west virginia department of environmental protection

Division of Air Quality
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Jim Justice, Governor
Austin Caperton, Cabinet Secretary
www.dep.wv.gov

January 24, 2017

RJ Moses
Noble Energy, Inc.
1000 Noble Energy Drive
Canonsburg, PA 15317

Re: Noble Energy, Inc.
Sand Hill 22 (SHL 22)
Permit No. R13-3345
Plant ID No. 051-000230

Dear Mr. Moses:

Your application for a permit as required by Section 5 of 45CSR13 - "Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permit, General Permit, and Procedures for Evaluation" has been approved. The enclosed permit R13-3345 is hereby issued pursuant to Subsection 5.7 of 45CSR13. Please be aware of the notification requirements in the permit which pertain to commencement of construction, modification, or relocation activities; startup of operations; and suspension of operations.

The source is not subject to 45CSR30.

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.

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.

Should you have any questions or comments, please contact me at (304) 926-0499, extension 1223.

Sincerely,

Jerry Williams, P.E.
Engineer

Enclosure

c: Phil Schlagel

West Virginia Department of Environmental Protection

Jim Justice
Governor

Division of Air Quality

Austin Caperton
Cabinet Secretary

Permit to Construct

R13- 3345

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 above-referenced facility is authorized to construct the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Issued to:

Noble Energy, Inc.
Sand Hill 22 (SHL 22)
051-00230

William F. Durham
Director

Issued: January 24, 2017

Facility Location:	Dallas, Marshall County, West Virginia
Mailing Address:	1000 Noble Energy Drive, Canonsburg, PA 15317
Facility Description:	Natural Gas Production Facility
NAICS Codes:	211111
UTM Coordinates:	536.136 km Easting • 4,429.051 km Northing • Zone 17
Permit Type:	Construction
Description of Change:	Natural gas production facility.

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

The source is not subject to 45CSR30.

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1.0. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
1S-TK1-4	4E-COMB	Four (4) Produced Water Storage Tanks	2016	400 bbl (each)	4C-COMB
2S-TL1	2E-TL1, 4C-COMB	Produced Water Truck Loadout	2016	2,044,000 bbl/yr	4C-COMB
3S-GPU1-8	3S-GPU1-8	Eight (8) GPU Burners	2016	2.0 MMBTU/hr (each)	None
4S-COMB	4E-COMB	Vapor Combustor	2016	11.7 MMBTU/hr	NA
5S-PILOT	5E-PILOT	Vapor Combustor Pilot	2016	0.02 MMBTU/hr	NA
6S-FL	6E-FL	Flare	2016	74.73 MMBTU/hr	NA
7S-PILOT	7E-PILOT	Flare Pilot	2016	0.26 MMBTU/hr	NA
8S-FC	8E-FC	Propane Fuel Cell	2016	1.44 gal/day	None
10S-Pump	6E-FL	Diaphragm Pump	2016	20 scf/min	6C-FL
11S-FC1-8	11E-FC1-8	Pneumatic Flow Control Valves	2016	6 scfh	None
11S-BP	11E-BP	Pneumatic Back Pressure Control Valve	2016	6 scfh	None
11S-LC1-16	11E-LC1-16	Pneumatic Level Control Valves	2016	0.02 scf/hr	None

1.1. Control Devices

Emission Unit	Pollutant	Control Device	Control Efficiency
1S-TK1-4(4 – 400 bbl Produced Water Tanks)	Volatile Organic Compounds	Vapor Combustor (4E-COMB)	98 %
	Hazardous Air Pollutants		98 %
2S-TL1 (Produced Water Truck Loadout)	Volatile Organic Compounds	Vapor Combustor (4E-COMB) w/ 70% Capture	69 %
	Hazardous Air Pollutants		69 %

2.0. General Conditions

2.1. Definitions

2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.

2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.

2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.12.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.

2.2. 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 2.5 µm in diameter
PM_{10}	Particulate Matter less than 10µm in diameter
Ppb	Pounds per Batch
Pph	Pounds per Hour
Ppm	Parts per Million
Ppm_V 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 other 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 R13-3345 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 -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 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 emissions, 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 45CSR11.
[45CSR§11-5.2.]

3.2. Monitoring Requirements

[Reserved]

3.3. Testing Requirements

3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling

connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63 in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4. or 45CSR§13-5.4 as applicable.

b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4. or 45CSR§13-5.4 as applicable.

c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.

d. The permittee shall submit a report of the results of the stack test within sixty (60) days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1.; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:

    1. The permit or rule evaluated, with the citation number and language;
    2. The result of the test for each permit or rule condition; and,
    3. A statement of compliance or noncompliance with each permit or rule condition.

