West Virginia Department of Environmental Protection
Division of Air Quality

Earl Ray Tomblin
Governor

Randy C. Huffman
Cabinet Secretary

Permit to Construct

R13-3095

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45 C.S.R. 13 — Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation. The permittee identified at the facility listed below is authorized to construct the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Issued to:

EQT Gathering
Pandora Station
017-00058

John A. Benedict
Director

Issued: DRAFT • Effective: DRAFT

Facility Location:	West Union, Doddridge County, West Virginia
Mailing Address:	625 Liberty Ave., Suite 1700 Pittsburgh, PA 15222
Facility Description:	Natural Gas Gathering Facility
NAICS Codes:	211111
UTM Coordinates:	525.32 km Easting • 4,357.16 km Northing • Zone 17
Permit Type:	Construction

Description of Change: Construction of a 240 mmscfd natural gas gathering facility.

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.

The source is not subject to 45CSR30.

Table of Contents

1.0. Emission Units 3

2.0. General Conditions 4
2.1. Definitions 4
2.2. Acronyms 4
2.3. Authority 5
2.4. Term and Renewal 5
2.5. Duty to Comply 5
2.6. Duty to Provide Information 5
2.7. Duty to Supplement and Correct Information 6
2.8. Administrative Permit Update 6
2.9. Permit Modification 6
2.10. Major Permit Modification 6
2.11. Inspection and Entry 6
2.12. Emergency 6
2.13. Need to Halt or Reduce Activity Not a Defense 7
2.14. Suspension of Activities 7
2.15. Property Rights 7
2.16. Severability 8
2.17. Transferability 8
2.18. Notification Requirements 8
2.19. Credible Evidence 8

3.0. Facility-Wide Requirements 9
3.1. Limitations and Standards 9
3.2. Monitoring Requirements 9
3.3. Testing Requirements 9
3.4. Recordkeeping Requirements 11
3.5. Reporting Requirements 11

4.0. Source-Specific Requirements 13
4.1. Limitations and Standards 13
4.2. Monitoring Requirements 18
4.3. Testing Requirements 21
4.4. Recordkeeping Requirements 21
4.5. Reporting Requirements 22

CERTIFICATION OF DATA ACCURACY 23

1.0 Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
S1	E1	Compressor Engine #1	2013	4,735 hp	Cat. Ox. (C1)
S2	E2	Compressor Engine #2	2013	4,735 hp	Cat. Ox.(C2)
S3	E3	Compressor Engine #3	2013	2,370 hp	Cat. Ox.(C3)
S4	E4	Compressor Engine #4	2013	2,370 hp	Cat. Ox.(C4)
S5	E5	Dehydration Unit	2013	120 MMscfd	Vapor combustor (C5)
S6	E6	Dehydration Unit Reboiler	2013	2.31 MMbtu/hr	N
S7	E7	Dehydration Unit	2013	120 MMscfd	Vapor combustor (C6)
S8	E8	Dehydration Unit Reboiler	2013	2.31 MMbtu/hr	N
S9	E9	Micro Turbine Generator #1	2013	65 KW	N
S10	E10	Micro Turbine Generator #2	2013	65 KW	N
S11	E11	Micro Turbine Generator #3	2013	65 KW	N
S12	E12	Micro Turbine Generator #4	2013	65 KW	N
S13	E13	Micro Turbine Generator #5	2013	65 KW	N
S14	E14	Micro Turbine Generator #6	2013	65 KW	N
S15	E15	Micro Turbine Generator #7	2013	65 KW	N
S16	E16	Micro Turbine Generator #8	2013	65 KW	N
S17	E17	Fuel Gas Heater	2013	0.77 MMbtu/hr	N
T001	E18	Produced Fluids Tank	2013	8,820 gal	N
T002	E19	Produced Fluids Tank	2013	8,820 gal	N
T003	E20	Lube Oil Tank	2013	2,000 gal	N
T004	E21	Lube Oil Tank	2013	2,000 gal	N
T005	E22	Lube Oil Tank	2013	4,000 gal	N
T006	E23	MEG Tank	2013	2,000 gal	N
T007	E24	MEG Tank	2013	2,000 gal	N
T008	E25	TEG Tank	2013	2,000 gal	N
T009	E26	TEG Tank	2013	2,000 gal	N

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 (45 CSR § 30-2.12.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.

