West Virginia Department of Environmental Protection
Division of Air Quality

Earl Ray Tomblin
Governor

Randy C. Huffman
Cabinet Secretary

Permit to Construct

R13-3011

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 Production Company
OXF-160
017-00039

John A. Benedict
Director

Issued: DRAFT • Effective: DRAFT

Facility Location:	Near New Milton, Doddridge County, West Virginia
Mailing Address:	625 Liberty Avenue, Suite 1700, Pittsburgh, PA 15222
Facility Description:	Natural-Gas Production Facility
NAICS Codes:	211111
UTM Coordinates:	517.4 km Easting • 4,336.9 km Northing • Zone 17
Permit Type:	Construction
Desc. of Change:	Permit for construction and operation of a natural gas production facility at the OXF-160 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 Installed	Design Capacity	Control Device
S001	E001	Condensate Storage Tank	2013	8,820-gallon	Vapor Combustor
S002	E002	Condensate Storage Tank	2013	8,820-gallon	Vapor Combustor
S003	E003	Condensate Storage Tank	2013	8,820-gallon	Vapor Combustor
S004	E004	Condensate Storage Tank	2013	8,820-gallon	Vapor Combustor
S005	E005	Line Heater	2013	1.54 mmBtu/hr	None
S006	E006	Line Heater	2013	1.54 mmBtu/hr	None
S007	E007	Line Heater	2013	1.54 mmBtu/hr	None
S008	E008	Line Heater	2013	1.54 mmBtu/hr	None
S009	E009	Thermoelectric Generator	2013	0.013 mmBtu/hr	None
S010	E010	Thermoelectric Generator	2013	0.013 mmBtu/hr	None

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 R13-3011 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:	**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 R13-3011, 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. The Line Heaters (S005 to S008) shall operate according to the following requirements:

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

Table 4.1.2(a): Process Heater Emission Limits

Pollutant	Hourly (lb/hr)	Annual (ton/yr)
CO	0.12	0.54
NO_x	0.15	0.64

b. The MDHI of each Line Heater shall not exceed 1.54 mmBtu/hr and the unit shall only be fired by natural gas; and

c. As the annual emission limits given in Table 4.1.2(a) are based on operating 8,760 hours/year, there is no limit on the annual hours of operation or fuel usage of the Line Heaters;

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.
[45CSR§2-3.1.]

4.1.3. The maximum aggregate production of condensate/produced-water from the wells shall not exceed 13,084,000 gallons/year.

4.1.4. All working/breathing/flashing emissions from the storage tanks (S001 through S004) shall be captured and sent to the vapor combustor for control.

4.1.5. All condensate/produced-water trucks shall be loaded using the submerged-fill method. The "submerged-fill method" shall, for the purposes of this permit, mean either bottom-filling or filling by extending the pipe to near the bottom of the tank, and as soon as is practicable, below the level of liquid.

4.1.6. The vapor combustor (C001) 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 4.1.6(a): Vapor Combustor Emission Limits

Pollutant	Hourly (lb/hr)	Annual (ton/yr)
CO	0.93	4.09
NO_X	1.11	4.86
$PM_{2.5}/PM_{10}/PM$	0.08	0.37
VOC	9.95	43.58
HAPs	0.31	1.36

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 95.0%.

c. 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.

d. As of October 15, 2013, the vapor combustor shall meet all applicable requirements in 40, CFR 60, Subpart OOOO.

e. 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]

f. No person shall cause or allow emission of smoke into the atmosphere from any incinerator which is twenty percent (20%) opacity or greater.
[45CSR§6-4.3]

4.1.7. 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 R13-3011.

4.1.8. 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.

4.1.9. **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.]

4.1.10. 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.

(1) For the duration of flowback, route the recovered liquids into one or more storage vessels or re-inject the recovered liquids into the well or another well, and route the recovered gas into a gas flow line or collection system, re-inject the recovered gas into the well or another well, use the recovered gas as an on-site fuel source, or use the recovered gas for another useful purpose that a purchased fuel or raw material would serve, with no direct release to the atmosphere. If this is infeasible, follow the requirements in paragraph (a)(3) of this section.

