West Virginia Department of Environmental Protection

Earl Ray Tomblin
Governor

Division of Air Quality

Randy C. Huffman
Cabinet Secretary

Permit to Construct

R13- 3192

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:

Stone Energy Corporation
ZMBG Well Pad
103-00094

William F. Durham
Director

Issued: February 2, 2015

Facility Location:	New Martinsville, Wetzel County, West Virginia
Mailing Address:	1300 Fort Pierpont, Suite 201; Morgantown, WV 26508
Facility Description:	Natural Gas Production Facility
NAICS Codes:	211111
UTM Coordinates:	515.3917km Easting • 4,387.9539 km Northing • Zone 17
Permit Type:	Construction
Description of Change:	Construction and operation of a 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.

Table of Contents

1.0. Emission Units 5

1.1. Control Devices 5

2.0. General Conditions 6
2.1. Definitions 6
2.2. Acronyms 6
2.3. Authority 7
2.4. Term and Renewal 7
2.5. Duty to Comply 7
2.6. Duty to Provide Information 7
2.7. Duty to Supplement and Correct Information 8
2.8. Administrative Update 8
2.9. Permit Modification 8
2.10 Major Permit Modification 8
2.11. Inspection and Entry 8
2.12. Emergency 8
2.13. Need to Halt or Reduce Activity Not a Defense 9
2.14. Suspension of Activities 9
2.15. Property Rights 9
2.16. Severability 10
2.17. Transferability 10
2.18. Notification Requirements 10
2.19. Credible Evidence 10

3.0. Facility-Wide Requirements 11
3.1. Limitations and Standards 11
3.2. Monitoring Requirements 11
3.3. Testing Requirements 11
3.4. Recordkeeping Requirements 13
3.5. Reporting Requirements 13

4.0. Source-Specific Requirements 15
4.1. Limitations and Standards 15

5.0. Source-Specific Requirements (Engines, CE-1, CE-2, CE-3, CE-4, GN-1, GN-2, GN-3) 16
5.1. Limitations and Standards 16
5.2. Monitoring Requirements 18
5.3. Testing Requirements 18
5.4. Recordkeeping Requirements 18
5.5. Reporting Requirements 18

6.0. Source-Specific Requirements (Line Heaters (HTR-1 – HTR-8), Condensate Heaters (HTR-9, HTR-10)) 19
6.1. Limitations and Standards 19
6.2. Monitoring Requirements 19
6.3. Testing Requirements 19
6.4. Recordkeeping Requirements 19
6.5. Reporting Requirements 19

7.0. Source-Specific Requirements (Storage Tanks, T01 – T06) 20
7.1. Limitations and Standards 20
7.2. Monitoring Requirements 22
7.3. Recordkeeping Requirements 23
7.4. Reporting Requirements 24

8.0. Source-Specific Requirements (Truck Loading, Vapor Combustion Units (VCU-1/VCU-2)) 25
8.1. Limitations and Standards 25
8.2. Monitoring Requirements 26
8.3. Testing Requirements 27
8.4. Recordkeeping Requirements 27
8.5. Reporting Requirements 28

9.0. Source-Specific Requirements (40CFR60 Subpart JJJJ Requirements (CE-1, CE-2, CE-3, CE-4, GN-1, GN-2, GN-3)) 29
9.1. Limitations and Standards 29
9.2. Compliance Requirements 29
9.3. Testing Requirements 30
9.4. Notification, Reporting, Recordkeeping Requirements 33

10.0. Source-Specific Requirements (40CFR60 Subpart OOOO Requirements, Gas Well Affected Facility) 34
10.1. Limitations and Standards 34
10.2. Initial Compliance Demonstration 35
10.3. Continuous Compliance Demonstration 36
10.4. Notification, Recordkeeping and Reporting Requirements 37

11.0. Source-Specific Requirements (40CFR60 Subpart OOOO Requirements, Pneumatic Controllers Affected Facility 39
11.1. Limitations and Standards 39
11.2. Monitoring Requirements 41
11.3. Testing Requirements 42
11.4. Recordkeeping Requirements 42
11.5. Reporting Requirements 42

12.0. Source-Specific Requirements (40CFR63 Subpart ZZZZ Requirements (CE-1, CE-2, CE-3, CE-4, GN-1, GN-2, GN-3)) 44
12.1. Limitations and Standards 44

CERTIFICATION OF DATA ACCURACY 45

1.0. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
CE-1	1E	Cummins GTA855 Flash Gas Compressor Engine	2014	225 hp	1C (NSCR)
CE-2	2E	Cummins GTA855 Flash Gas Compressor Engine	2014	225 hp	2C (NSCR)
CE-3	18E	Cummins G8.3 VRU Compressor Engine	2014	118 hp	4C (NSCR)
CE-4	19E	Cummins G8.3 VRU Compressor Engine	2014	118 hp	5C (NSCR)
VCU-1	3E-A	Vapor Combustion Unit	2014	100 mscfd	NA
VCU-2	3E-B	Vapor Combustion Unit	2014	100 mscfd	NA
HTR-1 – HTR-8	8E-15E	Eight (8) Line Heaters	2014	0.75 MMBTU/hr each	None
HTR-9, HTR-10	16E, 17E	Two (2) Condensate Heaters	2014	0.75 MMBTU/hr each	None
GN-1	5E	Power Solutions Generator Engine	2014	25 hp	None
GN-2	6E	Power Solutions Generator Engine	2014	25 hp	None
GN-3	7E	Caterpillar 3412,LE Generator Engine	2014	637 hp	3C (SCR)
T01-T04	18E, 19E	Four (4) Condensate Tanks	2014	400 bbl each	VRU-1, VRU-2
T05, T06	4E	Two (2) Produced Water Tanks	2014	400 bbl each	None
TL	TL	Condensate Truck Loadout	2014	10 million gal/yr	VCU-1, VCU-2

1.1. Control Devices

Emission Unit	Pollutant	Control Device	Control Efficiency
225 hp Cummins GTA855 RICE w/ NSCR (CE-1, CE-2)	Nitrogen Oxides	1C, 2C (NSCR)	92 %
	Carbon Monoxide		31 %
118 hp Cummins G8.3 RICE w/ NSCR (CE-3, CE-4)	Nitrogen Oxides	4C, 5C (NSCR)	92 %
	Carbon Monoxide		77 %
637 hp Caterpillar 3412 RICE w/ SCR (GN-3)	Volatile Organic Compounds	3C (SCR)	50 %
	Carbon Monoxide		20 %
Truck Loading	Volatile Organic Compounds	VCU-1, VCU-2 (Vapor Combustion Units)	98 %
	Hazardous Air Pollutants		98 %
Condensate Tanks (T01-T04)	Volatile Organic Compounds	VRU-1, VRU-2 (Vapor Recovery Units)	99 %
	Hazardous Air Pollutants		99 %

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

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 R13-3192 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

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.

3.5.4.2. In accordance with 45CSR22 – Air Quality Management Fee Program, enclosed with this permit is an Application for a 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. **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.

4.1.5. *Emission Units.* 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.

