

West Virginia Department of Environmental Protection

*Earl Ray Tomblin
Governor*

Division of Air Quality

*Randy C. Huffman
Cabinet Secretary*

Permit to Construct



R13-2985

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:
HG Energy, LLC
John Rush 404
103-00050

*John A. Benedict
Director*

Issued: DRAFT • Effective: DRAFT

Facility Location: Wileyville, Wetzel County, West Virginia
Mailing Address: 5650 Dupont Road, Parkers, PA 15370
Facility Description: Natural-Gas Production Facility
NAICS Codes: 211111
UTM Coordinates: 531.104 km Easting • 4,384.714 km Northing • Zone 17
Permit Type: Construction
Desc. of Change: Permit for construction and operation of a natural gas production facility at the existing John Rush 404 well-pad.

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.

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1.0 Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Permitted	Design Capacity	Control Device
1S	1E	GPU-1 Burner	2012	1.0 mmBtu/hr	None
2S	2E	GPU-2 Burner	2012	1.0 mmBtu/hr	None
3S	3E	GPU-3 Burner	2012	1.0 mmBtu/hr	None
4S	4E	GPU-4 Burner	2012	1.0 mmBtu/hr	None
5S	5E	GPU-5 Burner	2012	1.0 mmBtu/hr	None
6S	6E	GPU-6 Burner	2012	1.0 mmBtu/hr	None
7S	7E	Condensate Tank	2012	8,820 gallons	Vapor Combustor
8S	8E	Condensate Tank	2012	8,820 gallons	Vapor Combustor
9S	9E	Condensate Tank	2012	8,820 gallons	Vapor Combustor
10S	10E	Condensate Tank	2012	8,820 gallons	Vapor Combustor
11S	11E	Condensate Tank	2012	8,820 gallons	Vapor Combustor
12S	12E	Produced Water Tank	2012	8,820 gallons	Vapor Combustor
13S	13E	Produced Water Tank	2012	8,820 gallons	Vapor Combustor
14S	14E	Produced Water Tank	2012	8,820 gallons	Vapor Combustor
15S	15E	Produced Water Tank	2012	8,820 gallons	Vapor Combustor
16S	16E	Produced Water Tank	2012	8,820 gallons	Vapor Combustor
17S	17E	Vapor Combustor Pilot Light	2012	0.05 mmBtu/hr	None
18S	18E	Vapor Combustor	2012	8.0 mmBtu/hr	N/A
19S	19E	Fugitive Emissions/ Equipment Leaks	2012	N/A	N/A
A20S	A20E	Flowback Flare	2012	2.083 mmscf/hr	N/A
B20S	B20E	Flowback Flare	2012	2.083 mmscf/hr	N/A

1.0 Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Permitted	Design Capacity	Control Device
20S	20E	Process Heater	2012	0.50 mmBtu/hr	None
21S	21E	Process Heater	2012	0.50 mmBtu/hr	None
22S	22E	Process Heater	2012	0.50 mmBtu/hr	None
23S	23E	Condensate Truck Loading	2012	125 gallons/min	Vapor Combustor
24S	24E	Produced Water Truck Loading	2012	125 gallons/min	Vapor Combustor

