Requirements

- 4.5.1. See Facility-Wide Reporting Requirements Section 3.5 and Reporting Requirements of Sections 5.5.1. and 6.5.
[45CSR13, R13-3048 §5.5.1.]

4.6. Compliance Plan

- 4.6.1. Reserved.

5.0 40 CFR 60 Subpart JJJJ and 40 CFR 63 Subpart ZZZZ [emission point ID(s): EPCE-1 - EPCE-12]

5.1. Limitations and Standards

- 5.1.1. The compressor engines EUCE-1 - EUCE-12 must meet the requirements of 40 CFR Part 63 Subpart ZZZZ by meeting the requirements of 40 CFR 60 Subpart JJJJ.
[45CSR13, R13-3048 §8.1.2.; 45CSR34; 40 CFR §63.6590(e)]
- 5.1.2. Stationary SI ICE may be eligible for exemption from the requirements of 40 CFR 60 Subpart JJJJ as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR parts 90 and 1048, for engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security
[45CSR13, R13-3048 §6.1.3.; 45CSR16; 40 CFR §60.4230(e)]
- 5.1.3. Owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards in Table 1 to 40 CFR 60 Subpart JJJJ for their stationary SI ICE as follows.

Engine type and fuel	Maximum engine power	Manufacture date	Emission standards ^a					
			g/HP-hr			ppmvd at 15% O ₂		
			NO _x	CO	VOC ^d	NO _x	CO	VOC ^d
Non-Emergency SI Natural Gas	HP ≥ 500 HP	7/1/2010	1.0	2.0	0.7	82	270	60

^a Owners and operators of stationary non-certified SI engines may choose to comply with the emission standards in units of either g/HP-hr or ppmvd at 15 percent O₂.

^d For purposes of 40 CFR 63 Subpart JJJJ, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

[45CSR13, R13-3048 §6.2.1.; 45CSR16; 40 CFR §60.4233(e), Table 1 to 40 CFR 60 Subpart JJJJ]

- 5.1.4. Owners and operators of stationary SI ICE must operate and maintain stationary SI ICE that achieve the emission standards as required in §60.4233 over the entire life of the engine.
[45CSR13, R13-3048 §6.2.2.; 45CSR16; 40 CFR §60.4234]
- 5.1.5. If you are an owner or operator of a stationary SI internal combustion engine and must comply with the emission standards specified in §60.4233(e), you must demonstrate compliance according to the method specified below.
 - (1) Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in §60.4233(e) and according to the requirements specified in §60.4244, as applicable, and according to 40 CFR §60.4243(b)(2)(ii).

[45CSR13, R13-3048 §6.4.1.b.; 45CSR16; 40 CFR §60.4243(b)(2)]

- 5.1.6. Owners and operators of stationary SI natural gas fired engines may operate their engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but must keep records of such use. If propane is used for more than 100 hours per year in an engine that is not certified to

the emission standards when using propane, the owners and operators are required to conduct a performance test to demonstrate compliance with the emission standards of §60.4233.
[45CSR13, R13-3048 §6.4.2.; 45CSR16; 40 CFR §60.4243(e)]

- 5.1.7. It is expected that air-to-fuel ratio controllers will be used with the operation of three-way catalysts/non-selective catalytic reduction. The AFR controller must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times.
[45CSR13, R13-3048 §6.4.3.; 45CSR16; 40 CFR §60.4243(g)]

5.2. Monitoring Requirements

- 5.2.1. Reserved.

5.3. Testing Requirements

- 5.3.1. Owners and operators of stationary SI ICE who conduct performance tests must follow the procedures in paragraphs (a) through (f) of this section.
- Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in §60.8 and under the specific conditions that are specified by Table 2 to 40 CFR 60 Subpart JJJJ.
 - You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8 (c). If your stationary SI internal combustion engine is non-operational, you do not need to startup the engine solely to conduct a performance test; however, you must conduct the performance test immediately upon startup of the engine.
 - You must conduct three separate test runs for each performance test required in this section, as specified in 40 CFR §60.8 (f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.
 - To determine compliance with the NO_x mass per unit output emission limitation, convert the concentration of NO_x in the engine exhaust using Equation 1 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{HP - hr} \quad (Eq. 1)$$

Where:

ER = Emission rate of NO_x in g/HP-hr.

C_d = Measured NO_x concentration in parts per million by volume (ppmv).

1.912 × 10⁻³ = Conversion constant for ppm NO_x to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, horsepower-hour (HP-hr).

- e. To determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using Equation 2 of this section:

$$ER = \frac{C_d \times 1.164 \times 10^{-3} \times Q \times T}{HP - hr} \quad (Eq. 2)$$

Where:

ER = Emission rate of CO in g/HP-hr.

C_d = Measured CO concentration in ppmv.