4.1.6. *Fugitive Emissions.* The permittee shall not exceed the number and type of components in gas/vapor or light liquid service listed in Permit Application R13-3192. The permittee 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.

5.0. Source-Specific Requirements (Engines, CE-1, CE-2, CE-3, CE-4, GN-1, GN-2, GN-3)

5.1. Limitations and Standards

5.1.1. The quantity of natural gas that shall be consumed in each of the natural gas fired engines shall not exceed the following:

Emission Unit ID	Emission Unit Description	Maximum Hourly Throughput (scf/hr)	Maximum Annual Throughput (mmscf/yr)
CE-1	225 hp Cummins GTA855	1,508	13.21
CE-2	225 hp Cummins GTA855	1,508	13.21
CE-3	118 hp Cummins G8.3	750	6.57
CE-4	118 hp Cummins G8.3	750	6.57
GN-1	25 hp Power Solutions	201	1.76
GN-2	25 hp Power Solutions	201	1.76
GN-3	637 hp Caterpillar 3412	4,588	40.19

5.1.2. Maximum emissions from each of the 225 hp Cummins GTA855 natural gas fired engines (CE-1, CE-2) shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	0.50	2.17
Carbon Monoxide	0.99	4.35
Volatile Organic Compounds	0.35	1.52

5.1.3. Maximum emissions from each of the 118 hp Cummins G8.3 natural gas fired engines (CE-3, CE-4) shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	0.26	1.14
Carbon Monoxide	0.52	2.28
Volatile Organic Compounds	0.03	0.13

5.1.4. Maximum emissions from each of the 25 hp Power Solutions natural gas fired generator engines (GN-1, GN-2) shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	0.20	0.87
Carbon Monoxide	1.39	6.05
Volatile Organic Compounds	0.08	0.37

5.1.5. Maximum emissions from the 637 hp Caterpillar 3412 natural gas fired generator engine (GN-3) shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	1.40	6.15
Carbon Monoxide	2.77	12.12
Volatile Organic Compounds	0.31	1.35

5.1.6. Requirements for Use of Catalytic Reduction Devices (NSCR for CE-1, CE-2, CE-3, CE-4)

a. Rich-burn natural gas compressor engines equipped with non-selective catalytic reduction (NSCR) air pollution control devices (CE-1, CE-2, CE-3, CE-4) shall be fitted with a closed-loop, automatic air/fuel ratio controller to ensure emissions of regulated pollutants do not exceed the potential to emit for any engine/NSCR combination under varying load. The closed-loop, automatic air/fuel ratio controller shall control a fuel metering valve to deliver additional fuel when required to ensure a fuel-rich mixture and a resultant exhaust oxygen content of less than or equal to 0.5%. The automatic air/fuel ratio controller shall also incorporate dual-point exhaust gas temperature and oxygen sensors which provide temperature and exhaust oxygen content differential feedback. Such controls shall ensure proper and efficient operation of the engine and NSCR air pollution control device;

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

c. No person shall knowingly:
   1. Remove or render inoperative any air pollution or auxiliary air pollution control device installed subject to the requirements of this permit;
   2. Install any part or component when the principal effect of the part or component is to bypass, defeat or render inoperative any air pollution control device or auxiliary air pollution control device installed subject to the requirements of this permit; or
   3. Cause or allow engine exhaust gases to bypass any catalytic reduction device.

5.1.7. Requirements for Use of Catalytic Reduction Devices (SCR for GN-3)

a. Natural gas compressor engine (GN-3) equipped with selective catalytic reduction (SCR) air pollution control devices shall be fitted with a closed-loop automatic feedback controller to ensure emissions of regulated pollutants do not exceed the potential to emit for any engine/SCR combination under varying load. The closed-loop automatic feedback controller shall provide proper and efficient operation of the engine, ammonia injection and SCR device, monitor emission levels downstream of the catalyst element and limit ammonia slip to less than 10 ppm;

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

c. The permittee shall check the air/fuel ratio every 1,500 service hours and adjust in accordance to the manufacturer's specifications. The permittee shall maintain these records for five (5) years. The permittee shall monitor the temperature to the inlet of the catalyst and in

accordance with manufacturer's specifications a high temperature alarm shall shut off the engine before thermal deactivation of the catalyst occurs. The permittee shall also inspect for thermal deactivation of the catalyst before restarting the engine; and

d. No person shall knowingly:
   1. Remove or render inoperative any air pollution or auxiliary air pollution control device installed subject to the requirements of this permit;
   2. Install any part or component when the principal effect of the part or component is to bypass, defeat or render inoperative any air pollution control device or auxiliary air pollution control device installed subject to the requirements of this permit; or
   3. Cause or allow engine exhaust gases to bypass any catalytic reduction device.

5.2. Monitoring Requirements

5.2.1. Catalytic Oxidizer Control Devices

a. The permittee shall regularly inspect, properly maintain and/or replace catalytic reduction devices and auxiliary air pollution control devices to ensure functional and effective operation of the engine's physical and operational design. The permittee shall ensure proper operation, maintenance and performance of catalytic reduction devices and auxiliary air pollution control devices by:

   1. Maintaining proper operation of the automatic air/fuel ratio controller or automatic feedback controller.
   2. Following operating and maintenance recommendations of the catalyst element manufacturer.

5.3. Testing Requirements

5.2.1. See Facility-Wide Testing Requirements Section 3.3 and Section 9.3.

5.4. Recordkeeping Requirements

5.3.1. To demonstrate compliance with sections 5.1.1 – 5.1.5, the permittee shall maintain records of the amount of natural gas consumed in each engine and the hours of operation of each engine. 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.

5.5. Reporting Requirements

5.4.1. See Facility-Wide Reporting Requirements Section 3.5 and Section 9.4

6.0. Source-Specific Requirements (Line Heaters (HTR-1 – HTR-8), Condensate Heaters (HTR-9, HTR-10))

6.1. Limitations and Standards

6.1.1. Maximum Design Heat Input. The maximum design heat input for each of the Line Heaters (HTR-1 – HTR-8) shall not exceed 0.75 MMBtu/hr.

6.1.2 Maximum Design Heat Input. The maximum design heat input for each of the Condensate Heaters (HTR-9, HTR-10) shall not exceed 0.75 MMBtu/hr.

6.1.3. 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.]

6.2. Monitoring Requirements

6.2.1. At such reasonable times as the Secretary may designate, the permittee shall conduct Method 9 emission observations for the purpose of demonstrating compliance with Section 6.1.3. Method 9 shall be conducted in accordance with 40 CFR 60 Appendix A.

6.3. Testing Requirements

6.3.1. When monitoring is required by 6.2.1, compliance with the visible emission requirements of section 6.1.3 shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9, Method 22, or by using measurements from continuous opacity monitoring systems approved by the Director. The Director 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 section 6.1.3. Continuous opacity monitors shall not be required on fuel burning units which employ wet scrubbing systems for emission control.
[45CSR§2-3.2.]

6.4. Recordkeeping Requirements

6.4.1. The permittee shall maintain records of all monitoring data required by Section 6.2.1 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.