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

3.4. Recordkeeping Requirements

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

3.4.2. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.
[45CSR§4. *State Enforceable Only.*]

3.5. Reporting Requirements

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

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

3.5.3. **Correspondence.** All notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class with postage prepaid to the address(es) set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

If to the DAQ:
Director
WVDEP
Division of Air Quality
601 57th Street
Charleston, WV 25304-2345
-or-
DEPAirQualityReports@wv.gov (preferred)

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

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.

3.5.5. **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. **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.

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

4.1.3. **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.]

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

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

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

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

5.0. Source-Specific Requirements [Gas and Oil Well Affected Facility (NSPS, Subpart OOOOa]

5.1. Limitations and Standards

5.1.1. The permittee of each gas well affected facility which commenced construction, modification or reconstruction after September 18, 2015 shall comply with the applicable requirements specified in 40 CFR Part 60, Subpart OOOOa.

5.1.2. *Completion Combustion Devices/Temporary Flares/Incinerators/Vapor Combustors/Enclosed Combustors.* These devices are subject to the applicable requirements specified in 45CSR6.

6.0. Source-Specific Requirements [Storage Vessels (1S-TK1-4)]

6.1. Limitations and Standards

6.1.1. *Emissions determination.* The permittee shall determine the VOC emissions for each storage vessel (as defined in § 60.5430, 60.5430a) to determine affected facility status in accordance with the *emissions determination* required below:

a. All storage vessels that commenced construction, modification or reconstruction after September 18, 2015 must use the emissions determination in § 60.5365a.

6.1.2. *Control Devices.* The permittee shall install, operate, and maintain the vapor combustor (4C-COMB) for the purpose of controlling emissions from the storage vessels (1S-TK1-4). The permittee shall route all VOC and HAP emissions from the storage vessels (1S-TK1-4) to the vapor combustor (4C-COMB), prior to release to the atmosphere. The vapor combustor shall be designed to achieve a minimum guaranteed destruction efficiency of 98% for volatile organic compound (VOC) and hazardous air pollutants (HAP) emissions.

6.1.3. The maximum aggregate annual throughput of product to the 400 bbl storage tanks (1S-TK1-4) shall not exceed a maximum annual throughput of 85,848,000 gal/yr.

6.2. Monitoring Requirements

6.2.1. *Flash emissions.* The permittee shall monitor and maintain quarterly records of the temperature and pressure upstream of any storage vessel containing condensate and/or produced water at the appropriate separation unit based on the calculation methodology or model being used by the permittee to calculate their VOC flash emissions.

6.2.2. The permittee shall monitor the throughput to the storage vessels (1S-TK1-4) on a monthly basis.

6.3. Recordkeeping Requirements

6.3.1. The permittee shall maintain a record of the aggregate throughput for the storage vessels (1S-TK1-4) on a monthly and rolling twelve (12) month total. Said records shall be maintained in accordance with permit condition 3.5.1.

6.3.2. To demonstrate compliance with permit condition 6.1.1, the permittee shall maintain records of the determination of the VOC emission rate per storage vessel (1S-TK1-4), including identification of the model or calculation methodology used to calculate the VOC emission rate.

7.0. Source-Specific Requirements [Vapor Combustor (4E-COMB) controlling Produced Water Storage Tanks (1S-TK1-4) and Produced Water Truck Loading (2S-TL1)]

7.1. Limitations and Standards

7.1.1. *Operation and Maintenance of Vapor Combustor (4E-COMB).* The permittee shall, to the extent practicable, install, maintain, and operate the vapor combustors 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.]**

7.1.2. *Vapor Combustor (4E-COMB).* The permittee shall comply with the requirements in this section for the vapor combustor (4E-COMB):

i. Vapors that are being controlled by the vapor combustor (4E-COMB) shall be routed to the vapor combustors at all times.

ii. The vapor combustor (4E-COMB) shall be operated with a flame present at all times, as determined by the methods specified in permit conditions 7.2.1 and 7.2.3.

iii. The vapor combustor (4E-COMB) shall be designed for and operated with no visible emissions as determined by the methods specified in permit condition 7.3.1 except for either (a) or (b):

a. periods not to exceed a total of one minute during any 15 minute period, determined on a monthly basis; or

b. periods not to exceed a total of two (2) minutes during any hour, determined on a quarterly basis if the enclosed combustion device installed was a model tested under § 60.5413(d) which meets the criteria in § 60.5413(d)(11).

iv. The vapor combustor (4E-COMB) shall be operated at all times when emissions are vented to them.

v. To ensure compliance with 7.1.2.3(iv) above, the permittee shall monitor in accordance with permit condition 7.2.3.

vi. The permittee shall operate and maintain the vapor combustor (4E-COMB) according to the manufacturer's specifications for operating and maintenance requirements to maintain a guaranteed control efficiency of 98% for volatile organic compounds and hazardous air pollutants.

vii. *Closed Vent System.* The permittee shall comply with the closed vent system requirements in section 7.1.4.

viii. The vapor combustor (4E-COMB) is subject to the applicable requirements specified in 45CSR6.

ix. The maximum design heat input (MDHI) for the vapor combustor shall not exceed a maximum design heat input of 11.7 MMBTU/hr.