1.164×10^{-3} = Conversion constant for ppm CO to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

- f. For purposes of 40 CFR 60 Subpart JJJJ, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of this section:

$$ER = \frac{C_d \times 1.833 \times 10^{-3} \times Q \times T}{HP - hr} \quad (Eq. 3)$$

Where:

ER = Emission rate of VOC in g/HP-hr.

C_d = VOC concentration measured as propane in ppmv.

1.833×10^{-3} = Conversion constant for ppm VOC measured as propane, to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

- g. If the owner/operator chooses to measure VOC emissions using either Method 18 of 40 CFR Part 60, appendix A, or Method 320 of 40 CFR Part 63, appendix A, then it has the option of correcting the

measured VOC emissions to account for the potential differences in measured values between these methods and Method 25A. The results from Method 18 and Method 320 can be corrected for response factor differences using Equations 4 and 5 of this section. The corrected VOC concentration can then be placed on a propane basis using Equation 6 of this section.

$$RF_i = \frac{C_{Mi}}{C_{Ai}} \quad (Eq. 4)$$

Where:

RF_i = Response factor of compound i when measured with EPA Method 25A.

C_{Mi} = Measured concentration of compound i in ppmv as carbon.

C_{Ai} = True concentration of compound i in ppmv as carbon.

$$C_{icorr} = RF_i \times C_{imeas} \quad (Eq. 5)$$

Where:

C_{icorr} = Concentration of compound i corrected to the value that would have been measured by EPA Method 25A, ppmv as carbon.

C_{imeas} = Concentration of compound i measured by EPA Method 320, ppmv as carbon.

$$C_{peq} = 0.6098 \times C_{icorr} \quad (Eq. 6)$$

Where:

C_{peq} = Concentration of compound i in mg of propane equivalent per DSCM.

[45CSR13, R13-3048 §6.5.1.; 45CSR16; 40 CFR §60.4244 and Table 2 to 40 CFR 60 Subpart JJJJ]

5.4. Recordkeeping Requirements

5.4.1. If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

[45CSR13, R13-3048 §6.4.1.b.2.; 45CSR16; 40 CFR §60.4243(b)(2)(ii)]

5.4.2. Owners and operators of all stationary SI ICE must keep records of the information below.

a. All notifications submitted to comply with 40 CFR 60 Subpart JJJJ and all documentation supporting any notification.

b. Maintenance conducted on the engine.

- c. If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to 40 CFR §60.4243(a)(2), documentation that the engine meets the emission standards.

[45CSR13, R13-3048 §§6.6.1.a.1., 2. 4.; 45CSR16; 40 CFR §§60.4245(a)(1), (2), (4)]

5.5. Reporting Requirements

- 5.5.1. Owners and operators of stationary SI ICE that are subject to performance testing must submit a copy of each performance test as conducted in §60.4244 within 60 days after the test has been completed.
[45CSR13, R13-3048 §6.6.1.d.; 45CSR16; 40 CFR §60.4245(d)]

5.6. Compliance Plan

- 5.6.1. NA

6.0 Reciprocating Compressors, (40 CFR Part 60, Subpart OOOO) [emission point ID(s): EPCE-1 - EPCE-12]

6.1. Limitations and Standards

6.1.1. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

[45CSR16; 40 CFR §60.5370(b)]

6.1.2. You must comply with the standards in paragraphs (a) through (d) of this section for each reciprocating compressor affected facility.

a. You must replace the reciprocating compressor rod packing according to either paragraph (a)(1) or (2) of this section.

1. Before the compressor has operated for 26,000 hours. The number of hours of operation must be continuously monitored beginning upon initial startup of your reciprocating compressor affected facility, or October 15, 2012, or the date of the most recent reciprocating compressor rod packing replacement, whichever is later.

2. Prior to 36 months from the date of the most recent rod packing replacement, or 36 months from the date of startup for a new reciprocating compressor for which the rod packing has not yet been replaced.

b. You must demonstrate initial compliance with standards that apply to reciprocating compressor affected facilities as required by §60.5410.

c. You must demonstrate continuous compliance with standards that apply to reciprocating compressor affected facilities as required by §60.5415.

d. You must perform the required notification, recordkeeping, and reporting as required by §60.5420.

[45CSR13, R13-3048 §7.1.1.; 45CSR16; 40 CFR §60.5385]

6.1.3. For each reciprocating compressor affected facility complying with §60.5385(a)(1) or (2), you must demonstrate continuous compliance according to paragraphs a. through c.

a. You must continuously monitor the number of hours of operation for each reciprocating compressor affected facility or track the number of months since initial startup, or October 15, 2012, or the date of the most recent reciprocating compressor rod packing replacement, whichever is later.

b. You must submit the annual report as required in 40 CFR §60.5420(b) and maintain records as required in 40 CFR §60.5420(c)(3).

- c. You must replace the reciprocating compressor rod packing before the total number of hours of operation reaches 26,000 hours or the number of months since the most recent rod packing replacement reaches 36 months.

[45CSR13, R13-3048 §7.3.1.; 45CSR16; 40 CFR §§60.5415(c)(1), (2) and (3)]

6.2. Monitoring Requirements

- 6.2.1. Reserved.