6.5. Reporting Requirements

6.5.1. Any deviation(s) from the allowable visible emission requirement for any emission source discovered during observations using 40CFR Part 60, Appendix A, Method 9 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.

7.0. Source-Specific Requirements (Storage Tanks, T01 – T06)

7.1. Limitations and Standards

7.1.1. The permittee shall route all VOC and HAP emissions from the Condensate Storage Tanks (T01 – T04) to vapor recovery units (VRU-1/VRU-2), prior to release to the atmosphere. The vapor recovery units shall be designed to achieve a minimum guaranteed control efficiency of 99% for volatile organic compound (VOC) and hazardous air pollutants (HAP) emissions. Emissions from these tanks will be collected and compressed by the vapor recovery units (VRU-1/VRU-2) whereby the vapors are sufficiently compressed to be introduced into the inlet gas line and processed with the inlet gas. In the event of shut down of the vapor recovery units (VRU-1/VRU-2) due to maintenance or equipment failure, the vapors from the condensate tanks (T01-T04) shall be routed to the vapor combustion units (VCU-1/VCU2) covered in Section 8 of this permit. The Reporting Requirements of 7.4.2 still apply.

7.1.2. *Operation and Maintenance of Air Pollution Control Equipment.* The permittee shall, to the extent practicable, install, maintain, and operate the vapor recovery units 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.]

7.1.3. The maximum annual throughput of product to the 400 bbl storage tanks shall not exceed the following:

Storage Tank ID	Product Stored	Maximum Annual Throughput (gal/yr)
T01 – T04	Condensate	2,500,000 each
T05, T06	Produced Water	800,000 each

7.1.4. In addition to the vapor recovery units (VRU-1/VRU-2), the permittee shall utilize the following requirements:

a. Install additional sensing equipment to monitor the run status of the Vapor Recovery Units (VRU-1/VRU-2). If the Vapor Recovery Units shut down, the wells must be shut in.
b. Install a by-pass system which operates automatically whereby discharge is re-routed back to the inlet of the Vapor Recovery Units (VRU-1/VRU-2) until the appropriate pressure is built up for the compressor to turn on.
c. Install a blanket gas and have automatic throttling valves to ensure oxygen does not enter the condensate tanks (T01-T04).
d. Continuously monitor and keep records of the pressure in the condensate tanks (T01-T04) to demonstrate the gas is not escaping through pressure relief valves. The permittee must install gas detection on the vents, and if gas is detected, the wells must be shut in until the problem is found and resolved.

7.1.5. Emissions from the Condensate Storage Tanks (T01-T04) shall be designed and operated as specified in the paragraphs (a) through (c).

a. 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.

b. 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 8.1.7 of this section to a control device.

c. Each 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]**

7.1.6. The facility shall comply with the closed vent system requirements for the Storage Tanks (T01-T04) as noted below.

a. You must design the closed vent system to route all gases, vapors, and fumes emitted from the material in the Condensate Tank Storage Tanks (T01-T04) to the VRUs (VRU-1/VRU-2).

b. You must design and operate a closed vent system with no detectable emissions, as determined using olfactory, visual and auditory inspections.

c. You must meet the requirements specified in paragraphs (i) and (ii) of this section if the closed vent system contains one or more bypass devices that could be used to divert all or a portion of the gases, vapors, or fumes from entering the control device or to a process.

(i) Except as provided in paragraph (ii) of this section, 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]

7.2. Monitoring Requirements

7.2.1. The permittee shall monitor the throughput to the vapor recovery units (VRU-1/VRU-2) on a monthly basis.

7.2.2. To demonstrate compliance with section 7.1.1, the permittee shall monitor the vapor recovery units (VRU-1/VRU-2) in accordance with the plans and specifications and manufacturer's recommendations.

7.2.3. To demonstrate compliance with the closed vent system requirements of Sections 7.1.5 and 7.1.6, the permittee shall:

a. Initial requirements. Conduct an initial visual, olfactory, and auditory inspection for defects that could result in air emissions within 180 days of start-up. Defects include, but are not limited to, visible cracks, holes, or gaps in piping; loose connections; liquid leaks; or broken or missing caps or other closure devices.

i. The annual inspection shall include the bypass inspection, conducted according to paragraph (c) of this section.

ii. In the event that a leak or defect is detected, you must repair the leak or defect as soon as practicable. Grease or another applicable substance must be applied to deteriorating or cracked gaskets to improve the seal while awaiting repair.

iii. Delay of repair of a closed vent system for which leaks or defects have been detected is allowed if the repair is technically infeasible without a shutdown, or if you determine that emissions resulting from immediate repair would be greater than the fugitive emission likely to result from delay of repair. You must complete repair of such equipment by the end of the next shutdown.

b. Continuous requirements. Conduct an annual visual, olfactory, and auditory inspection for defects that could result in air emissions. Defect include, but are not limited to, visible cracks, holes, or gaps in piping, loose connections; liquid leaks; or broken or missing caps or other closure devices.

i. The annual inspection shall be conducted within 365 calendar days from the date of the previous inspection or earlier.
ii. The annual inspection shall include the bypass inspection, conducted according to paragraph (c) of this section.

c. Bypass inspection. Visually inspect the bypass valve during the initial and annual 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.

d. 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.

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

i. You determine that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface.

ii. You have a written plan that requires inspection of the equipment at least once every 5 years.

[45CSR§13-5.11]

7.3. Recordkeeping Requirements

7.3.1. All records required under Section 7.3 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.

7.3.2. *Record of Maintenance of VRUs.* The permittee shall maintain accurate records of the vapor recovery units (VRU-1/VRU-2) equipment inspection and/or preventative maintenance procedures.

7.3.3. *Record of Malfunctions of VRU* The permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the vapor recovery units (VRU-1/VRU-2) 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.

7.3.4. To demonstrate compliance with section 7.1.3, the permittee shall maintain a record of the aggregate throughput for the storage tanks (T01-T06) 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 registrant 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.

7.3.5. The permittee shall maintain a copy all design records of the process, maintenance records of equipment and any downtime hours associated with the vapor recovery units (VRU-1/VRU-2).

7.3.6. The permittee shall maintain records of the additional monitoring required in Section 7.1.4 to demonstrate compliance with the 99% control efficiency claimed and the Section 7.1.1.

7.3.7. To demonstrate compliance with the closed vent monitoring requirements, the following records shall be maintained.

i. The initial compliance requirements;

ii. Each annual visual inspection conducted to demonstrate continuous compliance, including records of any repairs that were made as results of the inspection;

iii. Bypass requirements.

a. Each inspection or each time the key is checked out or a record 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 the event occurred. The record shall also include the estimate of emissions that were released to the environment as a result of the bypass.

iv. Any part of the system that has been designated as "unsafe to inspect" in accordance with 7.2.3.d or "difficult to inspect" in accordance with 7.2.3.e.

[45CSR§13-5.11]

7.4. Reporting Requirements

7.4.1. Upon request by the Director, the permittee shall report deviations within a requested time from of any occurrences when the control device was operated outside of the parameters defined in the monitoring plan.

