

West Virginia Department of Environmental Protection
Division of Air Quality

Earl Ray Tomblin
Governor

Randy C. Huffman
Cabinet Secretary

Permit to Operate



Pursuant to
Title V
of the Clean Air Act

Issued to:

Energy Corporation of America
Ellamore Compressor Station, Ellamore, WV
R30-083000101-2012

John A. Benedict
Director

Issued: Draft/Proposed • Effective: [Equals issue date plus two weeks]
Expiration: [5 years after issuance date] • Renewal Application Due: [6 months prior to expiration]

Permit Number: **R30-08300101-2012**
Permittee: **Energy Corporation of America**
Facility Name: **Ellamore Compressor Station**
Mailing Address: **P. O. Box 459, Buckhannon, WV 26201**

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: | Ellamore, Randolph County, West Virginia |
| Mailing Address: | P. O. Box 459, Buckhannon, WV 26201 |
| Telephone Number: | (304) 472-6100 |
| Type of Business Entity: | Corporation |
| Facility Description: | Natural gas compressor station |
| SIC Codes: | Primary: 1311; Secondary: None; Tertiary: None |
| UTM Coordinates: | 536.40 km Easting • 4306.30 km Northing • Zone 17 |

Permit Writer: Rex Compston, P.E.

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 |
|-------------------|-------------------|---|----------------|-----------------|----------------|
| 002-01 | E01 | Reciprocating Engine / Internal Compressor Ajax - 600DPC 2-cycle Lean Burn | 1981 | 600 HP | None |
| 002-02 | E02 | Reciprocating Engine / Reciprocating Compressor Waukesha L-7042G 4-cycle Rich Burn | 1982 | 800 HP | None |
| 002-03 | G1 | Reciprocating Engine / Generator Onan modified Ford LRG-245L 4-cycle Rich Burn | 2005 | 120 HP | None |
| Dehydrator | | | | | |
| 004-01 | FL1 | TEG Dehydrator NATCO; 12-Tray | 1982 | 15 mmscf/day | FL1 |
| Flare | | | | | |
| FLLP1 | FL1 | Dehydrator Flare NATCO; Model: SHV-2.0L | 1999 | 0.4 MMBtu/hr | None |
| Boilers | | | | | |
| 001-01 | BL1 | Dehydrator Reboiler | 1982 | 0.75 MMBtu/hr | None |
| 001-02 | BL2 | Heater System Boiler | 1965 | 0.216 MMBtu/hr | None |
| Tanks | | | | | |
| 003-01 | A01 | Lube Oil Tank | 1965 | 1000 Gallons | None |
| 003-02 | A02 | Lube Oil Tank | 1985 | 1000 Gallons | None |
| 003-03 | A03 | Pipeline Liquids Tank | 2006 | 630 Gallons | None |
| 005-01 | NA | Fugitive Emissions (Equipment Leaks and Blow downs) | NA | NA | NA |

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 |
|---------------|------------------|
| R13-2347 | October 21, 1999 |
| | |

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. 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.

[45CSR§2-3.1., BL1, BL2]

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.]

- 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.]

- 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.]

3.5. 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 certification to the USEPA as required in 3.5.5 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, mailed first class or by private carrier with postage prepaid to the address(es) set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

If to the DAQ:

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

Phone: 304/926-0475
FAX: 304/926-0478

If to the US EPA:

Associate Director
Office of Enforcement and Permits Review
(3AP12)
U. S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

- 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 annual certification to the USEPA shall be submitted in electronic format only. It shall be submitted by e-mail to the following address: R3_APD_Permits@epa.gov. The permittee shall maintain a copy of the certification on site for five (5) years from submittal of the certification.
[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.