6.3. Testing Requirements

- 6.3.1. Reserved

6.4. Recordkeeping Requirements

- 6.4.1. For each reciprocating compressor affected facility, you must maintain the records identified as specified in 40 CFR §60.7(f) and in this condition. All records required by 40 CFR 60 Subpart OOOO must be maintained either onsite or at the nearest local field office for at least 5 years.
 - a. Records of the cumulative number of hours of operation or number of months since initial startup or October 15, 2012, or the previous replacement of the reciprocating compressor rod packing, whichever is later.
 - b. Records of the date and time of each reciprocating compressor rod packing replacement.
 - c. Records of deviations in cases where the reciprocating compressor was not operated in compliance with the requirements specified in 40 CFR §60.5385.

[45CSR13, R13-3048 §7.4.3.3.; 45CSR16; 40 CFR §60.5420(c)(3)]

6.5. Reporting Requirements

- 6.5.1. You must submit the notifications required in 40 CFR §60.7 except that you are not required to submit notifications required in §60.7(a)(1), (3), and (4) if you own or operate one or more of the affected facilities specified in 40 CFR §60.5365 that was constructed, modified, or reconstructed during the reporting period. [45CSR13, R13-3048 §7.4.1.; 45CSR16; 40 CFR §60.5420(a)(1) and Table 3 to 40 CFR 60 Subpart OOOO]
- 6.5.2. You must submit annual reports containing the information specified in paragraphs a. and b. of this section to the Administrator and performance test reports as specified in paragraph c. of this section. Annual reports are due no later than same date each year as the initial annual report. If you own or operate more than one affected facility, you may submit one report for multiple affected facilities provided the report contains all of the information required as specified in paragraphs a. and b. of this section. Annual reports may coincide with title V reports as long as all the required elements of the annual report are included. You may arrange with the Administrator a common schedule on which reports required by 40 CFR Part 60 may be submitted as long as the schedule does not extend the reporting period.

- a. The following specified general information.
 1. The company name and address of the affected facility.
 2. An identification of each affected facility being included in the annual report.
 3. Beginning and ending dates of the reporting period.
 4. A certification by a certifying official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- b. For each reciprocating compressor affected facility, the following specified information.
 1. The cumulative number of hours of operation or the number of months since initial startup, since October 15, 2012, or since the previous reciprocating compressor rod packing replacement, whichever is later.
 2. Records of deviations specified in condition 6.4.1.c. that occurred during the reporting period.
- c. Within 60 days after the date of completing each performance test (see 40 CFR §60.8) as required by 40 CFR 60 Subpart OOOO, you must submit the results of the performance tests required by Subpart OOOO to the EPA as follows. You must use the latest version of the EPA's Electronic Reporting Tool (ERT) (see <http://www.epa.gov/ttn/chieffert/index.html>) existing at the time of the performance test to generate a submission package file, which documents the performance test. You must then submit the file generated by the ERT through the EPA's Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed by logging in to the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>). Only data collected using test methods supported by the ERT as listed on the ERT Web site are subject to this requirement for submitting reports electronically. Owners or operators who claim that some of the information being submitted for performance tests is confidential business information (CBI) must submit a complete ERT file including information claimed to be CBI on a compact disk or other commonly used electronic storage media (including, but not limited to, flash drives) to EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT file with the CBI omitted must be submitted to EPA via CDX as described earlier in this paragraph. At the discretion of the delegated authority, you must also submit these reports, including the confidential business information, to the delegated authority in the format specified by the delegated authority. For any performance test conducted using test methods that are not listed on the ERT Web site, the owner or operator shall submit the results of the performance test to the Administrator at the appropriate address listed in §60.4.

All reports required by 40 CFR 60 Subpart OOOO not subject to the requirements in 40 CFR §60.5420(a)(2)(i) must be sent to the Administrator at the appropriate address listed in 40 CFR §60.4. The Administrator or the delegated authority may request a report in any form suitable for the specific case (e.g., by commonly used electronic media such as Excel spreadsheet, on CD or hard copy).

[45CSR13, R13-3048 §7.4.2.; 45CSR16; 40 CFR §§60.5420(b)(1), (4) and (7)]

6.6. Compliance Plan

6.6.1. NA

7.0 Dehydration Units [emission point ID(s): EPSTL-1, EPSTL-2]

7.1. Limitations and Standards

- 7.1.1. **Maximum Throughput Limitation.** To demonstrate compliance with permit conditions 7.1.4 and 7.1.5, the maximum wet natural gas throughput to the glycol dehydration unit/still columns shall not exceed the following:

Emission Point ID	Maximum Wet Natural Gas Throughput
EPSTL-1	55.0 mmscf/day
EPSTL-2	110.0 mmscf/day

[45CSR13, R13-3048 §9.1.1.]