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	NSPS	New Source Performance Standards
CBI	Confidential Business Information	PM	Particulate Matter
CEM	Continuous Emission Monitor	PM_{2.5}	Particulate Matter less than 2.5µm in diameter
CES	Certified Emission Statement	PM₁₀	Particulate Matter less than 10µm in diameter
C.F.R. or CFR	Code of Federal Regulations	Ppb	Pounds per Batch
CO	Carbon Monoxide	pph	Pounds per Hour
C.S.R. or CSR	Codes of State Rules	ppm	Parts per Million
DAQ	Division of Air Quality	Ppmv or ppmv	Parts per million by volume
DEP	Department of Environmental Protection	PSD	Prevention of Significant Deterioration
dscm	Dry Standard Cubic Meter	psi	Pounds per Square Inch
FOIA	Freedom of Information Act	SIC	Standard Industrial Classification
HAP	Hazardous Air Pollutant	SIP	State Implementation Plan
HON	Hazardous Organic NESHAP	SO₂	Sulfur Dioxide
HP	Horsepower	TAP	Toxic Air Pollutant
lbs/hr	Pounds per Hour	TPY	Tons per Year
LDAR	Leak Detection and Repair	TRS	Total Reduced Sulfur
M	Thousand	TSP	Total Suspended Particulate
MACT	Maximum Achievable Control Technology	USEPA	United States Environmental Protection Agency
MDHI	Maximum Design Heat Input	UTM	Universal Transverse Mercator
MM	Million	VEE	Visual Emissions Evaluation
MMBtu/hr or mmbtu/hr	Million British Thermal Units per Hour	VOC	Volatile Organic Compounds
MMCF/hr or mmcf/hr	Million Cubic Feet per Hour	VOL	Volatile Organic Liquids
NA	Not Applicable		
NAAQS	National Ambient Air Quality Standards		
NESHAPS	National Emissions Standards for Hazardous Air Pollutants		
NO_x	Nitrogen Oxides		

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 R13-2985 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

- 3.2.1. **Emission Limit Averaging Time.** Unless otherwise specified, compliance with all annual limits shall be based on a rolling twelve month total. A rolling twelve month total shall be the sum of the measured parameter of the previous twelve calendar months. Compliance with all hourly emission limits shall be based on the applicable NAAQS averaging times or, where applicable, as given in any approved performance test method.

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:

Director
WVDEP
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304-2345

If to the USEPA:

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. **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 R13-2985, 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, and shall use the specified control devices.
- 4.1.2. At all times the wells are producing gas that cannot be directed to the flow line, all said natural gas shall be directed to the flare(s) (A20S, B20S) for combustion.
- 4.1.3. Flaring operations shall be in accordance with the following requirements:

- a. The annual aggregate emissions resulting from the flaring of gas shall not exceed the following limits:

Table 4.1.3(a): Flaring Emission Limits

Pollutant	Annual (ton/yr)
CO	13.34
NO _x	2.54
VOC	13.91
CH ₄	18.47
CO ₂	4,213.39

- b. The permittee shall not combust greater than an aggregate of 60.54 MMscf standard cubic feet (scf) of natural gas per year in the flares.
- c. The flares 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 98.0%.
- d. The permittee shall install, maintain, and operate instrumentation to continuously monitor the aggregate amount of gas combusted in the flares in standard cubic feet per minute (SCFM). The monitor(s) shall be installed, maintained, and operated according to the manufacturer's recommendations.
- e. Although not required by 40 CFR 60, Subpart OOOO, the flares shall meet all applicable requirements of 40 CFR 60, Subpart A, Section 60.18(b) through (f) including the following:
- (1) Flares shall be designed for and operated with no visible emissions as determined by the methods specified in paragraph (f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

[45CSR§60.18(c)(1)]

- (2) Flares shall be operated with a flame present at all times, as determined by the methods

specified in paragraph (f).
[45CSR§60.18(c)(2)]

- (3) Method 22 of appendix A to this part shall be used to determine the compliance of flares with the visible emission provisions of this subpart. The observation period is 2 hours and shall be used according to Method 22.

[45CSR§60.18(f)(1)]

- (4) The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.

[45CSR§60.18(f)(2)]

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

$$\text{Emissions (lb/hr)} = F \times \text{Incinerator Capacity (tons/hr)}$$

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

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

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

[45CSR§6-4.1]

- g. The authorization to conduct flaring operations under this permit will expire ninety (90) days after the commencement of such operations.