2.2. Acronyms

CAAA	Clean Air Act Amendments
CBI	Confidential Business Information
CEM	Continuous Emission Monitor
CES	Certified Emission Statement
C.F.R. *or* CFR	Code of Federal Regulations
CO	Carbon Monoxide
C.S.R. *or* CSR	Codes of State Rules
DAQ	Division of Air Quality
DEP	Department of Environmental Protection
dscm	Dry Standard Cubic Meter
FOIA	Freedom of Information Act
HAP	Hazardous Air Pollutant
HON	Hazardous Organic NESHAP
HP	Horsepower
lbs/hr	Pounds per Hour
LDAR	Leak Detection and Repair
M	Thousand
MACT	Maximum Achievable Control Technology
MDHI	Maximum Design Heat Input
MM	Million
MMBtu/hr *or* mmbtu/hr	Million British Thermal Units per Hour
MMCF/hr *or* mmcf/hr	Million Cubic Feet per Hour
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAPS	National Emissions Standards for Hazardous Air Pollutants
NO_x	Nitrogen Oxides
NSPS	New Source Performance Standards
PM	Particulate Matter
$PM_{2.5}$	Particulate Matter less than 2.5µm in diameter
PM_{10}	Particulate Matter less than 10µm in diameter
Ppb	Pounds per Batch
pph	Pounds per Hour
ppm	Parts per Million
Ppmv or ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration
psi	Pounds per Square Inch
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
TAP	Toxic Air Pollutant
TPY	Tons per Year
TRS	Total Reduced Sulfur
TSP	Total Suspended Particulate
USEPA	United States Environmental Protection Agency
UTM	Universal Transverse Mercator
VEE	Visual Emissions Evaluation
VOC	Volatile Organic Compounds
VOL	Volatile Organic Liquids

2.3. Authority

This permit is issued in accordance with West Virginia Air Pollution Control Law W.Va. Code §§22-5-1 et seq. and the following Legislative Rules promulgated thereunder:

2.3.1. 45CSR13 – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation;*

2.4. Term and Renewal

2.4.1. This permit shall remain valid, continuous and in effect unless it is revised, suspended, revoked or otherwise changed under an applicable provision of 45CSR13 or any applicable legislative rule.

2.5. Duty to Comply

2.5.1. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Application R13-3095 and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to;
[45CSR§§13-5.11 and 13-10.3]

2.5.2. 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;

2.5.3. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7;

2.5.4. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses and/or approvals from other agencies; i.e., local, state and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

2.6. Duty to Provide Information

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 administratively updating, modifying, revoking or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records 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.

2.7. Duty to Supplement and Correct Information

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.

2.8. Administrative Update

The permittee may request an administrative update to this permit as defined in and according to the procedures specified in 45CSR13.
[45CSR§13-4]

2.9. Permit Modification

The permittee may request a minor modification to this permit as defined in and according to the procedures specified in 45CSR13.
[45CSR§13-5.4.]

2.10. Major Permit Modification

The permittee may request a major modification as defined in and according to the procedures specified in 45CSR14 or 45CSR19, as appropriate.
[45CSR§13-5.1]

2.11. Inspection and Entry

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.

2.12. Emergency

2.12.1. An "emergency" means any situation arising from sudden and reasonable 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.

2.12.2. 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 Section 2.12.3 are not met.

2.12.3. 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. 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 must contain a detailed description of the emergency, any steps taken to mitigate emission, and corrective actions taken.

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

2.12.5. The provisions of this section are in addition to any emergency or upset provision contained in any applicable requirement.