- 7.1.2. The still vent of each dehydration unit shall be vented to a dedicated BTEX Condenser through a closed vent system. The non-condensable gas shall be vented back to the respective reboiler through a closed vent system. The control device(s) shall be operated according to manufacturer's specifications, and shall be properly maintained in a manner which prevents the unit from freezing.

[45CSR13, R13-3048 §9.1.2.]

- 7.1.3. Each dehydration unit (EUDHY-1 & EUDHY-2) shall be designed and operated in accordance with the following:

- a. The non-condensable gas from the BTEX Condenser shall be routed to the reboiler and combusted.
- b. The flash tank off-gases from each flash tank shall be routed to the pilot light for each burner of the reboiler, to the burner of the reboiler, and/or flash gas header to be re-injected in the suction line for recompression. The routing of the flash tank off-gases shall be done through a closed vent system.
- c. The pilot light for each reboiler burner shall be lit at all times when the dehydration unit is in operation.
- d. The maximum flow rate of glycol through the Dehydration Unit EUDHY-1 shall not exceed 22 gpm. The permittee may install two Kimray 45015PV (max 7.5 gpm for each pump) glycol pumps piped in parallel and one electric driven pump with a name plate rating of no greater than 22 gpm. This dehydration unit shall only be operated with the two Kimray pumps or one electric pump in service.
- e. The maximum flow rate of glycol through the Dehydration Unit EUDHY-2 shall not exceed 22 gpm. The permittee may install two (2) Kimray 45015PV glycol pumps or one (1) electric driven pump with a name plate rating of no greater than 22 gpm. This dehydration unit shall only be operated with either the two (2) Kimray pumps or one (1) electric pump in service.
- f. The maximum temperature of the outlet stream from the BTEX Condenser shall not be above 120° F on a 3-hour average basis.

[45CSR13, R13-3048 §9.1.3.]

- 7.1.4. Maximum emissions from emission point EPSTL-1 (EUDHY-1 still vent) shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Volatile Organic Compounds	1.88	8.25
Benzene	0.07	0.30
Total HAPs	0.31	1.35

[45CSR13, R13-3048 §9.1.4.]

- 7.1.5. Maximum emissions from the emission point EPSTL-2 (EUDHY-2 still vent) shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Volatile Organic Compounds	1.86	8.14
Benzene	0.07	0.31
Total HAPs	0.31	1.36

[45CSR13, R13-3048 §9.1.5.]

7.2. Monitoring Requirements

- 7.2.1. The permittee shall monitor the throughput of wet natural gas fed to the dehydration system on a monthly basis for the glycol dehydration units (EUDHY-1 & EUDHY-2). Records of such monitoring shall be maintained in accordance with permit condition 3.4.2.

[45CSR13, R13-3048 §9.2.1.]

- 7.2.2. The permittee shall monitor the temperature of the outlet stream of each BTEX Condenser on a daily basis for the purpose of demonstrating compliance with permit condition 7.1.3.f. The permittee may use a portable temperature measuring device. Only one measurement is required to be measured per day if the measured temperature is at or less than 120°F. For readings above 120°F, the permittee shall take additional measurements in equal time intervals to develop a 3-hour average. Records of such monitoring shall be maintained in accordance with permit condition 3.4.2. and include the time and date of measurements.

[45CSR13, R13-3048 §9.2.2.]

7.3. Testing Requirements

- 7.3.1. In order to demonstrate compliance with the minor source status of hazardous air pollutants required by condition 3.1.9., upon request of the Director, the permittee shall demonstrate compliance with the HAP emissions thresholds using GLYCalc Version 3.0 or higher. The permittee shall sample in accordance with GPA Method 2166 and analyze the samples utilizing the extended GPA Method 2286 as specified in the GRI-GLYCalc V4 Technical Reference User Manual and Handbook.

[45CSR13, R13-3048 §9.3.2.]

- 7.3.2. Determination of glycol dehydration benzene emissions. In order to demonstrate that the benzene emissions are less than 1 tpy, the permittee shall determine the actual average benzene emissions using the procedure in the paragraph below. Emissions shall be determined either uncontrolled, or with federally enforceable controls in place.

The owner or operator shall determine actual average benzene or BTEX emissions using the model GRI-GLYCalc™, Version 3.0 or higher, and the procedures presented in the associated GRI-GLYCalc™ Technical Reference Manual. Inputs to the model shall be representative of actual operating conditions of the glycol dehydration unit and may be determined using the procedures documented in the Gas Research Institute (GRI) report entitled “Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions” (GRI-95/0368.1).