[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. None

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.

| | |
|---------------------------|---|
| 45CSR21 | Regulation to Prevent and Control Air Pollution from the Emission of Volatile Organic Compounds. Ellamore station is not located in Cabell, Kanawha, Putnam, Wayne, or Wood counties that are affected by 45CSR21. |
| 45CSR27 | To Prevent and Control the Emissions of Toxic Air Pollutants. Natural gas is included as a petroleum product and contains less than 5% benzene by weight. 45CSR§27-2.4 exempts equipment "used in the production and distribution of petroleum products providing that such equipment does not produce or contact materials containing more than 5% benzene by weight." |
| 40 C.F.R. 60 Subpart GG | Standards of Performance for Stationary Gas Turbines. There are no turbines at the Ellamore Compressor Station. |
| 40 C.F.R. 60 Subpart K | Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978. All tanks are below 40,000 gallons in capacity. |
| 40 C.F.R. 60 Subpart Ka | Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984. All tanks are below 40,000 gallons in capacity. |
| 40 C.F.R. 60 Subpart Kb | Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984. All tanks storing volatile organic liquids are below 75 m ³ in capacity. |
| 40 C.F.R. 60 Subpart KKK | Standards of Performance for Equipment Leaks of VOC From Onshore Natural Gas Processing Plants. Ellamore station is not engaged in the extraction of natural gas from field gas or in the fractionation of mixed natural gas liquids to natural gas products. |
| 40 C.F.R. 60 Subpart LLL | Standards of Performance for Onshore Natural Gas Processing: SO ₂ Emissions. There are no sweetening units at the Ellamore station. |
| 40 C.F.R. 60 Subpart KKKK | Standards of Performance for Stationary Combustion Turbines. There are no turbines at the Ellamore Compressor Station. |
| 40 CFR 63 Subpart HHH | National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities. Ellamore station is not a natural gas storage and transmission facility as defined under 40 C.F.R. §63.1270. |
| 40 CFR 63 Subpart JJJJJ | National Emissions Standards for Hazardous Air Pollutants: Industrial, Commercial, and Institutional Boilers Area Sources. The boilers at this facility burn only natural gas; thus this facility is exempt per 40 CFR §63.11195(e). |
| 40 C.F.R. Part 64 | This is the second permit renewal for this facility. At the time of the first renewal, CAM was determined not to be applicable to the sources at this facility. No changes have been made at this facility since the first renewal that would make this facility subject to CAM. |

4.0 Reciprocating Engines [emission point ID(s): E01, E02, and G1]

4.1. Limitations and Standards

4.1.1. For the engines (E01 and E02) and the generator (G1), the permittee shall comply with the requirements of 40 C.F.R. 63, Subpart ZZZZ – “National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines” by October 19, 2013.

a. The permittee shall meet the following operating requirements:

Table 2d to Subpart ZZZZ of Part 63 – Requirements for Existing RICE Stationary RICE Located at Area Sources of HAP Emissions

| For each... | You must meet the following requirement, except during periods of startup... | During periods of startup you must... |
|---|---|---------------------------------------|
| 6. Non-emergency, non-black start 2SLB stationary RICE | a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first; ¹ | |
| | b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first; and | |
| | c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary. | |
| 9. Non-emergency, non-black start 4SRB stationary RICE ≤500 HP | a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; ¹ | |
| | b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first; and | |
| | c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary. | |
| 10. Non-emergency, non-black start 4SRB stationary RICE >500 HP | a. Limit concentration of formaldehyde in the stationary RICE exhaust to 2.7 ppmvd at 15 percent O ₂ ; or | |
| | b. Reduce formaldehyde emissions by 76 percent or more. | |

¹Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in Table 2d of this subpart.

b. For E02, the permittee shall comply with the following requirements:

Table 1b to Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed Spark Ignition 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions and Existing Spark Ignition 4SRB Stationary RICE >500 HP Located at an Area Source of HAP Emissions

| For each . . . | You must meet the following operating limitation . . . |
|---|--|
| 1. 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR; or 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O ₂ and using NSCR; or 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 2.7 ppmvd or less at 15 percent O ₂ and using NSCR. | a. Maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial performance test; and b. Maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 750 °F and less than or equal to 1250 °F. |
| 2. 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not using NSCR; or 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O ₂ and not using NSCR; or 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 2.7 ppmvd or less at 15 percent O ₂ and not using NSCR. | Comply with any operating limitations approved by the Administrator |