7.1.3. *Cover Requirements.* The permittee shall comply with the cover requirements in this section if the potential emissions that were calculated to determine affected facility status did include recovered vapors from the storage vessels (1S-TK1-4).

1. The cover and all openings on the cover (e.g., access hatches, sampling ports, pressure relief valves and gauge wells) shall form a continuous impermeable barrier over the entire surface area of the liquid in the storage vessel.

2. Each cover opening shall be secured in a closed, sealed position (e.g., covered by a gasketed lid or cap) whenever material is in the unit on which the cover is installed except during those times when it is necessary to use an opening as follows:

   (i) To add material to, or remove material from the unit (this includes openings necessary to equalize or balance the internal pressure of the unit following changes in the level of the material in the unit);

   (ii) To inspect or sample the material in the unit;

   (iii) To inspect, maintain, repair, or replace equipment located inside the unit; or

   (iv) To vent liquids, gases, or fumes from the unit through a closed-vent system designed and operated in accordance with the requirements of this permit to a control device or to a process.

3. Each storage vessel thief hatch shall be weighted and properly seated. You must select gasket material for the hatch based on composition of the fluid in the storage vessel and weather conditions.
[45CSR§13-5.11.]

7.1.4. *Closed Vent Systems.* The permittee shall comply with the closed vent system requirements in this section if the potential emissions that were calculated to determine affected facility status did include recovered or controlled vapors from the storage vessels (1S-TK1-4).

1. You must design the closed vent system to route all gases, vapors, and fumes emitted from the material in the storage vessel to a control device that meets the requirements of permit condition 7.1.2.

2. You must design and operate a closed vent system with no detectable emissions, as determined following the leak detection and repair procedures in 40CFR60 Subpart OOOOa.

3. You must comply with either paragraph (A) or (B) of this section for each bypass device.

   A. You must properly install, calibrate, maintain, and operate a flow indicator at the inlet to the bypass device that could divert the stream away from the control device or process to the atmosphere that sounds an alarm, or initiates notification via remote alarm to the nearest field office, when the bypass device is open such that the stream is being, or could be, diverted away from the control device or process to the atmosphere.

   B. You must secure the bypass device valve installed at the inlet to the bypass device in the non-diverting position using a car-seal or a lock-and-key type configuration.

ii. Low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and safety devices are not subject to the requirements of paragraph (i) of this section.
[45CSR§13-5.11.]

7.1.5. Maximum emissions from the 11.7 MMBTU/hr LEED vapor combustor (4E-COMB) shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	0.80	3.49
Carbon Monoxide	4.33	18.97
Volatile Organic Compounds	0.28	1.24

7.2. Monitoring Requirements

7.2.1. To demonstrate compliance with the pilot flame requirements of permit conditions 7.1.2.2 and 7.1.2.3, the presence of a pilot flame shall be continuously monitored using a thermocouple or any other equivalent device to detect the presence of a flame when emissions are vented to it. The pilot shall be equipped such that it sounds an alarm, or initiates notification via a remote alarm to the nearest field office, when the pilot light is out.

7.2.2. To demonstrate compliance with the closed vent system requirements of permit condition 7.1.4, the permittee shall:

a. *Initial requirements.* The permittee shall follow the leak detection and repair procedures in 40CFR60 Subpart OOOOa. The initial inspection shall include the bypass inspection, conducted according to paragraph (b) of this section.

b. *Bypass inspection.* Visually inspect the bypass valve during the initial inspection for the presence of the car seal or lock-and-key type configuration to verify that the valve is maintained in the non-diverting position to ensure that the vent stream is not diverted through the bypass device. If an alternative method is used, conduct the inspection of the bypass as described in the operating procedures.

c. *Unsafe to inspect requirements.* You may designate any parts of the closed vent system as unsafe to inspect if the requirements in paragraphs (i) and (ii) of this section are met. Unsafe to inspect parts are exempt from the inspection requirements of paragraphs (a) and (b) of this section.

i. You determine that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with the requirements.

ii. You have a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.

[45CSR§13-5.11.]