4.1.4. The GPU Burners (1S through 6S) shall operate according to the following requirements:

- a. The maximum emissions from each GPU Burner shall not exceed the limits given in the following table;

Table 4.1.4(a): GPU Burner Emission Limits

Pollutant	Hourly (lb/hr)	Annual (ton/yr)
CO	0.07	0.31
NO_x	0.08	0.37

- b. The MDHI of each GPU Burner shall not exceed 1.0 mmBtu/hr and the unit shall only be fired by natural gas; and
- c. As the annual emission limits given in Table 4.1.4(c) are based on operating 8,760 hours/year, there is no limit on the annual hours of operation or fuel usage of the GPU Burners;

4.1.5. The Process Heaters (20S through 22S) shall operate according to the following requirements:

- a. The maximum emissions from each Process Heater shall not exceed the limits given in the following table;

Table 4.1.5(a): Process Heater Emission Limits

Pollutant	Hourly (lb/hr)	Annual (ton/yr)
CO	0.04	0.15
NO _x	0.04	0.18

- b. The MDHI of each Process Heater shall not exceed 0.50 mmBtu/hr and the unit shall only be fired by natural gas; and
 - c. As the annual emission limits given in Table 4.1.4(c) are based on operating 8,760 hours/year, there is no limit on the annual hours of operation or fuel usage of the Process Heaters;
- 4.1.6. The maximum aggregate production of condensate/liquids from the wells shall not exceed 2,299,500 gallons/year. The permittee shall install, maintain, and operate instrumentation to continuously monitor the production of condensate/liquids from the wells in gallons per minute (GPM). The monitor(s) shall be installed, maintained, and operated according to the manufacturer's recommendations.
- 4.1.7. Flashing emissions from the Low Pressure Towers shall be captured and either sent to the production line or sent to the vapor combustor for control.
- 4.1.8. All working/breathing/flashing emissions from the storage tanks (7S through 16S) shall be captured and either sent to the production line or sent to the vapor combustor for control.
- 4.1.9. The Truck Loading operations (23S, 24S) shall be in accordance with the following requirements:
- a. All trucks shall be loaded using the submerged-fill method;
 - b. The permittee shall, at all times trucks are being loaded with VOC-containing liquids, utilize the vapor combustor to control captured VOC emissions;
 - c. The capture system directing VOC emissions to the vapor combustor shall be installed, designed, and maintained so as to achieve a minimum capture efficiency of 70.00%;
- 4.1.10. The vapor combustor (18S) shall be operated according to the following requirements:
- a. The maximum emissions from the vapor combustor shall not exceed the limits given in the following table;

Table 4.1.10(a): Vapor Combustor Emission Limits

Pollutant	Hourly (lb/hr)	Annual (ton/yr)
CO	2.20	9.65
NO _x	1.10	4.84
VOC	0.81	3.55

- b. The vapor combustor 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 98.0%.

- c. The vapor combustor 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.
- d. The vapor combustor shall be operated with a flame present at all times whenever emissions may be vented to it. The presence of a pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.
- e. As of October 15, 2013, the vapor combustor shall meet all applicable requirements in 40, CFR 60, Subpart OOOO.

4.1.11. To minimize any fugitive entrapment of particulate matter from haulroads and mobile work areas, the permittee shall:

- a. Where applicable, properly maintain the pavement on all paved roads and mobile work areas (including a reasonable shoulder area) within the site boundary; and
- b. Maintain access to a water truck in good operating condition, and shall utilize same to apply a mixture of water and an environmentally acceptable dust control additive, hereinafter referred to as solution, as often as is necessary in order to minimize the atmospheric entrainment of fugitive particulate emissions that may be generated from access roads and other work areas within the site boundary where mobile equipment is used. The spraybar shall be equipped with commercially available spray nozzles, of sufficient size and number, so as to provide adequate coverage to the area being treated.

The pump delivering the solution, shall be of sufficient size and capacity so as to be capable of delivering to the spray nozzle(s) an adequate quantity of solution, and at a sufficient pressure, so as to assure that the treatment process will minimize the atmospheric entrainment of fugitive particulate emissions generated from the haulroads and work areas where mobile equipment is used.