[45CSR13, R13-3048 §9.3.3.; 45CSR34; 40 CFR §63.772(b)(2)(i)]

7.4. Recordkeeping Requirements

- 7.4.1. For the purpose of demonstrating compliance with permit conditions 3.1.9., 7.1.4. and 7.1.5., the permittee shall maintain a record of all potential to emit (PTE) HAP calculations for the entire affected facility. These records shall include the natural gas compressor engines and ancillary equipment.
[45CSR13, R13-3048 §9.3.1.]
- 7.4.2. The permittee shall document and maintain the corresponding records specified by the on-going monitoring requirements of section 7.2 and the testing requirements of section 7.3.
[45CSR13, R13-3048 §9.4.1.]
- 7.4.3. For the purpose of demonstrating compliance with the minor source status of hazardous air pollutants required by permit condition 3.1.9., the permittee shall maintain a record of all potential to emit (PTE) HAP calculations for the entire affected facility. These records shall include the natural gas compressor engines and ancillary equipment.
[45CSR13, R13-3048 §9.4.2.]
- 7.4.4. The permittee shall maintain a record of the dry natural gas throughput through the dehydration system to demonstrate compliance with permit condition 7.1.1.
[45CSR13, R13-3048 §9.4.3.]
- 7.4.5. To demonstrate that the permittee is exempt from the requirements of §63.764(d) if the actual average emissions of benzene from the glycol dehydration unit process vent to the atmosphere is less than 0.90 megagram per year (1 tpy), as determined by the procedures specified in § 63.772(b)(2) and permit condition 7.3.2 of this permit, records of the actual average benzene emissions (in terms of benzene emissions per year) shall be maintained.
[45CSR13, R13-3048 §9.4.4.; 45CSR34; 40 CFR §63.764(e)(1)(ii) and §63.774(d)(1)(ii)]
- 7.4.6. All records required under Section 7.4 shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.
[45CSR13, R13-3048 §9.4.5.]

7.5. Reporting Requirements

- 7.5.1. If permittee is required by the Director to demonstrate compliance with permit condition 7.3.2., then the permittee shall submit a testing protocol at least thirty (30) days prior to testing and shall submit a notification of the testing date at least fifteen (15) days prior to testing. The permittee shall submit the testing results within sixty (60) days of testing and provide all supporting calculations and testing data.
[45CSR13, R13-3048 §9.5.1.]

7.6. Compliance Plan

- 7.6.1. NA

8.0 Reboilers, Heater Treaters [emission point ID(s): *EPRL-1, EPRL-2, EPHT-1, EPHT-2*]

8.1 Limitations and Standards

8.1.1. Maximum Design Heat Input. The maximum design heat input (MDHI) shall not exceed the following:

Emission Unit ID#	Emission Unit Description	MDHI (MMBTU/hr)
EURBL-1	Glycol Dehydration Reboiler	1.0
EURBL-2	Glycol Dehydration Reboiler	2.0
EUHT-1	Heater Treater	0.5
EUHT-2	Heater Treater	0.5

[45CSR13, R13-3048 §10.1.1.]

8.1.2. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six-minute block average.
[45CSR13, R13-3048 §10.1.2.; 45CSR§2-3.1.]

8.2 Monitoring Requirements

8.2.1. At such reasonable times as the Secretary may designate, the permittee shall conduct Method 9 emission observations for the purpose of demonstrating compliance with permit condition 8.1.2. Method 9 shall be conducted in accordance with 40 CFR 60 Appendix A.
[45CSR13, R13-3048 §10.2.1.]

8.3 Testing Requirements

8.3.1. Compliance with the visible emission requirements of permit condition 8.1.2 shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9 or by using measurements from continuous opacity monitoring systems approved by the Director. The Director may require the installation, calibration, maintenance and operation of continuous opacity monitoring systems and may establish policies for the evaluation of continuous opacity monitoring results and the determination of compliance with the visible emission requirements of permit condition 8.1.2. Continuous opacity monitors shall not be required on fuel burning units which employ wet scrubbing systems for emission control.
[45CSR13, R13-3048 §10.3.1.; 45CSR§2-3.2.]

8.4 Recordkeeping Requirements

8.4.1. The permittee shall maintain records of all monitoring data required by permit condition 8.2.1 documenting the date and time of each visible emission check, the emission point or equipment/source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80°F, 6 - 10 mph NE wind) during the visual emission check(s). Should a visible emission observation be required to be performed per the requirements specified in Method 9, the data records of each observation shall be maintained per the requirements of Method 9.
[45CSR13, R13-3048 §10.4.1.]

8.5. Reporting Requirements

- 8.5.1. Any deviation(s) from the allowable visible emission requirement for any emission source discovered during observations using 40CFR Part 60, Appendix A, Method 9 or 22 shall be reported in writing to the Director of the Division of Air Quality as soon as practicable, but in any case within ten (10) calendar days of the occurrence and shall include at least the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.

[45CSR13, R13-3048 §10.5.1.]

8.6. Compliance Plan

- 8.6.1. NA

9.0 Storage Tanks [emission point ID(s): *EPTK-1 - EPTK-8, EPWTK-9 - EPWTK-10*]

9.1. Limitations and Standards

9.1.1. The permittee shall route all VOC and HAP emissions from the stabilized condensate storage tanks (EUTK-1 – EUTK-8) to a vapor recovery system prior to release to the atmosphere. The vapor recovery system shall be designed to achieve a minimum guaranteed control efficiency of 95% for volatile organic compound (VOC) and hazardous air pollutants (HAP) emissions. Emissions from these tanks will be collected and compressed by the vapor recovery system whereby the vapors are sufficiently compressed to be introduced into the inlet gas line and processed with the inlet gas.