7.2.3. To demonstrate compliance with the pilot flame requirements of permit condition 7.1.2.3, the permittee shall follow (i) and (ii).

i. The presence of a pilot flame shall be continuously monitored using a thermocouple or any other equivalent device to detect the presence of a flame when emissions are vented to it. The pilot shall be equipped such that it sounds an alarm, or initiates notification via remote alarm to the nearest field office, when the pilot light is out.

ii. For any absence of pilot flame, or other indication of smoking or improper equipment operation, you must ensure the equipment is returned to proper operation as soon as practicable after the event occurs. At a minimum, you must: (1) Check the air vent for obstruction. If an obstruction is observed, you must clear the obstruction as soon as practicable. (2) Check for liquid reaching the combustor.

iii. The permittee is exempt from the pilot flame requirements of permit condition 7.2.3.i and 7.2.3.ii if the permittee installed an enclosed combustion device model that was tested under § 60.5413(d) which meets the criteria in § 60.5413(d)(11).

7.3. Testing Requirements

7.3.1. To demonstrate compliance with the visible emissions requirements of permit condition 7.1.2, the permittee shall conduct visible emission checks and/or opacity monitoring and recordkeeping for all emission sources subject to an opacity limit.

i. The visible emission check shall determine the presence or absence of visible emissions. The observations shall be conducted according to Section 11 of EPA Method 22. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40CFR Part 60, Appendix A, Method 22 or from the lecture portion of the 40CFR Part 60, Appendix A, Method 9 certification course. The observation period shall be:

a. a minimum of 15 minutes if demonstrating compliance with 7.1.2.iii(a); or
c. a minimum of 1 hour if demonstrating compliance with 7.1.2.iii(b)

ii. The visible emission check shall be conducted initially within 180 days of start-up to demonstrate compliance while vapors are being sent to the control device.

iii. If during this visible emission check or at any other time visible emissions are observed, compliance with section 7.1.2(viii) of this permit shall be determined by conducting opacity tests in accordance with Method 9 or 40 CFR 60, Appendix A.

7.3.2. At such reasonable times as the Secretary may designate, the operator of any incinerator shall be required to conduct or have conducted stack tests to determine the particulate matter loading, by using 40 CFR Part 60, Appendix A, Method 5, and volatile organic compound loading, by using Methods 18 and 25A of 40 CFR Part 60, Appendix A, Method 320 of 40 CFR Part 63, Appendix A, or ASTM D 6348-03 or other equivalent U.S. EPA approved method approved by the Secretary, in exhaust gases. Such tests shall be conducted in such manner as the Secretary may specify and be filed on forms and in a manner acceptable to the Secretary. The Secretary may, at the Secretary's option, witness or conduct such stack tests. Should the Secretary exercise his or her option to conduct such tests, the operator will provide all the 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. The Secretary may conduct such other tests as the Secretary may deem necessary to evaluate air pollution emissions other than those noted above. **[45CSR6 §§7.1 and 7.2]**

7.4. Recordkeeping Requirements

7.4.1. For the purpose of demonstrating compliance with the continuous pilot flame requirements in permit condition 7.1.2, the permittee shall maintain records of the times and duration of all periods when the pilot flame was not present and vapors were vented to the device.

i. If the permittee is demonstrating compliance to permit condition 7.2.3 with visual inspections, the permittee shall maintain records of the inspections.

7.4.2. For the purpose of demonstrating compliance with the visible emissions and opacity requirements, the permittee shall maintain records of the visible emission opacity tests and checks. The permittee shall maintain records of all monitoring data required by permit condition 7.3.1 documenting the date and time of each visible emission check, the emission point or equipment/ source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80°F, 6-10 mph NE wind) during the visual emission check(s). Should a visible emission observation be required to be performed per the requirements specified in Method 9, the data records of each observation shall be maintained per the requirements of Method 9. For an emission unit out of service during the evaluation, the record of observation may note "out of service" (O/S) or equivalent.

7.4.3. To demonstrate compliance with permit condition 7.1.2., the permittee shall maintain records of the manufacturer's specifications for operating and maintenance requirements to maintain the control efficiency.

7.4.4. To demonstrate compliance with the closed vent monitoring requirements in permit condition 7.2.2, records shall be maintained of:

i. The initial compliance requirements;

ii. If you are subject to the bypass requirements, the following records shall also be maintained:

(a) Each inspection or each time the key is checked out or a record of each time the alarm is sounded;

(b) Each occurrence that the control device was bypassed. If the device was bypassed, the records shall include the date, time, and duration of the event and shall provide the reason that the event occurred. The record shall also include the estimate of emissions that were released to the environment as a result of the bypass.

iii. Any part of the system that has been designated as "unsafe to inspect" in accordance with 8.2.2(d).