- c. The permittee shall be in compliance with the general requirements of 40 C.F.R. §63.6605.
- d. For E01 and G1, the permittee shall meet the applicable general provisions specified in Table 8 of 40 C.F.R. 63, Subpart ZZZZ with the exception of §§63.7(b) and (c), 63.8(e), (f)(4), and (f)(6), and 63.9(b)-(e), (g) and (h) which do not apply per 40 C.F.R. §63.6645(a)(5).
- e. For E02 the permittee shall meet the applicable general provisions specified in Table 8 of 40 C.F.R. 63, Subpart ZZZZ.
- f. For E02, the permittee shall demonstrate initial compliance according to 40 C.F.R. §63.6630 and Table 5 of 40 C.F.R. 63, Subpart ZZZZ.
- g. For E02, the permittee shall comply with the continuous compliance requirements of 40 C.F.R. §63.6635.
- h. The permittee shall demonstrate continuous compliance with the limits specified in 4.1.1. according to the methods specified in Table 6 of 40 C.F.R. 63, Subpart ZZZZ.

Table 6 - to Subpart ZZZZ of Part 63—Continuous Compliance with Emission Limitations, Operating Limitations, Work Practices, and Management Practices

| For each . . . | Complying with the requirement to . . . | You must demonstrate continuous compliance by . . . |
|--|---|---|
| 9. existing non-emergency 2SLB stationary RICE located at an area source of HAP; existing non-emergency 4SLB and 4SRB stationary RICE ≤500 HP located at an area source of HAP | a. Work or Management practices | i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. |
| 10. Existing 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year and are not limited use stationary RICE | a. Reduce CO or formaldehyde emissions, or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and using oxidation catalyst or NSCR | i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test. |

[40 C.F.R. §§63.6595(a)(1), 63.6603(a), 63.6605, 63.6630, 63.6635, 63.6640(a), 63.6645(a)(5), , 63.6665, Table 1b, Table 2d, Table 5, Table 6 and Table 8]

4.2. Monitoring Requirements

- 4.2.1. For E01 and G1, the permittee shall comply with the Monitoring, Installation, Collection, Operation and Maintenance Requirements of 40 C.F.R. §§ 63.6625(e), (h), and (j).
[40 C.F.R. §63.6625]
- 4.2.2. For E02, the permittee shall comply with the Monitoring, Installation, Collection, Operation and Maintenance Requirements of 40 C.F.R. §§ 63.6625(a), (b), (h), and (k).
[40 C.F.R. §63.6625]

4.3. Testing Requirements

- 4.3.1. For E02, the permittee shall comply with the testing requirements in 40 C.F.R. §§ 63.6612, 63.6615, and 63.6620 and Tables 3, 4, and 5 to 40 C.F.R. 63, subpart ZZZZ.
[40 C.F.R. §§63.6612, 63.6615, 63.6620, Table 3, Table 4, and Table 5]

4.4. Recordkeeping Requirements

- 4.4.1. For E01 and G1, the permittee shall comply with recordkeeping requirements of 40 C.F.R. §§63.6655(a), (b), (d), and (e).
[40 C.F.R. §63.6655]
- 4.4.2. For E02, the permittee shall comply with recordkeeping requirements of 40 C.F.R. §§63.6655(a), (b), and (d).
[40 C.F.R. §63.6655]

4.5. Reporting Requirements

- 4.5.1. The permittee shall report each instance in which they did not meet each operating limitation in 4.1.1. These instances are deviations from the operating limitations in this subpart. These deviations must be reported according to the requirements in 40 C.F.R. §63.6650.
[40 C.F.R. §63.6640(b)]
- 4.5.2. The permittee shall report each instance in which they did not meet the requirements in Table 8 of this subpart that applies.
[40 C.F.R. §63.6640(e)]
- 4.5.3. For E02, the permittee shall comply with the notification requirements in 40 C.F.R. §63.6645.
[40 C.F.R. §63.6645]
- 4.5.4. For E02, the permittee shall comply with the reporting requirements in 40 C.F.R. §§63.6650(a), (b), (c), (d), (e), and (f).
[40 C.F.R. §63.6650]
- 4.5.5. For emergency situations which interrupt the critical supply of natural gas to the public, and which pose a life threatening circumstance to the customer, the permittee is allowed to temporarily replace failed engine(s) as long as all of the following conditions are met:
- a. The replacement engine(s) is only allowed to operate until repair of the failed engine(s) is complete, but under no circumstance may the replacement engine(s) operate in excess of sixty (60) days;
 - b. Both the replacement engine(s) and the repaired failed engine(s) shall not operate at the same time with the exception of any necessary testing of the repaired engine(s) and this testing may not exceed five (5) hours;
 - c. Potential hourly emissions from the replacement engine(s) are less than or equal to the potential hourly emissions from the engine(s) being replaced;
 - d. Credible performance emission test data verifying the emission rates associated with the operation of the substitute engine shall be submitted to the Director within five (5) days;