7.4.2. The permittee shall notify the Director of any downtime of the VRUs in excess of 1%, based on the 12 month rolling total, in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days of the discovery and shall include, at a minimum, the following information: the dates and durations of each downtime event, the cause or suspected causes for each downtime event, any corrective measures taken or planned for each downtime event.

8.0. Source-Specific Requirements (Condensate Truck Loading, Vapor Combustion Units (VCU-1/VCU-2))

8.1. Limitations and Standards

8.1.1. *Operation and Maintenance of Air Pollution Control Equipment.* The permittee shall, to the extent practicable, install, maintain, and operate the vapor combustion units (VCU-1/VCU-2) 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.]

8.1.2. The permittee shall route all VOC and HAP emissions from the truck loading to the vapor combustor units (VCU-1/VCU-2). The vapor combustor units shall be designed to achieve a minimum guaranteed control efficiency of 98% for volatile organic compound (VOC) and hazardous air pollutants (HAP) emissions.

8.1.3. The Condensate Truck Loading shall be operated in accordance with the plans and specifications filed in Permit Application R13-3192. All trucks loading the condensate are required to be certified as meeting the NSPS Annual Leak Test. Compliance with this requirement shall be demonstrated by keeping records of this NSPS Annual Leak Test certification for every truck loaded.

8.1.4. The maximum quantity of condensate that shall be loaded shall not exceed 10,000,000 gallons per year. Compliance with this limit shall be demonstrated using a twelve month rolling total. A twelve month rolling total shall mean the sum of the monthly throughput at any given time during the previous twelve consecutive calendar months.

8.1.5. The vapor combustion units (VCU-1/VCU-2) shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

8.1.6. The vapor combustion units (VCU-1/VCU-2) shall be operated, with a flame present at all times whenever emissions may be vented to them, except during SSM (Startup, Shutdown, Malfunctions) events.

8.1.7 The presence of a pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.

8.1.8. The vapor combustion units (VCU-1/VCU-2) is subject to 45CSR6. The requirements of 45CSR6 include but are not limited to the following:

i. No person shall cause, suffer, allow or permit particulate matter to be discharged from any incinerator 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 either 5.43 for an incinerator with a capacity of less than 15,000 lbs/hr or 2.72 for an incinerator with a capacity of 15,000 lbs/hr or greater. **[45CSR6 §4.1]**

ii. No person shall cause, suffer, allow or permit emission of smoke into the atmosphere from any incinerator which is twenty (20%) percent opacity or greater. **[45CSR6 §4.3]**

iii. The provisions of paragraph (i) shall not apply to smoke which is less than forty (40%) percent opacity, for a period or periods aggregating no more than eight (8) minutes per start-up. **[45CSR6 §4.4]**

iv. No person shall cause or allow the emission of particles of unburned or partially burned refuse or ash from any incinerator which are large enough to be individually distinguished in the open air. **[45CSR6 §4.5]**

v. Incinerators, including all associated equipment and grounds, shall be designed, operated and maintained so as to prevent the emission of objectionable odors. **[45CSR6 §4.6]**

vi. Due to unavoidable malfunction of equipment, emissions exceeding those provided for in this rule may be permitted by the Director for periods not to exceed five (5) days upon specific application to the Director. Such application shall be made within twenty-four (24) hours of the malfunction. In cases of major equipment failure, additional time periods may be granted by the Director provided a corrective program has been submitted by the owner or operator and approved by the Director. **[45CSR6 §8.2]**

8.1.9 To demonstrate compliance with Section 8.1.11, the quantity of waste gas that shall be consumed in the vapor combustion units (VCU-1/VCU-2) shall not exceed 143,000 cubic feet per day. Compliance with the gas throughput limit shall be demonstrated using a rolling 12-month total.

8.1.10. Maximum emissions from the vapor combustion units (VCU-1/VCU-2) shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Volatile Organic Compounds	16.14	4.78
Nitrogen Oxides	1.22	0.36
Carbon Monoxide	6.64	1.90
Particulate Matter-10	0.04	0.02

8.2. Monitoring Requirements

8.2.1. The permittee shall operate the vapor combustion units (VCU-1/VCU-2) with no visible emissions and have a constant pilot flame at all times that waste gas is directed to it. The pilot flame shall be continuously monitored by a thermocouple or any other equivalent device. Each monitoring device shall be accurate to, and shall be calibrated at a frequency in accordance with manufacturer's specifications.

8.2.2. The permittee shall monitor the throughput to the vapor combustion units (VCU-1/VCU-2) on a monthly basis.

8.2.3. To demonstrate compliance with the flame requirements of sections 8.1.5 and 8.1.6, the presence of a flame shall be continuously monitored using a thermocouple or any other equivalent device to detect the presence of a flame.

8.2.4. To demonstrate compliance with section 8.1.3, the permittee shall monitor the vapor combustion units (VCU-1/VCU-2) in accordance with the plans and specifications and manufacturer's recommendations.

8.3. Testing Requirements

8.3.1. The permittee shall conduct a Method 22 opacity test on the vapor combustion units (VCU-1/VCU-2) for at least two hours. This test shall demonstrate no visible emissions are observed for more than a total of 5 minutes during any 2 consecutive hour period using 40CFR60 Appendix A Method 22. The permittee shall conduct this test within one (1) year of permit issuance or initial startup whichever is later. The visible emission checks shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40 CFR part 60, appendix A, Method 22 or from the lecture portion of 40 CFR part 60, appendix A, Method 9 certification course.

8.3.2. 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 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. **[45CSR6 §7.1]**

8.3.3. The Secretary may conduct such other tests as the Secretary may deem necessary to evaluate air pollution emissions other than those noted above. **[45CSR6 §7.2]**

8.3.4. For the purpose of demonstrating compliance with sections 8.1.3, the permittee shall maintain records of the NSPS Annual Leak Tests of all trucks loaded with condensate at the facility.

8.4. Recordkeeping Requirements

8.4.1. For the purpose of demonstrating compliance with section 8.2.1, the permittee shall maintain records of the times and duration of all periods which the pilot flame was absent.

8.4.2. For the purpose of demonstrating compliance with section 8.3.1, the permittee shall maintain records of the visible emission opacity tests.

8.4.3. For the purpose of demonstrating compliance with sections 8.1.4 and 8.2.2, the permittee shall maintain records of the volumes of condensate and produced water loaded into trucks and the amount of vapors routed to the vapor combustor on a monthly basis. In addition, the permittee shall maintain records of condensate sales and brine disposal on a monthly basis.

8.4.4. All records required under Section 8.4 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 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.

8.4.5. *Record of Maintenance of Air Pollution Control Equipment.* The permittee shall maintain accurate records of the VCU (2C) equipment inspection and/or preventative maintenance procedures.

8.4.6. *Record of Malfunctions of Air Pollution Control Equipment.* The permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the VCU (2C) 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.

8.5. Reporting Requirements

8.5.1 Any deviation(s) of the allowable visible emission requirement for any emission source discovered during observations using 40CFR Part 60, Appendix A, Method 9 must be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.