[45CSR13, R13-3048 §11.1.1.]

9.1.2. *Operation and Maintenance of Air Pollution Control Equipment.* The permittee shall, to the extent practicable, install, maintain, and operate the vapor recovery system and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.

[45CSR13, R13-3048 §11.1.2.]

9.1.3. The maximum annual throughput of product to the storage tanks shall not exceed the following:

Storage Tank ID	Storage Tank Size (bbl)	Product Stored	Maximum Annual Throughput (gal/yr)
EUTK-1 – EUTK-8	400 each	Stabilized Condensate	1,250,000 (each)
EUWTK-9 – EUWTK-10	400 each	Produced Water	770,000 (each)

[45CSR13, R13-3048 §11.1.3.]

9.1.4. Emissions from the Storage Tanks (EUTK-1 – EUTK-8) that are recovered and routed to the vapor recovery system shall be designed and operated as specified in the paragraphs a. through c.

- a. The cover and all openings on the cover (e.g., access hatches, sampling ports, pressure relief valves and gauge wells) shall form a continuous impermeable barrier over the entire surface area of the liquid in the storage vessel.
- b. Each cover opening shall be secured in a closed, sealed position (e.g., covered by a gasketed lid or cap) whenever material is in the unit on which the cover is installed except during those times when it is necessary to use an opening as follows:
 1. To add material to, or remove material from the unit (this includes openings necessary to equalize or balance the internal pressure of the unit following changes in the level of the material in the unit);
 2. To inspect or sample the material in the unit;
 3. To inspect, maintain, repair, or replace equipment located inside the unit; or
 4. To vent liquids, gases, or fumes from the unit through a closed-vent system designed and operated in accordance with the requirements of permit condition 9.1.5. to a control device.

- c. Each Storage Tank (EUTK-1 – EUTK-8) thief hatch shall be weighted and properly seated. You must select gasket material for the hatch based on composition of the fluid in the storage vessel and weather conditions.

[45CSR13, R13-3048 §11.1.4.]

- 9.1.5. The facility shall comply with the closed vent system requirements for the Storage Tanks (EUTK-1 – EUTK-8) as noted below.
 - a. You must design the closed vent system to route all gases, vapors, and fumes emitted from the material in the Storage Tanks (EUTK-1 – EUTK-8) to the vapor recovery system.
 - b. You must design and operate a closed vent system with no detectable emissions, as determined using olfactory, visual and auditory inspections.
 - c. You must meet the requirements specified below if the closed vent system contains one or more bypass devices that could be used to divert all or a portion of the gases, vapors, or fumes from entering the control device or to a process.
 1. Except as provided in 9.1.5.c.2., you must comply with either paragraph A. or B. of this section for each bypass device.
 - A. You must properly install, calibrate, maintain, and operate a flow indicator at the inlet to the bypass device that could divert the stream away from the control device or process to the atmosphere that sounds an alarm, or initiates notification via remote alarm to the nearest field office, when the bypass device is open such that the stream is being, or could be diverted away from the control device or process to the atmosphere.
 - B. You must secure the bypass device valve installed at the inlet to the bypass device in the non-diverting position using a car-seal or a lock-and-key type configuration.
 2. Low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and safety devices are not subject to the requirements of 9.1.5.c.1.

[45CSR13, R13-3048 §11.1.5.]

9.2. Monitoring Requirements

- 9.2.1. The permittee shall monitor the throughput to the storage vessels (EUTK-1 – EUTK-8, EUWTK-9 – EUWTK-10) on a monthly basis.
[45CSR13, R13-3048 §11.2.1.]
- 9.2.2. To demonstrate compliance with permit condition 9.1.1., the permittee shall monitor the vapor recovery system in accordance with the plans and specifications and manufacturer's recommendations.
[45CSR13, R13-3048 §11.2.2.]
- 9.2.3. To demonstrate compliance with the closed vent system requirements of permit conditions 9.1.4. and 9.1.5., the permittee shall:

- a. Initial requirements. Conduct an initial visual, olfactory, and auditory inspection for defects that could result in air emissions within 180 days of start-up. Defects include, but are not limited to, visible cracks, holes, or gaps in piping; loose connections; liquid leaks; or broken or missing caps or other closure devices.
 1. The annual inspection shall include the bypass inspection, conducted according to paragraph (c) of this section.
 2. In the event that a leak or defect is detected, you must repair the leak or defect as soon as practicable. Grease or another applicable substance must be applied to deteriorating or cracked gaskets to improve the seal while awaiting repair.
 3. Delay of repair of a closed vent system for which leaks or defects have been detected is allowed if the repair is technically infeasible without a shutdown, or if you determine that emissions resulting from immediate repair would be greater than the fugitive emission likely to result from delay of repair. You must complete repair of such equipment by the end of the next shutdown.
- b. Continuous requirements. Conduct an annual visual, olfactory, and auditory inspection for defects that could result in air emissions. Defect include, but are not limited to, visible cracks, holes, or gaps in piping; loose connections; liquid leaks; or broken or missing caps or other closure devices.
 1. The annual inspection shall be conducted within 365 calendar days from the date of the previous inspection or earlier.
 2. The annual inspection shall include the bypass inspection, conducted according to paragraph (c) of this section.
- c. Bypass inspection. Visually inspect the bypass valve during the initial and annual inspection for the presence of the car seal or lock-and-key type configuration to verify that the valve is maintained in the non-diverting position to ensure that the vent stream is not diverted through the bypass device. If an alternative method is used, conduct the inspection of the bypass as described in the operating procedures.
- d. Unsafe to inspect requirements. You may designate any parts of the closed vent system as unsafe to inspect if the requirements in 9.2.3.d.1. and 9.2.3.d.2. are met. Unsafe to inspect parts are exempt from the inspection requirements of 9.2.3.a. and 9.2.3.b.
 1. You determine that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with the requirements.
 2. You have a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.
- e. Difficult to inspect requirements. You may designate any parts of the closed vent system as difficult to inspect, if the requirements in 9.2.3.e.1. and 9.2.3.e.2. are met. Difficult to inspect parts are exempt from the inspection requirements of 9.2.3.a. and 9.2.3.b.
 1. You determine that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface.

2. You have a written plan that requires inspection of the equipment at least once every 5 years.

[45CSR13, R13-3048 §11.2.3.]

9.3. Testing Requirements

- 9.3.1. Reserved.

9.4. Recordkeeping Requirements

- 9.4.1. All records required under Section 9.4 shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

[45CSR13, R13-3048 §11.3.1.]

- 9.4.2. *Record of Maintenance of VRU.* The permittee shall maintain accurate records of the vapor recovery system equipment inspection and/or preventative maintenance procedures.

[45CSR13, R13-3048 §11.3.2.]

- 9.4.3. *Record of Malfunctions of VRU.* The permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the vapor recovery system during which excess emissions occur. For each such case, the following information shall be recorded:

- a. The equipment involved.
- b. Steps taken to minimize emissions during the event.
- c. The duration of the event.
- d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

- e. The cause of the malfunction.
- f. Steps taken to correct the malfunction.
- g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

[45CSR13, R13-3048 §11.3.3.]

- 9.4.4. To demonstrate compliance with permit condition 9.1.3, the permittee shall maintain a record of the aggregate throughput for the storage tanks on a monthly and rolling twelve-month total. Said records shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly

authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

[45CSR13, R13-3048 §11.3.4.]

9.4.5. The permittee shall maintain a copy all design records of the process, maintenance records of equipment and any downtime hours associated with the vapor recovery system.

[45CSR13, R13-3048 §11.3.5.]

9.4.6. To demonstrate compliance with the closed vent monitoring requirements, the following records shall be maintained.

- a. The initial compliance requirements;
- b. Each annual visual inspection conducted to demonstrate continuous compliance, including records of any repairs that were made as results of the inspection;
- c. Bypass requirements.
 1. Each inspection or each time the key is checked out or a record each time the alarm is sounded;
 2. Each occurrence that the control device was bypassed. If the device was bypassed, the records shall include the date, time, and duration of the event and shall provide the reason the event occurred. The record shall also include the estimate of emissions that were released to the environment as a result of the bypass.
- d. Any part of the system that has been designated as “unsafe to inspect” in accordance with 9.2.3.d or “difficult to inspect” in accordance with 9.2.3.e.

[45CSR13, R13-3048 §11.3.6.]

9.5. Reporting Requirements

9.5.1. Upon request by the Director, the permittee shall report deviations within a requested time frame of any occurrences when the control device was operated outside of the parameters defined in the monitoring plan.

[45CSR13, R13-3048 §11.4.1.]

9.5.2. The permittee shall notify the Director of any downtime of the vapor recovery system in excess of 5%, based on the 12 month rolling total, in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days of the discovery and shall include, at a minimum, the following information: the dates and durations of each downtime event, the cause or suspected causes for each downtime event, any corrective measures taken or planned for each downtime event.

[45CSR13, R13-3048 §11.4.2.]