- e. The permittee must provide written notification to the Director within five (5) days of the replacement. This notification must contain:
 - i. Information to support the claim of life threatening circumstances to justify applicability of this emergency provision;
 - ii. Identification of the engine(s) being temporarily replaced;
 - iii. The design parameters of the replacement engine(s) including, but not limited to, the design horsepower and emission factors;
 - iv. Projected duration of the replacement engine(s); and
 - v. The appropriate certification by a responsible official.

[45CSR§30-12.7]

4.6. Compliance Plan

- 4.6.1. None

5.0 Flare and Dehydrator [emission point ID(s): FL1]

5.1 Limitations and Standards

- 5.1.1. The emissions from the 0.4 MMBtu/hr dehydrator flare shall not exceed the following maximum hourly (lb/hr) and annual (tpy) emission limits:

| Pollutant | Emission Limit | |
|------------------|----------------|-------|
| | lb/hr | tpy |
| NO _x | 0.027 | 0.12 |
| CO | 0.15 | 0.65 |
| VOC | 0.19 | 0.83 |
| SO ₂ | 0.02 | 0.088 |
| PM ₁₀ | 0.002 | 0.008 |

Compliance with this streamlined condition shall ensure compliance with 45CSR§6-4.1 (Section 5.1.3).

[45CSR13, R13-2347, A.1.]

- 5.1.2. The 0.4 MMBtu/hr NATCO Model SHV-2.0L dehydrator flare shall be constructed, operated, and maintained in accordance with all information submitted in Permit Application R13-2347 and any amendments thereto. The Director may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to.

[45CSR13, R13-2347, A.2., C.3.]

- 5.1.3. The particulate matter discharged from open flare shall not exceed 0.11 LB/hr.

[45CSR§6-4.1., 45CSR13, R13-2347, B.2.]

- 5.1.4. The emission of particles of unburned or partially burned refuse or ash from the flare which are large enough to be individually distinguished in the open air shall not be allowed or permitted.

[45CSR§6-4.5.]

- 5.1.5. The flare, including all associated equipment and grounds, shall be designed, operated and maintained so as to prevent the emission of objectionable odors.

[45CSR§6-4.6., 45CSR13, R13-2347, B.2.]

- 5.1.6. No person shall cause, suffer, allow or permit the emission into the open air from any source operation an in-stack sulfur dioxide concentration exceeding 2,000 parts per million by volume from existing source operations, except as provided in 45CSR§10-4.1.a through 45CSR§10-4.1.e.

[45CSR§10-4.1]

- 5.1.7. No person shall cause, suffer, allow or permit the combustion of any refinery process gas stream or any other process gas stream that contains hydrogen sulfide in a concentration greater than 50 grains per 100 cubic feet of gas except in the case of a person operating in compliance with an emission control and mitigation plan approved by the Director and U. S. EPA. In certain cases very small units may be considered exempt from this requirement if, in the opinion of the Director, compliance would be economically unreasonable and if the contribution of the unit to the surrounding air quality could be considered negligible.

[45CSR§10-5.1]

Flare FLLP1 Requirements - Federally and Practically Enforceable

5.1.8. Potential HAP emissions from the entire facility shall not exceed 10 TPY of any single HAP or 25 TPY of any combination of HAPs. For purposes of determining potential HAP emissions at transmission and storage facilities, the methods specified in 40 C.F.R. Part 63, Subpart HHH shall be used unless HAPs are specifically limited by a federally enforceable permit condition. For purposes of determining potential HAP emissions at production-related facilities, the methods specified in 40 C.F.R. Part 63, Subpart HH (i.e. excluding compressor engines from HAP PTE) shall be used unless HAPs are specifically limited by a federally enforceable permit condition.