2.13. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it should 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.

2.14. Suspension of Activities

In the event the permittee should deem it necessary to suspend, for a period in excess of sixty (60) consecutive calendar days, the operations authorized by this permit, the permittee shall notify the Secretary, in writing, within two (2) calendar weeks of the passing of the sixtieth (60) day of the suspension period.

2.15. Property Rights

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

2.16. Severability

The provisions of this permit are severable and should any provision(s) be declared by a court of competent jurisdiction to be invalid or unenforceable, all other provisions shall remain in full force and effect.

2.17. Transferability

This permit is transferable in accordance with the requirements outlined in Section 10.1 of 45CSR13. **[45CSR§13-10.1]**

2.18. Notification Requirements

The permittee shall notify the Secretary, in writing, no later than thirty (30) calendar days after the actual startup of the operations authorized under this permit.

2.19. Credible Evidence

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 defense otherwise available to the permittee including, but not limited to, any challenge to the credible evidence rule in the context of any future proceeding.

3.0. Facility-Wide Requirements

3.1. Limitations and Standards

3.1.1. **Open burning.** The open burning of refuse by any person, firm, corporation, association or public agency 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, suffer, allow or permit 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.
[40CFR§61.145(b) and 45CSR§34]

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. **Permanent shutdown.** A source which has not operated at least 500 hours in one 12-month period within the previous five (5) year time period may be considered permanently shutdown, unless such source can provide to the Secretary, with reasonable specificity, information to the contrary. All permits may be modified or revoked and/or reapplication or application for new permits may be required for any source determined to be permanently shutdown.
[45CSR§13-10.5.]

3.1.6. **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 45 C.S.R. 11.
[45CSR§11-5.2.]

3.2. Monitoring Requirements

[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 in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4 or 45CSR§13-5.4 as 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. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4 or 45CSR§13-5.4 as applicable.

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 sixty (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; and,
    3. A statement of compliance or noncompliance with each permit or rule condition.

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

3.4. Recordkeeping Requirements

3.4.1. **Retention of records.** The permittee shall maintain records of all information (including monitoring data, support information, reports and notifications) required by this permit recorded in a form suitable and readily available for expeditious inspection and review. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation. The files shall be maintained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. Where appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.

3.4.2. **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§4. *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.

3.5.2. **Confidential information.** A permittee may request confidential treatment for the submission of reporting required by this permit pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.

3.5.3. **Correspondence.** 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 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:	**If to the USEPA:**
Director WVDEP Division of Air Quality 601 57th Street, SE Charleston, WV 25304-2345	Associate Director Office of Air Enforcement and Compliance Assistance (3AP20) U. S. Environmental Protection Agency Region III 1650 Arch Street Philadelphia, PA 19103-2029

3.5.4. **Operating Fee.**

3.5.4.1. In accordance with 45CSR22 – Air Quality Management Fee Program, the permittee shall not operate nor cause to operate the permitted facility or other associated facilities on the same or contiguous sites comprising the plant without first obtaining and having in current effect a Certificate to Operate (CTO). Such Certificate to Operate (CTO) shall be renewed annually, shall be maintained on the premises for which the certificate has been issued, and shall be made immediately available for inspection by the Secretary or his/her duly authorized representative.

3.5.4.2. In accordance with 45CSR22 – Air Quality Management Fee Program, enclosed with this permit is an Application for Certificate to Operate (CTO). The CTO will cover the time period beginning with the date of initial startup through the following June 30. Said application and the appropriate fee shall be submitted to this office prior to the date of initial startup. For any startup date other than July 1, the permittee shall pay a fee or prorated fee in accordance with Section 4.5 of 45CSR22. A copy of this schedule may be found on the reverse side of the CTO application.