8.5.2. Upon request by the Director, the permittee shall report deviations within a requested time from of any occurrences when the control device was operated outside of the parameters defined in the monitoring plan.

9.0. Source-Specific Requirements (40CFR60 Subpart JJJJ Requirements (CE-1, CE-2, CE-3, CE-4, GN-1, GN-2, GN-3))

9.1. Limitations and Standards

9.1.1. Owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards in Table 1 to this subpart for their stationary SI ICE. For owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 100 HP (except gasoline and rich burn engines that use LPG) manufactured prior to January 1, 2011 that were certified to the certification emission standards in 40 CFR part 1048 applicable to engines that are not severe duty engines, if such stationary SI ICE was certified to a carbon monoxide (CO) standard above the standard in Table 1 to this subpart, then the owners and operators may meet the CO certification (not field testing) standard for which the engine was certified. **[§ 60.4233(e)] Engines CE-1, CE-2, CE-3, CE-4, GN-3**

9.1.2. Owners and operators of stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) manufactured on or after July 1, 2008, must comply with the emission standards in §60.4231(a) for their stationary SI ICE. **[§ 60.4233(a)] Engines GN-1, GN-2**

9.1.3. Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) manufactured on or after July 1, 2008 to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 1054, as follows:

If engine displacement is * * *	and manufacturing dates are * * *	the engine must meet emission standards and related requirements for nonhandheld engines under * * *
(1) below 225 cc	July 1, 2008 to December 31, 2011	40 CFR part 90.
(2) below 225 cc	January 1, 2012 or later	40 CFR part 1054.
(3) at or above 225 cc	July 1, 2008 to December 31, 2010	40 CFR part 90.
(4) at or above 225 cc	January 1, 2011 or later	40 CFR part 1054.

[§ 60.4231(a)] Engines GN-1, GN-2

9.1.4. Owners and operators of stationary SI ICE must operate and maintain stationary SI ICE that achieve the emission standards as required in § 60.4233 over the entire life of the engine. **[§ 60.4234] Engines CE-1, CE-2, CE-3, CE-4, GN-3**

9.2. Compliance Requirements

9.2.1. If you are an owner or operator of a stationary SI internal combustion engine and must comply with the emission standards specified in § 60.4233(d) or (e), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) and (2) of this section. **[§ 60.4243(b)] Engines CE-1, CE-2, CE-3, CE-4, GN-3**

9.2.2. Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in § 60.4233(d) or (e) and according to the requirements specified in § 60.4244, as applicable, and according to paragraphs (b)(2)(i) and (ii) of this section. **[§ 60.4243(b)(2)] Engines CE-1, CE-2, CE-3, CE-4, GN-3**

9.2.3. If you are an owner or operator of a stationary SI internal combustion engine greater than 25 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted

maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance. **[§ 60.4243(b)(2)(i)] Engines CE-1, CE-2, CE-3, CE-4, GN-3**

9.2.4. If you are an owner or operator of a stationary SI internal combustion engine less than 100 HP, you must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions, but no performance testing is required if you are an owner or operator. **[§ 60.4243(a)(2)(i)] Engines GN-1, GN-2**

9.2.5. If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test within 1 year of engine startup and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance. **[§ 60.4243(a)(2)(iii)] Engine GN-3**

9.2.6. If you are an owner or operator of a stationary SI internal combustion engine that is less than or equal to 500 HP and you purchase a non-certified engine or you do not operate and maintain your certified stationary SI internal combustion engine and control device according to the manufacturer's written emission-related instructions, you are required to perform initial performance testing as indicated in this section, but you are not required to conduct subsequent performance testing unless the stationary engine is rebuilt or undergoes major repair or maintenance. A rebuilt stationary SI ICE means an engine that has been rebuilt as that term is defined in 40 CFR 94.11(a). **[§ 60.4243(f)] Engines CE-1, CE-2, CE-3, CE-4**

9.2.7. It is expected that air-to-fuel ratio controllers will be used with the operation of three-way catalysts/non-selective catalytic reduction. The AFR controller must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times. **[§ 60.4243(g)] Engines CE-1, CE-2, CE-3, CE-4**

9.3. Testing Requirements

9.3.1. Owners and operators of stationary SI ICE who conduct performance tests must follow the procedures in paragraphs (a) through (f) of this section.

a. Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in §60.8 and under the specific conditions that are specified by Table 2 to this subpart. **[40CFR§60.4244(a)]**

b. You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c). If your stationary SI internal combustion engine is non-operational, you do not need to startup the engine solely to conduct a performance test; however, you must conduct the performance test immediately upon startup of the engine. **[40CFR§60.4244(b)]**

c. You must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour. **[40CFR§60.4244(c)]**

d. To determine compliance with the NO_X mass per unit output emission limitation, convert the concentration of NO_X in the engine exhaust using Equation 1 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{HP - hr} \qquad \text{(Eq. 1)}$$

Where:
ER = Emission rate of NO_X in g/HP-hr.

C_d= Measured NO_X concentration in parts per million by volume (ppmv).

1.912×10^{-3} = Conversion constant for ppm NO_X to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, horsepower-hour (HP-hr).

[40CFR§60.4244(d)]

e. To determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using Equation 2 of this section:

$$ER = \frac{C_d \times 1.164 \times 10^{-3} \times Q \times T}{HP - hr} \qquad \text{(Eq. 2)}$$

Where:
ER = Emission rate of CO in g/HP-hr.

C_d= Measured CO concentration in ppmv.

1.164×10^{-3} = Conversion constant for ppm CO to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

[40CFR§60.4244(e)]

f. For purposes of this subpart, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of this section:

$$ER = \frac{C_d \times 1.833 \times 10^{-3} \times Q \times T}{HP - hr} \qquad \text{(Eq. 3)}$$

Where:
ER = Emission rate of VOC in g/HP-hr.

C_d= VOC concentration measured as propane in ppmv.

1.833×10^{-3} = Conversion constant for ppm VOC measured as propane, to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

[40CFR§60.4244(f)]

g. If the owner/operator chooses to measure VOC emissions using either Method 18 of 40 CFR part 60, appendix A, or Method 320 of 40 CFR part 63, appendix A, then it has the option of correcting the measured VOC emissions to account for the potential differences in measured values between these methods and Method 25A. The results from Method 18 and Method 320 can be corrected for response factor differences using Equations 4 and 5 of this section. The corrected VOC concentration can then be placed on a propane basis using Equation 6 of this section.

$$RF_i = \frac{C_{Mi}}{C_{Ai}} \qquad \text{(Eq. 4)}$$

Where:
RF_i= Response factor of compound i when measured with EPA Method 25A.

C_{Mi}= Measured concentration of compound i in ppmv as carbon.

C_{Ai}= True concentration of compound i in ppmv as carbon.

$$C_{icorr} = RF_i \times C_{imeas} \qquad \text{(Eq. 5)}$$

Where:
C_{icorr}= Concentration of compound i corrected to the value that would have been measured by EPA Method 25A, ppmv as carbon.