[45CSR§30-12.7]

- 5.1.9. Flare, (FLLP1) shall be designed and operated in accordance with the following:
- Flares shall be steam-assisted, air-assisted, or non-assisted.
 - Flares shall be operated at all times when emissions may be vented to them.
 - Flares shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. *This streamlined limit of no visible emissions will ensure compliance with 45CSR§6-4.3.* During the exception period when visible emissions are allowed, the visible emissions shall not exceed 20% opacity except for periods of start-up as outlined in 45CSR§6-4.4. (i.e., less than forty (40%) percent opacity, for a period or periods aggregating no more than eight (8) minutes per start-up).
 - Flares shall be operated with a flame present at all times.
 - Flares shall be used only with the net heating value of the gas being combusted at 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted at 7.45 MJ/scm (200 Btu/scf) or greater if the flare is non-assisted. The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K \sum_{i=1}^N C_i H_i$$

Where:

H_T = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of off gas is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C.

K = Constant = 1.740×10^{-7} [1/ppmv][g-mole/scm][MJ/kcal].
where the standard temperature for (g-mole/scm) is 20 °C.

C_i = Concentration of sample component i in ppmv on a wet basis, which may be measured for organics by 40 C.F.R. Part 60 Appendix A, Test Method 18, but is not required to be measured using Method 18 (unless designated by the Director).

H_i = Net heat of combustion of sample component i, kcal/g-mole at 25 °C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76 or 88 or D4809-95 if published values are not available or cannot be calculated.

N = Number of sample components.

- Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity less than 18.3 m/sec (60 ft/sec). The actual exit velocity of a flare shall be determined by dividing by the volumetric flow rate of gas being combusted (in units of emission standard temperature and pressure),

by the unobstructed (free) cross-sectional area of the flare tip, which may be determined by 40 C.F.R. Part 60 Appendix A, Test Method 2, 2A, 2C, or 2D in to, as appropriate, but is not required to be determined using these Methods (unless designated by the Director).

[45CSR§30-12.7, 45CSR§§6-4.3 and 4.4, 45CSR13, R13-2347, B.2.]

5.1.10. Flares are not required to conduct a flare compliance assessment for concentration of sample (i.e. 40 C.F.R. Part 60 Appendix A, Method 18) and tip velocity (i.e. 40 C.F.R. Part 60 Appendix A, Method 2), until such time as the Director requests a flare compliance assessment to be conducted in accordance with section 5.3.3, but the permittee is required to conduct a flare design evaluation in accordance with section 5.3.2.
[45CSR§30-5.1.c.]

5.1.11. The owner or operator of an affected area source that is not located in an Urban-1 county, as defined in §63.761, the construction or reconstruction of which commences on or after July 8, 2005, shall achieve compliance with the provisions of this subpart immediately upon initial startup or January 3, 2007, whichever date is later.
[40CFR§63.760(f)(6)] [FL1]

5.1.12. The following general standards from 40 C.F.R. § 63.764 shall be followed (note: the following section numbers match those in 40 C.F.R. § 63.764):

- (a) Table 2 of the Part 63 Subpart HH specifies the provisions of subpart A (General Provisions) of Part 63 that apply and those that do not apply to owners and operators of affected sources subject to this subpart.
 - (b) All reports required under this subpart shall be sent to the Administrator at the appropriate address listed in §63.13. Reports may be submitted on electronic media.
 - (d) Except as specified in paragraph (e)(1) of this requirement, the owner or operator of an affected source located at an existing or new area source of HAP emissions shall comply with the applicable standards specified in paragraph (d) of this section.
- (2) Each owner or operator of an area source not located in a UA plus offset and UC boundary (as defined in §63.761) shall comply with paragraphs (d)(2)(i) through (iii) of this requirement.
- (i) Determine the optimum glycol circulation rate using the following equation:

$$L_{OPT} = 1.15 * 3.0 \frac{\text{gal TEG}}{\text{lb H}_2\text{O}} * \left(\frac{F * (I - O)}{24 \text{ hr/day}} \right)$$

Where:

L_{OPT} = Optimal circulation rate, gal/hr.

F = Gas flowrate (MMSCF/D).

I = Inlet water content (lb/MMSCF).

O = Outlet water content (lb/MMSCF).

3.0 = The industry accepted rule of thumb for a TEG-to water ratio (gal TEG/lb H₂O).

1.15 = Adjustment factor included for a margin of safety.