[45CSR§13-5.11.]

7.4.5. The permittee shall maintain records of any testing that is conducted according to section 7.3 of this permit.

7.4.6. All records required under Section 7.4 shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the DAQ or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

7.4.7. To demonstrate compliance with permit condition 7.1.2.ix, the permittee shall record the volume of gas flared on a monthly basis.

7.5. Reporting Requirements

7.5.1. Any deviation of the allowable visible emission requirement for any emission source discovered during observation using 40CFR Part 60, Appendix A, Method 9 per permit condition 7.3.1(iii)

must be reported in writing to the Director of the DAQ as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the 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.

7.5.2. Any bypass event of the registered control device must be reported in writing to the Director of the DAQ as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the date of the bypass, the estimate of VOC emissions released to the atmosphere as a result of the bypass, the cause or suspected cause of the bypass, and any corrective measures taken or planned.

7.5.3. Any time the air pollution control device is not operating when emissions are vented to it, shall be reported in writing to the Director of the DAQ as soon as practicable, but within ten (10) calendar days of the discovery.

8.0. Source-Specific Requirements [GPU Burners (3E-GPU1-8)]

8.1. Limitations and Standards

8.1.1. *Maximum Design Heat Input (MDHI).* The MDHI of each of the GPU Bruners (3E-GPU1-8) shall not exceed 2.0 MMTU/hr.

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

8.2. Monitoring Requirements

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

8.3 Testing Requirements

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

8.4. Recordkeeping Requirements

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

9.0. Source-Specific Requirements [Pneumatic Controllers Affected Facility (NSPS, Subpart OOOO)]

9.1. Limitations and Standards

9.1.1. The permittee of each pneumatic controller affected facility that commenced construction, modification or reconstruction after September 18, 2015 shall comply with the applicable requirements specified in 40 CFR Part 60, Subpart OOOOa

9.1.2. Each pneumatic controller affected facility at a location other than at a natural gas processing plant must have a bleed rate less than or equal to 6 standard cubic feet per hour.
[40CFR§60.5390a(c)(1)]

9.1.3. Each pneumatic controller affected facility at a location other than 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 controller as required in §60.5420a(c)(4)(iii).
[40CFR§60.5390a(c)(2)]

9.1.4. To achieve initial compliance with methane and VOC emission standards for your pneumatic controller affected facility you must comply with the requirements specified in paragraphs (d)(1) through (6) of this section, as applicable.

(1) You must demonstrate initial compliance by maintaining records as specified in §60.5420a(c)(4)(ii) of your determination that the use of a pneumatic controller affected facility with a bleed rate greater than the applicable standard is required as specified in §60.5390a(b)(1) or (c)(1).

(2) N/A

(3) If you own or operate a pneumatic controller affected facility located other than at a natural gas processing plant, the controller manufacturer's design specifications for the controller must indicate that the controller emits less than or equal to 6 standard cubic feet of gas per hour.

(4) You must tag each new pneumatic controller affected facility according to the requirements of §60.5390a(b)(2) or (c)(2).

(5) You must include the information in paragraph (d)(1) of this section and a listing of the pneumatic controller affected facilities specified in paragraphs (d)(2) and (3) of this section in the initial annual report submitted for your pneumatic controller affected facilities constructed, modified or reconstructed during the period covered by the annual report according to the requirements of §60.5420a(b)(1) and (5).

(6) You must maintain the records as specified in §60.5420a(c)(4) for each pneumatic controller affected facility.

9.1.5. For each pneumatic controller affected facility, you must demonstrate continuous compliance according to paragraphs (d)(1) through (3) of this section.

(1) You must continuously operate the pneumatic controllers as required in §60.5390a(a), (b), or (c).

(2) You must submit the annual reports as required in §60.5420a(b)(1) and (5).

(3) You must maintain records as required in §60.5420a(c)(4).

9.2. Reporting Requirements

9.2.1. You must perform the reporting as required by §60.5420a(b)(1) and (5) and the recordkeeping as required by §60.5420a(c)(4).
[40CFR§60.5390a(f)]

10.0. Source-Specific Requirements [Pneumatic Pump Affected Facility (NSPS, Subpart OOOOa)]

10.1. Limitations and Standards

10.1.1. The permittee of each pneumatic pump affected facility that commenced construction, modification or reconstruction after September 18, 2015 shall comply with the applicable requirements specified in 40 CFR Part 60, Subpart OOOOa.