C_{imeas}= Concentration of compound i measured by EPA Method 320, ppmv as carbon.

$$C_{Peq} = 0.6098 \times C_{icorr} \qquad \text{(Eq. 6)}$$

Where:
C_{Peq}= Concentration of compound i in mg of propane equivalent per DSCM.

[40CFR§60.4244(g)]

9.4. Notification, Reporting, Recordkeeping Requirements

9.4.1. Owners or operators of stationary SI ICE must meet the following notification, reporting and recordkeeping requirements.

(a) Owners and operators of all stationary SI ICE must keep records of the information in paragraphs (a)(1) through (4) of this section.

(1) All notifications submitted to comply with this subpart and all documentation supporting any notification.

(2) Maintenance conducted on the engine.

(3) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable.

(4) If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to § 60.4243(a)(2), documentation that the engine meets the emission standards. **[§ 60.4245(a)]**

9.4.2. Owners and operators of stationary SI ICE that are subject to performance testing must submit a copy of each performance test as conducted in § 60.4244 within 60 days after the test has been completed. **[§ 60.4245(d)]**

10.0. Source-Specific Requirements (40CFR60 Subpart OOOO Requirements, Gas Well Affected Facility (047-103-02784, 047-103-02785, 047-103-02788, 047-103-02789, 047-103-02893, 047-103-02894, 047-103-02895, and 047-103-02896))

10.1. Limitations and Standards

10.1.1 If you are the owner or operator of a gas well affected facility, you must comply with paragraphs (a) through (f) of this section. 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.

(a) (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.

(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).

(c) You must demonstrate initial compliance with the standards that apply to gas well affected facilities as required by § 60.5410.

(d) You must demonstrate continuous compliance with the standards that apply to gas well affected facilities as required by § 60.5415.

(e) You must perform the required notification, recordkeeping and reporting as required by §60.5420.

(f) (1) For each gas well affected facility specified in paragraphs (f)(1)(i) and (ii) of this section, you must comply with the requirements of paragraphs (f)(2) and (3) of this section.

(i) Each well completion operation with hydraulic fracturing at a gas well affected facility meeting the criteria for a wildcat or delineation well.

(ii) Each well completion operation with hydraulic fracturing at a gas well affected facility meeting the criteria for a non-wildcat low pressure gas well or non-delineation low pressure gas well.

(2) 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. You must also comply with paragraphs (a)(4) and (b) through (e) of this section.

(3) You must maintain records specified in § 60.5420(c)(1)(iii) for wildcat, delineation and low pressure gas wells.

[40CFR§60.5375]

10.2. Initial Compliance Demonstration

10.2.1. You must determine initial compliance with the standards for each affected facility using the requirements in paragraph (a) of this section. The initial compliance period begins on October 15, 2012 or upon initial startup, whichever is later, and ends no later than one year after the initial startup date for your affected facility or no later than one year after October 15, 2012. The initial compliance period may be less than one full year.

(a) To achieve initial compliance with the standards for each well completion operation conducted at your gas well affected facility you must comply with paragraphs (a)(1) through (a)(4) of this section.

(1) You must submit the notification required in § 60.5420(a)(2).

(2) You must submit the initial annual report for your well affected facility as required in § 60.5420(b).

(3) You must maintain a log of records as specified in § 60.5420(c)(1) for each well completion operation conducted during the initial compliance period.

(4) For each gas well affected facility subject to both § 60.5375(a)(1) and (3), you must maintain records of one or more digital photographs with the date the photograph was taken and the latitude and longitude of the well site imbedded within or stored with the digital file showing the equipment for storing or re-injecting recovered liquid, equipment for routing recovered gas to the gas flow line and the completion combustion device (if applicable) connected to and operating at each gas well completion operation that occurred during the initial compliance period. As an alternative to imbedded latitude and longitude within the digital photograph, the digital photograph may consist of a photograph of the equipment connected and operating at each well completion operation with a photograph of a separately operating GIS device within the same digital picture, provided the latitude and longitude output of the GIS unit can be clearly read in the digital photograph.

[40CFR§60.5410]

10.3. Continuous Compliance Demonstration

10.3.1. For each gas well affected facility, you must demonstrate continuous compliance by submitting the reports required by § 60.5420(b) and maintaining the records for each completion operation specified in § 60.5420(c)(1).

10.3.2. Affirmative defense for violations of emission standards during malfunction. In response to an action to enforce the standards set forth in §§ 60.5375, you may assert an affirmative defense to a claim for civil penalties for violations of such standards that are caused by malfunction, as defined at § 60.2. Appropriate penalties may be assessed, however, if you fail to meet your burden of proving all of the requirements in the affirmative defense. The affirmative defense shall not be available for claims for injunctive relief.

(1) To establish the affirmative defense in any action to enforce such a standard, you must timely meet the reporting requirements in § 60.5420(a), and must prove by a preponderance of evidence that:

(i) The violation:

(A) Was caused by a sudden, infrequent, and unavoidable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner; and

(B) Could not have been prevented through careful planning, proper design or better operation and maintenance practices; and

(C) Did not stem from any activity or event that could have been foreseen and avoided, or planned for; and

(D) Was not part of a recurring pattern indicative of inadequate design, operation, or maintenance; and

(ii) Repairs were made as expeditiously as possible when a violation occurred. Off-shift and overtime labor were used, to the extent practicable to make these repairs; and

(iii) The frequency, amount and duration of the violation (including any bypass) were minimized to the maximum extent practicable; and

(iv) If the violation resulted from a bypass of control equipment or a process, then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and

(v) All possible steps were taken to minimize the impact of the violation on ambient air quality, the environment and human health; and

(vi) All emissions monitoring and control systems were kept in operation if at all possible, consistent with safety and good air pollution control practices; and

(vii) All of the actions in response to the violation were documented by properly signed, contemporaneous operating logs; and

(viii) At all times, the affected source was operated in a manner consistent with good practices for minimizing emissions; and

(ix) A written root cause analysis has been prepared, the purpose of which is to determine, correct, and eliminate the primary causes of the malfunction and the violation resulting from the malfunction event at issue. The analysis shall also specify, using best monitoring methods

and engineering judgment, the amount of any emissions that were the result of the malfunction.

(2) Report. The owner or operator seeking to assert an affirmative defense shall submit a written report to the Administrator with all necessary supporting documentation, that it has met the requirements set forth in paragraph (h)(1) of this section. This affirmative defense report shall be included in the first periodic compliance, deviation report or excess emission report otherwise required after the initial occurrence of the violation of the relevant standard (which may be the end of any applicable averaging period). If such compliance, deviation report or excess emission report is due less than 45 days after the initial occurrence of the violation, the affirmative defense report may be included in the second compliance, deviation report or excess emission report due after the initial occurrence of the violation of the relevant standard.
[40CFR§60.5415]

10.4. Notification, Recordkeeping and Reporting Requirements

10.4.1. You must submit the notifications required in § 60.7(a)(1) and (4), and according to paragraphs (a)(1) and (2) of this section, if you own or operate one or more of the affected facilities specified in § 60.5365 that was constructed, modified, or reconstructed during the reporting period.