- (ii) Operate the TEG dehydration unit such that the actual glycol circulation rate does not exceed the optimum glycol circulation rate determined in accordance with paragraph (d)(2)(i) of this section. If the TEG dehydration unit is unable to meet the sales gas specification for moisture content using the glycol circulation rate determined in accordance with paragraph (d)(2)(i), the owner or operator must calculate an alternate circulation rate using GRI-GLYCalc™, Version 3.0 or higher. The owner or operator must document why the TEG dehydration unit must be operated using the alternate circulation rate and submit this documentation with the initial notification in accordance with §63.775(c)(7).
 - (iii) Maintain a record of the determination specified in paragraph (d)(2)(ii) in accordance with the requirements in §63.774(f) and submit the Initial Notification in accordance with the requirements in §63.775(c)(7). If operating conditions change and a modification to the optimum glycol circulation rate is required, the owner or operator shall prepare a new determination in accordance with paragraph (d)(2)(i) or (ii) of this section and submit the information specified under §63.775(c)(7)(ii) through (v).
- (e) *Exemptions.* (1) The owner or operator is exempt from the requirements of paragraph (d) of this section if the criteria listed in paragraph (e)(1)(ii) of this section are met, except that the records of the determination of these criteria must be maintained as required in §63.774(d)(1).
- (ii) The actual average emissions of benzene from the glycol dehydration unit process vent to the atmosphere are less than 0.90 megagram per year (1 ton/yr), as determined by the procedures specified in §63.772(b)(2) of this subpart.

[40CFR§63.764(a), (b), (d), (e)] [FL1]

- 5.1.13. If the annual emissions of benzene from the dehydration unit ever equals or exceeds 0.90 megagram per year (1 tpy) as calculated per §63.772(b)(2) (condition 5.3.5), the permittee shall comply with section d(2)(i) through (iii) of §63.764 (condition 5.1.12).

[45CSR§30-5.1.c] [FL1]

5.2. Monitoring Requirements

- 5.2.1. In order to demonstrate compliance with the continuous flame requirements of Section 5.1.9 (d) the permittee shall monitor the presence or absence of a flare pilot flame using a thermocouple or any other equivalent device.

[45CSR§30-5.1.c.]

- 5.2.2. Visual emission checks of each emission point specified shall be conducted monthly. If during these checks or at any other time visible emissions are observed at any emission point, compliance shall be determined by conducting tests in accordance with Method 9 of 40 C.F.R. 60, Appendix A. Records shall be maintained on site or at a reasonably available location stating the date and time of each visible emission check and whether visible emissions were observed. Visible emission checks shall not be required during start-ups, shut-downs and malfunctions.

[45CSR§30-5.1.c.]

- 5.2.3. In order to demonstrate compliance with the area source status, claimed within 5.1.8, 5.1.11, and 5.1.12, as well as the 1 ton per year benzene exemption provided under 5.1.12(e)(1)(ii) using GRI-GLYCalc V3 or

higher, the dehydration system must be accurately defined by monitoring and recording actual operating parameters associated with the dehydration system. These parameters shall be measured periodically, with the exception of wet gas composition, in order to define annual average values or, if monitoring is not practical, some parameters may be assigned default values as listed below. Periodically, shall be interpreted as sufficient enough to reflect annual variation and, therefore, this term is operating parameter and site dependent.

The WV Division of Air Quality requires the following actual operating parameters be measured or assumed to equal the default values listed below in order to satisfy this monitoring requirement when using the Gas Analysis and Process Data, GLYCalc emission modeling method:

- Natural Gas Flowrate:
 - number of days operated per year,
 - annual daily average (MMscf/day), and
 - maximum design capacity (MMscf/day)
- Absorber temperature and pressure
- Lean glycol circulation rate
- Glycol pump type
- Flash tank temperature and pressure, if applicable
- Stripping Gas flow rate, if applicable
- Wet gas composition (upstream of the absorber – dehydration column) Sampled in accordance with GPA method 2166 and analyzed consistent with GPA extended method 2286 as well as the procedures presented in the GRI-GLYCalc Technical Reference User Manual and Handbook V4.