3.5.5. **Emission inventory.** At such time(s) as the Secretary may designate, the permittee herein shall prepare and submit an emission inventory for the previous year, addressing the emissions from the facility and/or process(es) authorized herein, in accordance with the emission inventory submittal requirements of the Division of Air Quality. After the initial submittal, the Secretary may, based upon the type and quantity of the pollutants emitted, establish a frequency other than on an annual basis.

4.0. Source-Specific Requirements

4.1. Limitations and Standards

4.1.1. Only those emission units/sources as identified in Table 1.0, with the exception of any *de minimis* sources as identified under Table 45-13B of 45CSR13, are authorized at the permitted facility. In accordance with the information filed in Permit Application R13-3095, the emission units/sources identified under Table 1.0 of this permit shall be installed, maintained, and operated so as to minimize any fugitive escape of pollutants, shall not exceed the listed maximum design capacities, shall use the specified control devices, and comply with any other information provided under Table 1.0.

4.1.2. The compressor engines, identified as S1 through S4, shall meet the following requirements:

a. Units S1 and S2 shall be Caterpillar 3616 LE 4,735 hp compressor engines. Units S3 and S4 shall be Caterpillar 3608 LE 2,370 hp engines. All engines shall only be fired by natural gas;

b. At all times each engine is in operation, a catalytic oxidizer shall be used for emissions control;

c. The maximum emissions from each engine, as controlled by the catalytic oxidizer specified under 4.1.2(b), shall not exceed the limits given in the following table:

Pollutant	Caterpillar 3616LE S1		Caterpillar 3616LE S2		Caterpillar 3608 LE S3		Caterpillar 3608 LE S4	
	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)
CO	2.87	12.57	2.87	12.57	1.44	6.29	1.44	6.29
NO_X	5.22	22.86	5.22	22.86	2.61	11.44	2.61	11.44
$PM/PM_{10}/PM_{2.5}$ (1)	0.36	1.56	0.36	1.56	0.18	0.78	0.18	0.78
PM (1)	0.36	1.56	0.36	1.56	0.18	0.78	0.18	0.78
VOCs	2.24	9.83	2.24	9.83	1.12	4.92	1.12	4.92
Formaldehyde	0.27	1.19	0.27	1.19	0.14	0.60	0.14	0.60
CH_4	--	245	--	245.00	--	123	--	123
N_2O	--	0.03	--	0.03	--	0.02	--	0.02
CO_2	--	20,072	--	20,072	--	10,092	--	10,092
CO_2e	--	25,229	--	25,229	--	12,674	--	12,674

(1) Includes condensables.

d. As the annual emissions are based on 8,760 hours of operation, there is no annual limit on hours of operation or natural gas combusted on an annual basis;

e. **40 CFR 60, Subpart JJJJ**
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 this subpart for their stationary SI ICE.
[40 CFR §60.4233(e)]

f. **40 CFR 60, Subpart OOOO**
You must comply with the standards in paragraphs (a) through (d) of this section for each reciprocating compressor affected facility.

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

(i) 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.
[40 CFR §60.5385(a)(1)]

(ii) 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.
[40 CFR §60.5385(a)(2)]

g. **43 CFR 63, Subpart ZZZZ**
An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.
[40 CFR §63.6590(c)]

(1) A new or reconstructed stationary RICE located at an area source;
[40 CFR §63.6590(c)(1)]

4.1.3. The Mircroturbines, identified as S9 through S16, shall meet the following requirements:

a. Each unit shall be a Capstone C65 NG Standard 65kWe (output) Microturbine and shall only be fired by natural gas;

b. The maximum emissions from each Microturbine shall not exceed the limits given in the following table:

Pollutant	lb/hr	TPY
CO	0.08	0.36
NO_x	0.03	0.13
CO_2e	--	434.00

c. As the annual emissions are based on 8,760 hours of operation, there are no annual limits on

hours of operation or natural gas combusted on an annual basis.

4.1.4. The maximum wet natural gas throughput to each of the two Glycol Dehydration Unit shall not exceed 120 MMscf/day or 43,800 MMscf/year.