(1) If you own or operate a gas well, pneumatic controller or storage vessel affected facility you are not required to submit the notifications required in § 60.7(a)(1), (3), and (4).

(2) (i) If you own or operate a gas well affected facility, you must submit a notification to the Administrator no later than 2 days prior to the commencement of each well completion operation listing the anticipated date of the well completion operation. The notification shall include contact information for the owner or operator; the API well number, the latitude and longitude coordinates for each well in decimal degrees to an accuracy and precision of five (5) decimals of a degree using the North American Datum of 1983; and the planned date of the beginning of flowback. You may submit the notification in writing or in electronic format.

(ii) If you are subject to state regulations that require advance notification of well completions and you have met those notification requirements, then you are considered to have met the advance notification requirements of paragraph (a)(2)(i) of this section.
[40CFR§60.5420(a)]

10.4.2. Reporting requirements. You must submit annual reports containing the information specified in paragraphs (b)(1) through (6) of this section to the Administrator and performance test reports as specified in paragraph (b)(7) of this section. The initial annual report is due 30 days after the end of the initial compliance period as determined according to § 60.5410. Subsequent annual reports are due on the same date each year as the initial annual report. If you own or operate more than one affected facility, you may submit one report for multiple affected facilities provided the report contains all of the information required as specified in paragraphs (b)(1) through (6) of this section. Annual reports may coincide with title V reports as long as all the required elements of the annual report are included. You may arrange with the Administrator a common schedule on which reports required by this part may be submitted as long as the schedule does not extend the reporting period.

(1) The general information specified in paragraphs (b)(1)(i) through (iv) of this section.

(i) The company name and address of the affected facility.

(ii) An identification of each affected facility being included in the annual report.

(iii) Beginning and ending dates of the reporting period.

(iv) A certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(2) For each gas well affected facility, the information in paragraphs (b)(2)(i) through (ii) of this section.

(i) Records of each well completion operation as specified in paragraph (c)(1)(i) through (iv) of this section for each gas well affected facility conducted during the reporting period. In lieu of submitting the records specified in paragraph (c)(1)(i) through (iv), the owner or operator may submit a list of the well completions with hydraulic fracturing completed during the reporting period and the records required by paragraph (c)(1)(v) of this section for each well completion.

(ii) Records of deviations specified in paragraph (c)(1)(ii) of this section that occurred during the reporting period.

[40CFR§60.5420(b)]

10.4.3. Recordkeeping requirements. You must maintain the records identified as specified in § 60.7(f) and in paragraph (c)(1) of this section. All records must be maintained for at least 5 years.

(1) The records for each gas well affected facility as specified in paragraphs (c)(1)(i) through (v) of this section.

(i) Records identifying each well completion operation for each gas well affected facility;

(ii) Records of deviations in cases where well completion operations with hydraulic fracturing were not performed in compliance with the requirements specified in § 60.5375.

(iii) Records required in § 60.5375(b) or (f) for each well completion operation conducted for each gas well affected facility that occurred during the reporting period. You must maintain the records specified in paragraphs (c)(1)(iii)(A) and (B) of this section.

(A) For each gas well affected facility required to comply with the requirements of § 60.5375(a), you must record: The location of the well; the API well number; the duration of flowback; duration of recovery to the flow line; duration of combustion; duration of venting; and specific reasons for venting in lieu of capture or combustion. The duration must be specified in hours of time.

(B) For each gas well affected facility required to comply with the requirements of § 60.5375(f), you must maintain the records specified in paragraph (c)(1)(iii)(A) of this section except that you do not have to record the duration of recovery to the flow line.

(iv) For each gas well facility for which you claim an exception under § 60.5375(a)(3), you must record: The location of the well; the API well number; the specific exception claimed; the starting date and ending date for the period the well operated under the exception; and an explanation of why the well meets the claimed exception.

(v) For each gas well affected facility required to comply with both § 60.5375(a)(1) and (3), records of the digital photograph as specified in § 60.5410(a)(4).

[40CFR§60.5420(c)]

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

11.1. Limitations and Standards

11.1.1. The registrant is subject to the applicable provisions of this permit section 8.0 if you are the owner or operator of the onshore affected facilities listed in paragraphs (a) below for which you commence construction, modification or reconstruction after August 23, 2011.

a. For the natural gas production segment (between the wellhead and the point of custody transfer to the natural gas transmission and storage segment and not including natural gas processing plants), each pneumatic controller affected facility, which is a single continuous bleed natural gas-driven pneumatic controller operating at a natural gas bleed rate greater than 6 scfh. **[NSPS, Subpart OOOO; §60.5365 (d)(2)]**

11.1.2. For each pneumatic controller affected facility you must comply with the VOC standards, based on natural gas as a surrogate for VOC, in section 8.1.3 of this permit. Pneumatic controllers meeting the conditions in paragraph (a) of this section are exempt from this requirement.

a. The requirements of sections 8.1.3 of this permit is not required if you determine that the use of a pneumatic controller affected facility with a bleed rate greater than the applicable standard is required based on functional needs, including but not limited to response time, safety and positive actuation. However, you must tag such pneumatic controller with the month and year of installation, reconstruction or modification, and identification information that allows traceability to the records for than pneumatic controller, as required in section 8.4.1.(ii) of this permit. **[NSPS, Subpart OOOO; §60.5390 (a)]**

11.1.3. 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 or to the point of custody transfer to an oil pipeline must have a bleed rate less than or equal to 6 standard cubic feet per hour. **[NSPS, Subpart OOOO; §60.5390 (c)(1)]**

11.1.4. Each pneumatic controller affected facility at a location between the wellhead and a natural gas processing plant or to the point of custody transfer to an oil pipeline 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 section 8.4.1(iii) of this permit. **[NSPS, Subpart OOOO; §60.5390 (c)(2)]**

11.1.5. The registrant shall demonstrate initial compliance with standards that apply to pneumatic controller affected facilities as required by Section 8.1.8 of this permit. **[NSPS, Subpart OOOO; §60.5390 (d)]**

11.1.6. The registrant shall demonstrate continuous compliance with standards that apply to pneumatic controller affected facilities as required by section 8.1.9 of this permit. **[NSPS, Subpart OOOO; §60.5390 (e)]**

11.1.7. The registrant shall perform the required notification, recordkeeping, and reporting as required by sections 8.4.1 and 8.5.1 of this permit, except that you are not required to submit the notifications specified in §60.5420(a). **[NSPS, Subpart OOOO; §60.5390 (f)]**

11.1.8. *Initial Compliance.* To achieve initial compliance with emission standards for your pneumatic controller affected facility, the registrant shall comply with the requirements specified in paragraphs (1) through (6) of this section, as applicable.

1. You must demonstrate initial compliance by maintaining records as specified in section 8.4.1(ii) of this permit of your determination that the use of a pneumatic controller affected facility with a bleed rater greater than 6 standard cubic feet of gas per hour is required as specified in section 8.1.2(a) of this permit.

2. *Reserved.*

3. You own or operate a pneumatic controller affected facility located between the wellhead and a natural gas processing plant and the manufacturer's design specifications 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 section 8.1.4 of this permit.