The following operating parameter(s) may be assigned default values when using GRI-GLYCalc:

- Dry Gas water content at a point directly after exiting the dehydration column and before any additional separation points or assume pipeline quality at 7 lb H₂O / MMscf.
- Lean glycol water content if not directly measured may use the default value of 1.5 % water as established by GRI.
- Lean glycol circulation rate may be estimated using the recirculation ratio of 3 gal TEG / lb H₂O removed.

[45CSR§30-5.1.c][FL1]

5.3. Testing Requirements

- 5.3.1. In order to demonstrate compliance with the flare opacity requirements of Section 5.1.9 (c) the permittee shall conduct a 40 C.F.R. Part 60 Appendix A, Method 22 opacity test for at least two hours. This test shall demonstrate no visible emissions are observed for more than a total of 5 minutes during any 2 consecutive hour period using 40 C.F.R. Part 60 Appendix A, Method 22. The permittee shall conduct this test within thirty (30) days of permit issuance or initial startup whichever is later and a second opacity test within six months from the time the permit expires. The visible emission checks shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40 C.F.R. Part 60 Appendix A, Method 22 or from the lecture portion of 40 C.F.R. Part 60 Appendix A, Method 9 certification course.

[45CSR§30-5.1.c.]

- 5.3.2. In order to demonstrate compliance with the flare design criteria requirements of Section 5.1.9, the permittee shall conduct a flare design evaluation demonstrating compliance with the criteria set forth by Section 5.1.9. The flare design evaluation shall include, net heat value calculations, exit (tip) velocity calculations, all supporting concentration calculations, and other related information requested. The permittee may elect to demonstrate compliance with the flare design criteria requirements of section 5.1.9 by complying with the compliance assessment testing requirements of Section 5.3.3.

[45CSR§30-5.1.c.]

- 5.3.3. The Director may require the permittee to conduct a flare compliance assessment to demonstrate compliance with the flare requirements of Section 5.1.9 and the flare design evaluation. This compliance assessment testing shall be conducted in accordance with 40 C.F.R. Part 60 Appendix A, Test Method 18 for organics and 40 C.F.R. Part 60 Appendix A, Test Method 2, 2A, 2C, or 2D, as appropriate, or other equivalent testing approved in writing by the Director. Also, 40 C.F.R. Part 60 Appendix A, Test Method 18 may require the permittee to conduct 40 C.F.R. Part 60 Appendix A, Test Method 4 in conjunction with 40 C.F.R. Part 60 Appendix A, Test Method 18.

[45CSR§30-5.1.c.]

- 5.3.4. Within the 3rd year of this permit term, the permittee shall determine the composition of the wet natural gas by sampling in accordance with GPA Method 2166 and analyzing according to extended GPA Method 2286 analysis as specified in the GRI-GLYCalc V4 Technical Reference User Manual and Handbook. As specified in the handbook, the permittee shall sample the wet gas stream at a location prior to the glycol dehydration contactor column, but after any type of separation device, in accordance with GPA method 2166. The permittee may utilize other equivalent methods provided they are approved in advance by DAQ as part of a testing protocol. If alternative methods are proposed, a test protocol shall be submitted for approval no later than 60 days before the scheduled test date.

[45CSR§30-5.1.c] [FL1]

- 5.3.5. The following testing and compliance provisions of Part 63 Subpart HH *National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities* are applicable to the facility:

§ 63.772 Test methods, compliance procedures, and compliance demonstrations (note: the following section numbers match those in 40 C.F.R. § 63.772).

(b) Determination of glycol dehydration unit flowrate or benzene emissions. The procedures of this paragraph shall be used by an owner or operator to determine glycol dehydration unit natural gas flowrate or benzene emissions to meet the criteria for an exemption from control requirements under §63.764(e)(1) (requirement 5.1.12).

(2) The determination of actual average benzene emissions from a glycol dehydration unit shall be made using the procedures of paragraph (b)(2)(i) of this requirement. Emissions shall be determined either uncontrolled, or with federally enforceable controls in place.

(i) The owner or operator shall determine actual average benzene 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.

Compliance with this monitoring and testing requirement shall be streamlined by demonstrating compliance with the monitoring specified within 5.2.13 and the testing provision of 5.3.4.