4.1.5. The Glycol Deydration Units shall meet the following requirements:

a. The maximum emissions from each of the Glycol Dehydrator Regeneration Still Vents and flash tanks, as emitted after combustion at the vapor combustors (5C and 6C), shall not exceed the limits given in the following table:

Pollutant	**Hourly (lb/hr)**	**Annual (ton/yr)**
VOC(1)	2.25	9.87
Hexane(1)	0.04	0.16
Benzene(1)	0.09	0.41
Toluene(1)	0.22	0.96
Ethyl-benzene(1)	0.41	1.80
Xylene(1)	0.35	1.53
Total HAPs (1)	1.14	4.98
GHG (CO_{2e})	--	163.03

(1) Emissions based on GLYCalc Version 4.0 using wet gas throughputs as limited under 4.1.4.

b. **43 CFR 63, Subpart HH**
Exemptions. The owner or operator of an area source is exempt from the requirements of paragraph (d) of this section if the criteria listed in paragraph (e)(1)(i) or (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).
[40 CFR §63.764(e)(1)]

(1) The actual average emissions of benzene from the glycol dehydration unit process vent to the atmosphere are less than 0.90 megagram per year, as determined by the procedures specified in § 63.772(b)(2) of this subpart.
[40 CFR §63.764(e)(1)(ii)]

4.1.6. Each of the two Glycol Dehydrator Reboilers shall meet the following requirements:

a. The MDHI shall not exceed 2.31 mmBtu/hr and the unit shall only be fired by natural gas;

b. The maximum emissions from each of the Reboiler combustion exhausts shall not exceed the limits given in the following table;

Pollutant	PPH(1)	TPY
CO	0.08	0.34
NO_x	0.20	0.89
CO_{2e}	--	1183.00

c. As the annual emissions are based on 8,760 hours of operation, there is no annual limit on hours of operation or natural gas combusted on an annual basis.

d. 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.
[40CSR§2-3.1]

4.1.7 The Vapor Combustors, identified as 5C and 6C, shall operate according to the following requirements:

a. The maximum capacity of each combustor shall not exceed 12 mmBtu/hr;

b. The combustors shall be designed, operated, and maintained according to good engineering practices or manufacturing recommendations so as to achieve, at a minimum, a hydrocarbon combustion rate of 95.0%;

c. The combustors shall be operated at all times when emissions may be vented to it.

d. The combustors 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.

e. The combustor shall be operated with a pilot flame present at all times. The presence of a pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.

f. The permittee shall not cause, suffer, allow or permit particulate matter to be discharged from the vapor combustor into the open air in excess of the quantity determined by use of the following formula:

Emissions (lb/hr) = F x Incinerator Capacity (tons/hr)

Where, the factor, F, is as indicated in Table I below:

Table I: Factor, F, for Determining Maximum Allowable Particulate Emissions

Incinerator Capacity	Factor F
A. Less than 15,000 lbs/hr	5.43
B. 15,000 lbs/hr or greater	2.72

[45CSR§6-4.1]

4.1.8. The use of the catalytic converters, identified as 1C through 34, shall be in accordance with the following requirements:

a. The automatic air/fuel ratio controller or closed-loop automatic feedback controller shall provide a warning or indication to the operator and/or be interlocked with the engine ignition system to cease engine operation in case of a masking, poisoning or overrich air/fuel ratio situation which results in performance degradation or failure of the catalyst element;

b. 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. The permittee shall maintain these records for five (5) years;

c. 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; and

d. 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.

4.1.9. Use of storage tanks, identified as T001 through T009, shall be in accordance with the following:

a. Tank size and material stored shall be limited as specified under Table 1.0 of this permit; and

b. All emissions (working/breathing/flashing) generated in storage tanks T001 and T002 shall be routed to the vapor combustor for control.

c. VOC emissions (working/breathing/flashing) generated in the storage tanks T001 and T002, as emitted after combustion at the vapor combustors (5C and 6C), shall not exceed 1.28 TPY (combined).