4.1.12. 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 R13-2985.

4.1.13. 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.

4.1.14. **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.]

4.1.15. **What standards apply to gas well affected facilities?** If you are the owner or operator of a gas well affected facility, you must comply with paragraphs (a) through (f) of this section.

- a. Except as provided in paragraph (f) of this section, for each well completion operation with hydraulic fracturing begun prior to January 1, 2015, you must comply with the requirements of paragraphs (a)(3) and (4) of this section unless a more stringent state or local emission control requirement is applicable; optionally, you may comply with the requirements of paragraphs (a)(1) through (4) of this section. For each new well completion operation with hydraulic fracturing begun on or after January 1, 2015, you must comply with the requirements in paragraphs (a)(1) through (4) of this section.
 - (3) You must capture and direct flowback emissions that cannot be directed to the flow line to a completion combustion device, except in conditions that may result in a fire hazard or explosion, or where high heat emissions from a completion combustion device may negatively impact tundra, permafrost or waterways. Completion combustion devices must be equipped with a reliable continuous ignition source over the duration of flowback.
 - (4) You have a general duty to safely maximize resource recovery and minimize releases to the atmosphere during flowback and subsequent recovery.
[40CFR§60.5375(a)]
 - b. You must maintain a log for each well completion operation at each gas well affected facility. The log must be completed on a daily basis for the duration of the well completion operation and must contain the records specified in §60.5420(c)(1)(iii).
[40CFR§60.5375(b)]
 - c. You must demonstrate initial compliance with the standards that apply to gas well affected facilities as required by §60.5410.
[40CFR§60.5375(c)]
 - d. You must demonstrate continuous compliance with the standards that apply to gas well affected facilities as required by §60.5415.
[40CFR§60.5375(d)]
 - e. You must perform the required notification, recordkeeping and reporting as required by §60.5420.
[40CFR§60.5375(e)]
- 4.1.16. **What standards apply to storage vessels affected facilities?** Except as provided in paragraph (d) of this section, you must comply with the standards in this section no later than October 15, 2013 for each storage vessel affected facility constructed, modified or reconstructed after August 23, 2011, with VOC emissions equal to or greater than 6 tpy, as determined in paragraph (a) of this section.
- a. Emissions determination.
 - (1) Well sites with no other wells in production. For each storage vessel constructed, modified or reconstructed at a well site with no other wells in production, you must determine the VOC emission rate for each storage vessel affected facility using any generally accepted model or calculation methodology within 30 days after startup, and minimize emissions to the extent practicable during the 30day period using good engineering practices. For each storage vessel affected facility emitting more than 6 tpy VOC, you must reduce VOC emissions by 95.0 percent of greater within 60 days after startup.
[40CFR§60.5395(a)]
 - b. Control Requirements.

- (1) If you use a control device (such as an enclosed combustion device or vapor recovery device) to reduce emissions, you must equip the storage vessel with a cover that meets the requirements of §60.5411(b) and is connected through a closed vent system that meets the requirements of §60.5411(a) to a control device that meets the conditions specified in §60.5412.
- (2) If you use a floating roof to reduce emissions, you must meet the requirements of §60.112b(a)(1) or (2) and the relevant monitoring, inspection, recordkeeping, and reporting requirements in 40 CFR part 60, subpart Kb.

[40CFR§60.5395(b)]

c. Compliance, notification, recordkeeping, and reporting.

- (1) You must demonstrate initial compliance with standards that apply to storage vessel affected facilities as required by §60.5410.
- (2) You must demonstrate continuous compliance with standards that apply to storage vessel affected facilities as required by §60.5415.
- (3) You must perform the required notification, recordkeeping, and reporting as required by §60.5420.

[40CFR§60.5395(c)]

- 4.1.17. The permittee shall meet all applicable requirements, including those not specified above, as given under 45CSR6 and 40 CFR 60, Subpart OOOO.