5. You must include the information in paragraph (1) of this section and a listing of the pneumatic controller affected facilities specified in paragraphs (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 section 8.5.1 of this permit.

6. You must maintain the records as specified in section 8.4.1 of this permit for each pneumatic controller affected facility.
[NSPS, Subpart OOOO; §60.5410(d)]

11.1.9. *Continuous Compliance.* For each pneumatic controller affected facility, the registrant shall demonstrate continuous compliance according to paragraphs (1) through (3) of this section.

1. You must continuously operate the pneumatic controllers as required in section 8.1.2 of this permit.

2. You must submit the annual report as required in section 8.5.1 of this permit.

3. You must maintain records as required in section 8.4.1 of this permit.
[NSPS, Subpart OOOO; §60.5415(d)]

11.1.10. *Affirmative defense for violations of emission standards during malfunction.* In response to an action to enforce the standards set forth in § 60.5390, you may assert an affirmative defense to a claim for civil penalties for violations of such standards that are caused by malfunction, as defined at §60.2. Appropriate penalties may be assessed, however, if you fail to meet your burden of proving all of the requirements in the affirmative defense. The affirmative defense shall not be available for claims for injunctive relief.

1. To establish the affirmative defense in any action to enforce such a standard, you must timely meet the reporting requirements in section 8.1.10.2 of this permit and must prove by a preponderance of evidence that:

   i. The violation:

      A. Was caused by a sudden, infrequent, and unavoidable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner; and

      B. Could not have been prevented through careful planning, proper design or better operation and maintenance practices; and

C. Did not stem from any activity or event that could have been foreseen and avoided, or planned for; and

D. Was not part of a recurring pattern indicative of inadequate design, operation, or maintenance; and

ii. Repairs were made as expeditiously as possible when a violation occurred. Off-shift and overtime labor were used, to the extent practicable to make these repairs; and

iii. The frequency, amount and duration of the violation (including any bypass) were minimized to the maximum extent practicable; and

iv. If the violation resulted from a bypass of control equipment or a process, then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and

v. All possible steps were taken to minimize the impact of the violation on ambient air quality, the environment and human health; and

vi. All emissions monitoring and control systems were kept in operation if at all possible, consistent with safety and good air pollution control practices; and

vii. All of the actions in response to the violation were documented by properly signed, contemporaneous operating logs; and

viii. At all times, the affected source was operated in a manner consistent with good practices for minimizing emissions; and

ix. A written root cause analysis has been prepared, the purpose of which is to determine, correct, and eliminate the primary causes of the malfunction and the violation resulting from the malfunction event at issue. The analysis shall also specify, using best monitoring methods and engineering judgment, the amount of any emissions that were the result of the malfunction.

2. *Report.* The owner or operator seeking to assert an affirmative defense shall submit a written report to the Administrator with all necessary supporting documentation, that it has met the requirements set forth in paragraph (1) of this section. This affirmative defense report shall be included in the first periodic compliance, deviation report or excess emission report otherwise required after the initial occurrence of the violation of the relevant standard (which may be the end of any applicable averaging period). If such compliance, deviation report or excess emission report is due less than 45 days after the initial occurrence of the violation, the affirmative defense report may be included in the second compliance, deviation report or excess emission report due after the initial occurrence of the violation of the relevant standard. **[NSPS, Subpart OOOO; 40CFR§60.5415(h)]**

11.1.11. Any future amendments to 40 CFR Part 60, subpart OOOO shall supersede the subpart OOOO requirements contained in this general permit, amended September 23, 2013.

11.2. Monitoring Requirements

Reserved.

11.3. Testing Requirements

Reserved.

11.4. Recordkeeping Requirements

11.4.1. You must maintain the records identified as specified in §60.7(f). For each pneumatic controller affected facility, you must maintain the records identified in paragraphs (i) through (v) of this section. All records must be maintained either onsite or at the nearest local field office for at least 5 years.

i. Records of the date, location and manufacturer specifications for each pneumatic controller constructed, modified or reconstructed.

ii. Records of the demonstration that the use of pneumatic controller affected facilities with a natural gas bleed rate greater than the applicable standard are required and the reasons why.

iii. If the pneumatic controller is not located at a natural gas processing plant, records of the manufacturer's specifications indicating that the controller is designed such that natural gas bleed rate is less than or equal to 6 standard cubic feet per hour.

iv. If the pneumatic controller is located at a natural gas processing plant, records of the documentation that the natural gas bleed rate is zero.

v. Records of deviations in cases where the pneumatic controller was not operated in compliance with the requirements specified in §60.5390.
[NSPS, Subpart OOOO; §60.5420(c)(4)]

11.5. Reporting Requirements

11.5.1. The registrant shall submit annual reports containing the information specified in this section to the Administrator. The initial annual report is due no later than 90 days after the end of the initial compliance period as determined according to section 8.1.8 of this permit. Subsequent annual reports are due no later than the same date each year as the initial annual report. If you own or operate more than one affected facility, you may submit one report for multiple affected facilities provided the report contains all of the information required as specified in paragraphs (2) and (3) below. You may arrange with the Administrator a common schedule on which reports required by this part may be submitted as long as the schedule does not extend the reporting period.

1. The general information specified below:

i. The company name and address of the affected facility.

ii. An identification of each affected facility being included in the annual report.

iii. Beginning and ending dates of the reporting period.

iv. A certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
[NSPS, Subpart OOOO; §60.5420 (b) (1)]

2. For each pneumatic controller affected facility, the information specified in paragraphs (i) through (iii) of this section:

   i. An identification of each pneumatic controller constructed, modified or reconstructed during the reporting period, including the identification information specified in section 8.1.4 of this permit.

   ii. If applicable, documentation that the use of pneumatic controller affected facilities with a natural gas bleed rate greater than 6 standard cubic feet per hour are required and the reasons why.

   iii. Records of deviations specified in section 8.4.1 (v) of this permit that occurred during the reporting period.
   [NSPS, Subpart OOOO; §60.5420(b)(5)]

3. All reports required by section 8.5 of the general permit must be sent to the Administrator at the appropriate address listed in §60.4 of this part. The Administrator or the delegated authority may request a report in any form suitable for the specific case (e.g., by commonly used electronic media such as Excel spreadsheet, on CD or hard copy).
   [NSPS, Subpart OOOO; §60.5420(b)(7)(ii)]

12.0. Source-Specific Requirements (40CFR63 Subpart ZZZZ Requirements (CE-1, CE-2, CE-3, CE-4, GN-1, GN-2, GN-3))

12.1. Limitations and Standards

12.1.1. The permittee must comply with the applicable operating limitations in this section no later than October 19, 2013.
[40 C.F.R. § 63.6595(a)]

12.1.2. *Stationary RICE subject to Regulation under 40 CFR Part 60.* An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

The permittee meets the criteria of paragraph (c)(1), which is for a new or reconstructed stationary RICE located at an area source. The permittee must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart JJJJ.
[40 C.F.R. § 63.6590(c)]

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. _____

[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.