10.1.2. If the pneumatic pump affected facility is located at a greenfield site as defined in §60.5430a, you must reduce natural gas emissions by 95.0 percent, except as provided in paragraphs (b)(3) and (4) of this section.
[40CFR§60.5393a(b)(1)]

10.1.3. You are not required to install a control device solely for the purpose of complying with the 95.0 percent reduction requirement of paragraph (b)(1) or (b)(2) of this section. If you do not have a control device installed on site by the compliance date and you do not have the ability to route to a process, then you must comply instead with the provisions of paragraphs (b)(3)(i) and (ii) of this section.

(i) Submit a certification in accordance with §60.5420a(b)(8)(i)(A) in your next annual report, certifying that there is no available control device or process on site and maintain the records in §60.5420a(c)(16)(i) and (ii).

(ii) If you subsequently install a control device or have the ability to route to a process, you are no longer required to comply with paragraph (b)(2)(i) of this section and must submit the information in §60.5420a(b)(8)(ii) in your next annual report and maintain the records in §60.5420a(c)(16)(i), (ii), and (iii). You must be in compliance with the requirements of paragraph (b)(2) of this section within 30 days of startup of the control device or within 30 days of the ability to route to a process.
[40CFR§60.5393a(b)(3)]

10.1.4. If the control device available on site is unable to achieve a 95 percent reduction and there is no ability to route the emissions to a process, you must still route the pneumatic pump affected facility's emissions to that existing control device. If you route the pneumatic pump affected facility to a control device installed on site that is designed to achieve less than a 95 percent reduction, you must submit the information specified in §60.5420a(b)(8)(i)(C) in your next annual report and maintain the records in §60.5420a(c)(16)(iii).
[40CFR§60.5393a(b)(4)]

10.1.5. If the pneumatic pump is routed to a control device or a process and the control device or process is subsequently removed from the location or is no longer available, you are no longer required to be in compliance with the requirements of paragraph (b)(1) or (b)(2) of this section, and instead must comply with paragraph (b)(3) of this section and report the change in next annual report in accordance with §60.5420a(b)(8)(ii).
[40CFR§60.5393a(b)(6)]

10.1.6. If you use a control device or route to a process to reduce emissions, you must connect the pneumatic pump affected facility through a closed vent system that meets the requirements of §60.5411a(a) and (d).
[40CFR§60.5393a(c)]

10.1.7. You must demonstrate initial compliance with standards that apply to pneumatic pump affected facilities as required by §60.5410a(e).
[40CFR§60.5393a(d)]

10.2. Reporting Requirements

10.2.1. You must perform the reporting as required by §60.5420a(b)(1) and (8) and the recordkeeping as required by §60.5420a(c)(6) through (10), (16), and (17), as applicable.
[40CFR§60.5393a(e)]

11.0. Source-Specific Requirements [Flare (6E-FL) controlling Diaphragm Pump (10S-Pump)]

11.1. Limitations and Standards

11.1.1. *Operation and Maintenance of Flare (6E-FL).* The permittee shall, to the extent practicable, install, maintain, and operate the vapor combustors 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.]

11.1.2. The permittee shall comply with the design and operating requirements below:

i. Vapors that are being controlled by the flare shall be routed to the flare at all times.

ii. The flare (6E-FL) shall be operated with a flame present at all times, as determined by the methods specified in permit condition 11.2.1.

iii. The flare (6E-FL) shall be designed according to the requirements specified in § 60.18;

iv. The flare (6E-FL) shall be operated at all times when emissions are vented to them;

v. To ensure compliance with permit condition 11.1.2.iv, the permittee shall monitor in accordance with section permit condition 11.2.1.

vi. The flare (6E-FL) shall be designed for and operated with no visible emissions as determined by the methods specified in permit condition 11.3.1, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours; and,

vii. The permittee shall monitor the flare (6E-FL) to ensure that it is operated and maintained in conformance with their designs.

viii. The National Oilwell Varco produced gas flare shall have a maximum design heat input of 74.73 MMBTU/hr.

ix. The flare (6E-FL) is subject to the applicable requirements specified in 45CSR6.

11.2. Monitoring Requirements

11.2.1. To demonstrate compliance with the pilot flame requirements of permit condition 11.1.2, the presence of a pilot flame shall be continuously monitored using a thermocouple or any other equivalent device to detect the presence of a flame when emissions are vented to it. The pilot shall be equipped such that it sounds an alarm, or initiates notification via remote alarm to the nearest field office, when the pilot light is out.