(2) All salable quality gas must be routed to the gas flow line as soon as practicable. In cases where flowback emissions cannot be directed to the flow line, you must follow the requirements in paragraph (a)(3) of this section.

(3) You must capture and direct flowback emissions 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)]**

4.1.11. For each pneumatic controller affected facility you must comply with the VOC standards, based on natural gas as a surrogate for VOC, in either paragraph (b) or (c) of this section, as applicable. Pneumatic controllers meeting the conditions in paragraph (a) of this section are exempt from this requirement.

a. The requirements of paragraph (b) or (c) of this section are not required if you determine that the use of a pneumatic controller affected facility with a bleed rate greater than 6 standard cubic feet per hour is required based on functional needs, including but not limited to response time, safety and positive actuation.

b. (1) Each pneumatic controller affected facility at a natural gas processing plant must have a bleed rate of zero.

(2) Each pneumatic controller affected facility at a natural gas processing plant must be tagged with the month and year of installation, reconstruction or modification, and identification information that allows traceability to the records for that pneumatic controller as required in § 60.5420(c)(4)(iv).

c. (1) Each pneumatic controller affected facility constructed, modified or reconstructed on or after October 15, 2013 at a location between the wellhead and a natural gas processing plant must have a bleed rate less than or equal to 6 standard cubic feet per hour.

(2) Each pneumatic controller affected facility at a location between the wellhead and a natural gas processing plant must be tagged with the month and year of installation, reconstruction or modification, and identification information that allows traceability to the records for that controller as required in § 60.5420(c)(4)(iii).

d. You must demonstrate initial compliance with standards that apply to pneumatic controller affected facilities as required by § 60.5410.

e. You must demonstrate continuous compliance with standards that apply to pneumatic controller affected facilities as required by § 60.5415.

f. You must perform the required notification, recordkeeping, and reporting as required by § 60.5420, except that you are not required to submit the notifications specified in § 60.5420(a).

4.1.12. Except as provided in paragraph (d) of this section, you must comply with the standards in this section no later than October 15, 2013for 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.

[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)]

4.1.13. 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 and Reporting Requirements

4.2.1. For the purposes of demonstrating compliance with maximum limit for the aggregate production of condensate/produced-water from the wells set forth in 4.1.3, the permittee shall monitor and record the monthly and rolling twelve month total of condensate/produced-water (in gallons) produced in the wells. Monitoring and recording the monthly and rolling twelve month total of condensate/produced-water (in gallons) unloaded from the storage tanks can be used to show compliance with this requirement.

4.2.2. For the purposes of demonstrating compliance with visible emissions limitations set forth in 4.1.2(d), the permittee shall:

a. Conduct an initial Method 22 visual emission observation on the line heaters 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 line heaters.

b. Conduct monthly Method 22 visible emission observations of the line heaters stack to ensure proper operation for a minimum of ten (10) minutes each month the line heaters are in operation.

c. In the event visible emissions are observed in excess of the limitations given under 4.1.2(d), the permittee shall take immediate corrective action.

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 4.1.6(f), 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 month the vapor combustor is in operation.

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

4.2.4. The permittee shall maintain records of all visual emission observations pursuant to the monitoring required under 4.2.2. and 4.2.3(c) including any corrective action taken.

4.2.5. 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.

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

4.3. Testing Requirements

4.3.1. Within sixty (60) days of the issuance date of this permit, the permittee shall perform, or have performed, a site-specific analysis to determine the constituent properties of the condensate/produced-water. The analysis shall, at a minimum, include the same components as the analysis used to calculate storage tank emissions in Permit Application R13-3011. The sample shall be taken from the pressurized liquid stream, aqueous and organic, coming from the last separator that feeds the storage tanks. Where applicable, if the analysis shows average constituent properties that, when used to calculate emissions in the same manner as submitted in Permit Application R13-3011, result in emissions greater than the limits in 4.1.4., the permittee shall, within thirty (30) days of receiving the results of the analysis, submit to the Director an appropriate permit application.

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. 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.

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. _____

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[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.