4.1.10. The Truck Loading operations shall be in accordance with the following requirements:

a. All trucks shall be loaded using the submerged-fill method; and

b. The maximum loadout of liquids from the storage tanks shall not exceed 20,000 gallons/year.

4.1.11. The permittee shall not exceed the number and type of components (valves, pump seals, connectors, etc.) in gas/vapor or light liquid (as applicable) listed in Attachment N of Permit Application R13-3095.

4.1.12. The Company shall install, maintain, and operate all above-ground piping, valves, pumps, etc. that service lines in the transport of potential sources of regulated air pollutants to prevent any substantive fugitive escape of regulated air pollutants. Any above-ground piping, valves, pumps, etc. that shows signs of excess wear and that have a reasonable potential for substantive fugitive emissions of regulated air pollutants shall be replaced.

4.1.13. The permittee shall meet all applicable requirements, including those not specified above, as given under 45CS2, 45CSR6, 40 CFR 60, Subpart JJJJ, and Subpart OOOO, and 40 CFR 63, Subpart HH and Subpart ZZZZ.

4.1.14. **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.
[45CSR§13-5.11.]

4.2. Monitoring Requirements

4.2.1. For the purposes of demonstrating compliance with the maximum wet gas throughput limit set forth in 4.1.4., the permittee shall monitor daily, monthly and rolling twelve month records of the wet gas throughput of the Glycol Dehydration Unit.

4.2.2. In order to demonstrate compliance with 4.1.5(a) and (b), upon request of the Director, the permittee shall demonstrate compliance with the VOC/HAP emissions thresholds using GLYCalc Version 4.0 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. For the purpose of demonstrating compliance with the requirements set forth in sections 4.1.7 and 4.2.3., the permittee shall maintain records of testing conducted in accordance with 4.2.3. If permittee is required by the Director to demonstrate compliance with section 4.2.2, 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.

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 H_2O/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 H_2O removed.

4.2.3. For the purposes of demonstrating compliance with visible emissions limitations set forth in 4.1.6(d) and 4.1.7(d), the permittee shall:

a. Conduct an initial Method 22 visual emission observation on the Reboiler exhaust and vapor combustor to determine the compliance with the visible emission provisions. The permittee shall take a minimum of two (2) hours of visual emissions observations on the units.

b. Conduct monthly Method 22 visible emission observations of the Reboiler exhaust and vapor combustor to ensure proper operation for a minimum of ten (10) minutes each month the units are in operation.

c. In the event visible emissions are observed in excess of the limitations given under 4.1.6(d) or 4.1.7(d), the permittee shall take immediate corrective action.

d. Maintain records of the visible emission opacity tests conducted per Section 4.2.4.

e. 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.

4.2.4. Operation of the vapor combustor shall meet the following Monitoring, Compliance Demonstration and Recordkeeping Requirements:

a. The permittee shall maintain records of all startups, shutdowns, and/or malfunctions of the vapor combustor. These records shall include the date, time, and duration of each event.

b. The permittee shall maintain records of the date, time, and duration each time the permittee does

not detect the presence of a pilot flame in the vapor combustor.

4.2.5. For the purposes of demonstrating compliance with the truck loadout throughput limit set forth in 4.1.10(b), the permittee shall monitor and maintain monthly and rolling twelve month records of the amount of liquids loaded out.

4.2.6. **40 CFR 60, Subpart JJJJ**
The permittee shall comply with all applicable monitoring, compliance demonstration and record-keeping requirements as given under 40 CFR 60, Subpart JJJJ including the following:

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(d) or (e), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) and (2) of this section.
[40 CFR §60.4243(b)]

a. Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in §60.4233(d) or (e) and according to the requirements specified in §60.4244, as applicable, and according to paragraphs (b)(2)(i) and (ii) of this section.
[40 CFR §60.4243(b)(2)]

(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.
[40 CFR §60.4243(b)(2)(ii)]