11.3. Testing Requirements

11.3.1. To demonstrate compliance with the visible emissions requirements of permit condition 11.1.2, the permittee shall conduct visible emission checks and/or opacity monitoring and recordkeeping for all emission sources subject to an opacity limit.

i. The visible emission check shall determine the presence or absence of visible emissions. The observations shall be conducted according to Section 11 of EPA Method 22. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40CFR Part 60, Appendix A, Method 22 or from the lecture portion of the 40CFR Part 60, Appendix A, Method 9 certification course. The observation period shall be a minimum of 2 hours if demonstrating compliance with 11.1.2.

ii. The visible emission check shall be conducted initially within 180 days of start-up to demonstrate compliance while vapors are being sent to the control device.

iii. If during this visible emission check or at any other time visible emissions are observed, compliance with permit condition 11.1.2.ix shall be determined by conducting opacity tests in accordance with Method 9 or 40 CFR 60, Appendix A.

11.3.2. A flare that is designed and operated in accordance with §60.18(b) shall not require a compliance demonstration, unless at the request of the Secretary, but must conduct visible emission check.

11.3.3. At such reasonable times as the Secretary may designate, the operator of any incinerator shall be required to conduct or have conducted stack tests to determine the particulate matter loading, by using 40 CFR Part 60, Appendix A, Method 5, and volatile organic compound loading, by using Methods 18 and 25A of 40 CFR Part 60, Appendix A, Method 320 of 40 CFR Part 63, Appendix A, or ASTM D 6348-03 or other equivalent U.S. EPA approved method approved by the Secretary, in exhaust gases. Such tests shall be conducted in such manner as the Secretary may specify and be filed on forms and in a manner acceptable to the Secretary. The Secretary may, at the Secretary's option, witness or conduct such stack tests. Should the Secretary exercise his or her option to conduct such tests, the operator will provide all the 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. The Secretary may conduct such other tests as the Secretary may deem necessary to evaluate air pollution emissions other than those noted above. **[45CSR6 §§7.1 and 7.2]**

11.4. Recordkeeping Requirements

11.4.1. For the purpose of demonstrating compliance with the design requirements in permit condition 11.1.2, the permittee shall maintain a record of the flare design evaluation. The flare design evaluation shall include, net heat value calculations, exit (tip) velocity calculations, and all supporting concentration calculations.

11.4.2. For the purpose of demonstrating compliance with the continuous pilot flame requirements in permit condition 11.1.2, the permittee shall maintain records of the times and duration of all periods when the pilot flame was not present and vapors were vented to the device.

11.4.3. For the purpose of demonstrating compliance with the visible emissions and opacity requirements, the permittee shall maintain records of the visible emission opacity tests and checks. The permittee shall maintain records of all monitoring data required by permit condition 11.3.1 documenting the date and time of each visible emission check, the emission point or equipment/ source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80°F, 6-10 mph NE wind) during the visual emission check(s). Should a visible emission observation be required to be performed per the requirements specified in Method 9, the data records of each observation shall be maintained per the requirements of Method 9. For an emission unit out of service during the evaluation, the record of observation may note "out of service" (O/S) or equivalent.

11.4.4. To demonstrate compliance with permit condition 11.1.2.viii, the permittee shall record the volume of gas flared on a monthly basis.

11.4.5. All records required under Section 11.4 shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the DAQ or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

11.5. Reporting Requirements

11.5.1. Any deviation of the allowable visible emission requirement for any emission source discovered during observation using 40CFR Part 60, Appendix A, Method 9 per permit condition 11.3.1(iii) must be reported in writing to the Director of the DAQ as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the 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.

11.5.2. Any bypass event of the flare (6E-FL) must be reported in writing to the Director of the DAQ as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the date of the bypass, the estimate of VOC emissions released to the atmosphere as a result of the bypass, the cause or suspected cause of the bypass, and any corrective measures taken or planned.

11.5.3. Any time the flare (6E-FL) is not operating when emissions are vented to it, shall be reported in writing to the Director of the DAQ as soon as practicable, but within ten (10) calendar days of the discovery.

12.0. Source-Specific Requirements [Fugitive Emissions GHG and VOC Standards (NSPS, Subpart OOOOa)]

12.1. Limitations and Standards

12.1.1. The permittee of each affected facility (collection of fugitive emissions components at a well site) that commenced construction, modification or reconstruction after September 18, 2015 shall comply with the applicable requirements specified in 40 CFR Part 60, Subpart OOOOa.