4.2. Monitoring, Compliance Demonstration and Source-Specific Recordkeeping Requirements

- 4.2.1. Flaring operations shall meet the following Monitoring, Compliance Demonstration and Source-Specific Recordkeeping Requirements:

- a. For the purposes of demonstrating compliance with maximum gas combustion limitation set forth in 4.1.3(b), the permittee shall monitor and record the daily, monthly, and rolling twelve month total of gas combusted (in scf) by the flare.
- b. The permittee shall maintain records of all startups, shutdowns, and/or malfunctions of the flare. These records shall include the date, time, and duration of each event.
- c. 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 flare.
- d. For the purposes of demonstrating compliance with visible emissions limitations set forth in 4.1.3(e)(1), the permittee shall:
 - (1) Conduct an initial Method 22 visual emission observation on the flares 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 flare.
 - (2) Conduct daily Method 22 visible emission observations of the flares to ensure proper operation for a minimum of ten (10) minutes each day the flare is in operation.
 - (3) In the event visible emissions are observed in excess of the limitations given under

4.1.3(e)(1), the permittee shall take immediate corrective action.

e. The permittee shall maintain records of all visual emission observations pursuant to the monitoring required under 4.2.1(d) including any corrective action taken.

4.2.2. For the purposes of demonstrating compliance with maximum limit for the aggregate production of condensate/liquids from the wells set forth in 4.1.6, the permittee shall monitor and record the daily, monthly, and rolling twelve month total of condensate/liquids (in gallons) produced in the wells.

4.2.3. Operation of the vapor combustor shall meet the following Monitoring, Compliance Demonstration and Source-Specific 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.

c. For the purposes of demonstrating compliance with visible emissions limitations set forth in 4.1.10(c), the permittee shall:

(1) Conduct an initial Method 22 visual emission observation on the 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 vapor combustor.

(2) Conduct monthly Method 22 visible emission observations of the vapor combustor stack to ensure proper operation for a minimum of ten (10) minutes each day the vapor combustor is in operation.

(3) In the event visible emissions are observed in excess of the limitations given under 4.1.10(c), the permittee shall take immediate corrective action.

d. The permittee shall maintain records of all visual emission observations pursuant to the monitoring required under 4.2.3(c) including any corrective action taken.

4.2.6. The permittee shall meet all applicable Monitoring, Compliance Demonstration and Source-Specific Recordkeeping Requirements as given under 40 CFR 60, Subpart OOOO.

4.3. Testing Requirements

4.3.1. Within sixty (60) days of production of natural gas in any well at the John Rush 404 natural gas production facility, in accordance with the provisions of 3.3 of this permit, the permittee shall perform or have performed an analysis to determine the constituent properties of the condensate/produced liquids. The analysis shall, at a minimum, include the same components as the analysis submitted in Permit Application R13-2985. Where applicable, if the analysis shows average constituent properties that, when used to calculate emissions in the same manner as submitted in Permit Application R13-2985, result in emissions that are emissions 10% greater than those used in the permit application, the permittee shall, within thirty (30) days of receiving the results of the analysis, submit to the Director an appropriate permit application to increase emissions.

4.3.2. The permittee shall meet all applicable Testing Requirements as given under 40 CFR 60, Subpart OOOO.

4.4. General 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.
- 4.4.4. The permittee shall meet all applicable General Recordkeeping Requirements as given under 40 CFR 60, Subpart OOOO.

4.5. Reporting Requirements

- 4.5.1. If permittee observes any visible emissions from the flare pursuant to the testing requirements given under 4.2.4., the permittee shall notify DAQ within twenty-four (24) hours.

- 4.5.2. The permittee shall meet all applicable Reporting Requirements as given under 40 CFR 60, Subpart OOOO.

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.

Signature¹ _____ Date _____
(please use blue ink) Responsible Official or Authorized Representative

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

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.