4.2.7. **40 CFR 63, Subpart HH**
The permittee shall comply with all applicable monitoring, compliance demonstration and record-keeping requirements as given under 40 CFR 63, Subpart HH including the following:

Determination of glycol dehydration unit flowrate, benzene emissions, or BTEX emissions. The procedures of this paragraph shall be used by an owner or operator to determine glycol dehydration unit natural gas flowrate, benzene emissions, or BTEX emissions.
[40 CFR §63.772(b)]

a. The determination of actual average benzene or BTEX emissions from a glycol dehydration unit shall be made using the procedures of either paragraph (b)(2)(i) or (ii) of this section. Emissions shall be determined either uncontrolled, or with federally enforceable controls in place.
[40 CFR §63.772(b)(2)]

(1) The owner or operator shall determine actual average benzene or BTEX emissions using the model GRI-GLYCalcTM , Version 3.0 or higher, and the procedures presented in the associated GRI-GLYCalcTM 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); or
[40 CFR §63.772(b)(2)(i)]

(2) The owner or operator shall determine an average mass rate of benzene or BTEX emissions in kilograms per hour through direct measurement using the methods in § 63.772(a)(1)(i) or (ii), or an alternative method according to § 63.7(f). Annual emissions in kilograms per year shall be determined by multiplying the mass rate by the number of hours the unit is operated per year. This result shall be converted to megagrams per year.
[40 CFR §63.772(b)(2)(ii)]

4.2.8. The permittee shall meet all applicable Monitoring, Compliance Demonstration and Source-Specific Recordkeeping and Reporting Requirements as given under 45CS2, 45CSR6, 40 CFR 60, Subpart JJJJ, and Subpart OOOO, and 40 CFR 63, Subpart HH and Subpart ZZZZ.

4.3. Testing Requirements

4.3.1. At such reasonable time(s) as the Secretary may designate, in accordance with the provisions of 3.3 of this permit, the permittee shall conduct or have conducted test(s) to determine compliance with the emission limitations established in this permit and/or applicable regulations.

4.3.2. The permittee shall, pursuant to the timing and other requirements of 40 CFR 60, Subpart JJJJ, conduct, or have conducted, performance testing on the compressor engines to determine the emission rates of CO, NO_x, and VOCs. The testing shall, in addition to meeting all applicable requirements under 40 CFR 60, Subpart JJJJ, be in accordance with 3.3.1. Results of the this performance testing shall, unless granted in writing a waiver by the Director, be used to determine compliance with the emission limits given under 4.1.2(c).

4.3.3 The permittee shall meet all applicable Performance Testing Requirements as given under 45CS2, 45CSR6, 40 CFR 60, Subpart JJJJ, and Subpart OOOO, and 40 CFR 63, Subpart HH and Subpart ZZZZ.

4.4. Recordkeeping Requirements

4.4.1. **Record of Monitoring.** 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.

4.4.2. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.

4.4.3. **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.

4.5. Reporting Requirements

4.5.1. Any deviation(s) from the vapor combustor design and operation criteria in Section 4.1.7. 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 discovery of such deviation.

CERTIFICATION OF DATA ACCURACY

I, the undersigned, hereby certify that, based on information and belief formed after reasonable inquiry, all information contained in the attached _____, representing the period beginning _____ and ending _____, and any supporting documents appended hereto, is true, accurate, and complete.

Signature[1] _____ _____
(please use blue ink) Responsible Official or Authorized Representative Date

Name and Title _____ _____
(please print or type) Name Title

Telephone No. _____ Fax No. _____

---

[1] This form shall be signed by a "Responsible Official." "Responsible Official" means one of the following:

a. For a corporation: The president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:

(I) the facilities employ more than 250 persons or have a gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars), or

(ii) the delegation of authority to such representative is approved in advance by the Director;

b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;

c. For a municipality, State, Federal, or other public entity: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of USEPA); or

d. The designated representative delegated with such authority and approved in advance by the Director.