12.1.2. You must monitor all fugitive emission components, as defined in §60.5430a, in accordance with paragraphs (b) through (g) of this section. You must repair all sources of fugitive emissions in accordance with paragraph (h) of this section. You must keep records in accordance with paragraph (i) of this section and report in accordance with paragraph (j) of this section. For purposes of this section, fugitive emissions are defined as: Any visible emission from a fugitive emissions component observed using optical gas imaging or an instrument reading of 500 ppm or greater using Method 21.
[40CFR§60.5397a(a)]

12.1.3. You must develop an emissions monitoring plan that covers the collection of fugitive emissions components at well sites and compressor stations within each company-defined area in accordance with paragraphs (c) and (d) of this section.
[40CFR§60.5397a(b)]

12.1.4. Each monitoring survey shall observe each fugitive emissions component, as defined in §60.5430a, for fugitive emissions.
[40CFR§60.5397a(e)]

12.1.5. You must conduct an initial monitoring survey within 60 days of the startup of production, as defined in §60.5430a, for each collection of fugitive emissions components at a new well site or by June 3, 2017, whichever is later. For a modified collection of fugitive emissions components at a well site, the initial monitoring survey must be conducted within 60 days of the first day of production for each collection of fugitive emission components after the modification or by June 3, 2017, whichever is later.
[40CFR§60.5397a(f)]

12.1.6. A monitoring survey of each collection of fugitive emissions components at a well site within a company-defined area must be conducted at least semiannually after the initial survey. Consecutive semiannual monitoring surveys must be conducted at least 4 months apart.
[40CFR§60.5397a(g)(1)]

12.1.7. Fugitive emissions components that cannot be monitored without elevating the monitoring personnel more than 2 meters above the surface may be designated as difficult-to-monitor. Fugitive emissions components that are designated difficult-to-monitor must meet the specifications of paragraphs (g)(3)(i) through (iv) of this section.
[40CFR§60.5397a(g)(3)]

12.1.8. Fugitive emissions components that cannot be monitored because monitoring personnel would be exposed to immediate danger while conducting a monitoring survey may be designated as unsafe-to-monitor. Fugitive emissions components that are designated unsafe-to-monitor must meet the specifications of paragraphs (g)(4)(i) through (iv) of this section.
[40CFR§60.5397a(g)(4)]

12.1.9. Each identified source of fugitive emissions shall be repaired or replaced in accordance with paragraphs (h)(1) and (2) of this section. For fugitive emissions components also subject to the repair provisions of §§60.5416a(b)(9) through (12) and (c)(4) through (7), those provisions apply

instead to those closed vent system and covers, and the repair provisions of paragraphs (h)(1) and (2) of this section do not apply to those closed vent systems and covers.
[40CFR§60.5397a(h)]

12.1.10. Each repaired or replaced fugitive emissions component must be resurveyed as soon as practicable, but no later than 30 days after being repaired, to ensure that there are no fugitive emissions.
[40CFR§60.5397a(h)(3)]

12.2. Recordkeeping Requirements

12.2.1. Records for each monitoring survey shall be maintained as specified §60.5420a(c)(15).
[40CFR§60.5397a(i)]

12.3. Reporting Requirements

12.2.1. Annual reports shall be submitted for each collection of fugitive emissions components at a well site and each collection of fugitive emissions components at a compressor station that include the information specified in §60.5420a(b)(7). Multiple collection of fugitive emissions components at a well site or at a compressor station may be included in a single annual report.
[40CFR§60.5397a(j)]

13.0. Source-Specific Requirements [Tanker Truck Loading]

13.1. Limitations and Standards

13.1.1. *Vapor Combustor (4E-COMB).* The permittee shall install, operate, and maintain the vapor combustor (4E-COMB) in accordance with the applicable requirements of section 7.0 of this permit.

13.1.2. The maximum quantity of produced water that shall be loaded shall not exceed 85,848,000 gallons per year. Compliance with the Maximum Yearly Operation Limitation shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the hours of operation at any given time during the previous twelve consecutive calendar months.

13.1.3. The Produced Water Truck Loading shall be operated in accordance with the plans and specifications filed in Permit Application R13-3345.

13.2. Recordkeeping Requirements

13.2.1. All records required under Section 13.2 shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

13.2.2. To demonstrate compliance with permit condition 13.1.2, the permittee shall maintain a record of the aggregate throughput for the product loadout rack on a monthly and rolling twelve month total. Said records shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection

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

14.0. Source-Specific Requirements [Fuel Cell (8E)]

14.1. Limitations and Standards

14.1.1. The maximum quantity of propane that shall be consumed in the Acumentrics Remote Power System fuel cell (8E) shall not exceed 526 gallons per year. Compliance with the Maximum Yearly Operation Limitation shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the hours of operation at any given time during the previous twelve consecutive calendar months.

14.1.2. The Acumentrics Remote Power System fuel cell (8E) shall be operated in accordance with the plans and specifications filed in Permit Application R13-3345.

14.2. Recordkeeping Requirements

14.2.1. All records required under Section 14.2 shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

14.2.2. To demonstrate compliance with permit condition 14.1.2, the permittee shall maintain a record of the propane consumed on a monthly and rolling twelve month total. Said records shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

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 & 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 U.S. EPA); or

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