9.6. Compliance Plan

9.6.1. NA

10.0 Truck Loading [emission point ID(s): *EPLOAD-1, EPLOAD-2*]

10.1 Limitations and Standards

- 10.1.1. The maximum quantity of stabilized condensate that shall be loaded shall not exceed 9,965,000 gallons per year. Compliance with the Maximum Yearly Operation Limitation shall be determined using a twelve-month rolling total. A twelve-month rolling total shall mean the sum of the condensate throughput at any given time during the previous twelve consecutive calendar months.
[45CSR13, R13-3048 §12.1.1.]
- 10.1.2. The maximum quantity of produced water that shall be loaded shall not exceed 1,533,000 gallons per year. Compliance with the Maximum Yearly Operation Limitation shall be determined using a twelve-month rolling total. A twelve-month rolling total shall mean the sum of the produced water throughput at any given time during the previous twelve consecutive calendar months.
[45CSR13, R13-3048 §12.1.2.]
- 10.1.3. The Condensate Truck Loading (EPLOAD-1) and the Produced Water Truck Loading (EPLOAD-2) shall be operated in accordance with the plans and specifications filed in Permit Application R13-3048B. The minimum guaranteed collection efficiency is 70% for volatile organic compound (VOC) emissions. All collected VOC emissions from the Condensate Truck Loading (EPLOAD-1) will be controlled by a carbon canister (CARBCAN) that shall be designed to achieve a minimum guaranteed control efficiency of 95% for VOC emissions, for an overall control efficiency of 66.5%.
[45CSR13, R13-3048 §12.1.3.]
- 10.1.4. The carbon canister (CARBCAN) must be operated at all times when gases, vapors, and fumes are vented from the Condensate Truck Loading (EPLOAD-1). In addition, the carbon canister must be operated in series, as dual carbon canisters, in case of emission breakthrough in one carbon canister.
[45CSR13, R13-3048 §12.1.4.]
- 10.1.5. Prior to the loading of each truck, the saturation indicator on the carbon canister (CARBCAN) must be checked to ensure that the carbon is not spent. If the saturation indicator demonstrates that the carbon is spent, no truck loading is allowed.
[45CSR13, R13-3048 §12.1.5.]
- 10.1.6. All carbon in the carbon canister (CARBCAN) must be replaced with fresh carbon when the saturation indicator changes in color from pink to brown.
[45CSR13, R13-3048 §12.1.6.]
- 10.1.7. The permittee is required to possess on site, fresh replacements for all carbon canisters (CARBCAN) being used.
[45CSR13, R13-3048 §12.1.7.]

10.2 Monitoring Requirements

- 10.2.1. The permittee shall monitor the Condensate Truck Loading (EPLOAD-1) and the Produced Water Truck Loading (EPLOAD-2) on a daily basis.
[45CSR13, R13-3048 §12.2.1.]

- 10.2.2. The permittee shall monitor all carbon canister (CARBCAN) replacements.
[45CSR13, R13-3048 §12.2.2.]

10.3. Testing Requirements

- 10.3.1. Reserved

10.4. Recordkeeping Requirements

- 10.4.1. The permittee shall maintain a record of the Condensate Truck Loading (ELOAD-1) and the Produced Water Truck Loading (ELOAD-2) to demonstrate compliance with permit conditions 10.1.1. and 10.1.2. of this permit. Said records shall be maintained for a period of five (5) years on site or in a readily accessible off-site location maintained by the permittee. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.
[45CSR13, R13-3048 §12.3.1.]
- 10.4.2. To demonstrate compliance with permit condition 10.1.5., the permittee shall maintain records that the saturation indicator was examined prior to the loading of any truck. Said records required shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.
[45CSR13, R13-3048 §12.3.2.]
- 10.4.3. To demonstrate compliance with permit condition 10.1.6., the permittee shall maintain records of carbon canister replacements. Said records required shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.
[45CSR13, R13-3048 §12.3.3.]

10.5. Reporting Requirements

- 10.5.1. Reserved.

10.6. Compliance Plan

- 10.6.1. NA

11.0 Compressor Blowdowns [emission point ID(s): *EPBD*]

11.1 Limitations and Standards

- 11.1.1. The maximum number of compressor blowdown events per year shall not exceed 104 per compressor (12), with an estimated 1,905 scf per event. Compliance shall be determined using a twelve-month rolling total. A twelve-month rolling total shall mean the sum of the blowdown events at any given time during the previous twelve consecutive calendar months.
[45CSR13, R13-3048 §13.1.1.]

11.2 Monitoring Requirements

- 11.2.1. Reserved.

11.3 Testing Requirements

- 11.3.1. Reserved.

11.4 Recordkeeping Requirements

- 11.4.1. All records required under section 11.4 of this permit shall be kept in accordance with permit condition 3.4.2.
[45CSR13, R13-3048 §13.2.1.]
- 11.4.2. To demonstrate compliance with permit condition 11.1.1, the permittee shall maintain a record of the compressor blowdown events and estimated volume per event (scf) on a monthly and rolling twelve-month total.
[45CSR13, R13-3048 §13.2.2.]

11.5 Reporting Requirements

- 11.5.1. Any exceedance of permit condition 11.1.1 must be reported in writing to the Director of the DAQ as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the date of the exceedance, the estimate of VOC emissions released to the atmosphere as a result of the exceedance and any corrective measures taken or planned.
[45CSR13, R13-3048 §13.3.1.]

11.6 Compliance Plan

- 11.6.1. NA