[40CFR§63.772 (b)(2)(i)] [FL1]

5.4. Recordkeeping Requirements

- 5.4.1. For the purpose of demonstrating compliance with Section 5.1.9. (d) and 5.2.1, the permittee shall maintain records of the times and duration of all periods which the pilot flame was absent. 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.
[45CSR§30-5.1.c.]
- 5.4.2. For the purpose of demonstrating compliance with Sections 5.1.9 and 5.3.2, the permittee shall maintain a record of the flare design evaluation. The flare design evaluation shall include, net heat value calculations, exit (tip) velocity calculations, all supporting concentration calculations, and other information requested. 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.
[45CSR§30-5.1.c.]
- 5.4.3. For the purpose of demonstrating compliance with the requirements set forth in Sections 5.1.9 and 5.3.3, the permittee shall maintain records of testing conducted in accordance with 5.3.3. 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.
[45CSR§30-5.1.c.]
- 5.4.4. The permittee shall document and maintain the corresponding records specified by the on-going monitoring requirements of 5.2 and testing requirements of 5.3. 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.
[45CSR§30-5.1.c.]
- 5.4.5. For the purpose of demonstrating compliance with section 5.1.9.c, the permittee shall maintain records of the visible emission opacity tests conducted per Sections 5.2.2 and 5.3.1. 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.
[45CSR§30-5.1.c.]
- 5.4.6. For the purpose of demonstrating compliance with Sections 5.1.8, the permittee shall maintain a record of all annual potential to emit (PTE) HAP calculations for the entire facility. These records shall include the natural gas compressor engines and ancillary equipment. 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.
[45CSR§30-5.1.c.]
- 5.4.7. For the purpose of documenting compliance with the emission limitations, HAP major source thresholds, as well as the 1 ton per year benzene exemption, the permittee shall maintain records of all monitoring data, wet gas sampling, and annual GLYCalc emission estimates.
[45CSR§30-5.1.c] [FL1]

5.5. Reporting Requirements

- 5.5.1. Any and all malfunctions of the 0.4 MMBtu/hr dehydrator flare shall be documented in writing, and certified by a responsible official of Energy Corporation of America. The following information must be documented for each malfunction:
- a. The equipment involved in the malfunction and the associated cause.
 - b. Steps taken to correct the malfunction.
 - c. The steps taken to minimize the emissions during the malfunction.
 - d. The duration of the malfunction.
 - e. The increase in emissions during the malfunction.
 - f. Steps taken to prevent a similar malfunction in the future.

These records shall be maintained on site for the duration of the operation, and shall be made available to the Director or a duly authorized representative of the Director upon request.

[45CSR13, R13-2347, B.3.]

- 5.5.2. For demonstrating compliance with section 5.3.3, the permittee shall submit a testing protocol thirty (30) days prior to testing and shall submit a notification of the testing date fifteen (15) days prior to testing. Also, the permittee shall submit the testing results within sixty (60) days of testing and provide all supporting calculations and testing data.
[45CSR§30-5.1.c.]
- 5.5.3. Any violation(s) of the allowable visible emission requirement for any emission source discovered during observations using 40 C.F.R. 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 within ten (10) calendar days of the occurrence and shall include, at a minimum, 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.
[45CSR§30-5.1.c.]
- 5.5.4. Any violation(s) of the flare design and operation criteria in Section 5.1.9 shall be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days.
[45CSR§30-5.1.c.]
- 5.5.5. The permittee shall submit by March 31st of the following year, an emission summary for the dehydration unit (FL1), which incorporates the wet gas testing results, required by 5.3.4. The permittee shall also supply a copy of the most recent report within the facility's subsequent Title V renewal application. These reports shall include an actual annual average emission estimate for the calendar year of the sample, modeled using GLYCalc V3 or higher software, which incorporates site specific parameters measured in accordance with 5.2.3. The permittee shall also supply all supporting documentation where site specific operating parameters are tabulated to define the annual average values. The report shall also incorporate a copy of the lab analysis obtained from the wet gas testing as well as a description of how and where the sample was taken. The report shall include a reference to all sampling and analytical methods utilized. Additionally, the permittee shall identify where the compressor station is located with respect to a custody transfer point,

which is referenced within 40 C.F.R 63, subpart HH as the point where the gas enters into a natural gas transmission and/or storage pipeline. This report shall be signed by a responsible official upon submittal.
[45CSR§30-5.1.c]

5.6. Compliance Plan

5.6.1. None