West Virginia Department of Environmental Protection

Harold D. Ward
Cabinet Secretary

Permit to Operate

Pursuant to

Title V

of the Clean Air Act

Issued to:

EQM Gathering Opco, LLC
Saturn Compressor Station/Central Station, WV
R30-01700027-2022

Laura M. Crowder

Laura M. Crowder
Director, Division of Air Quality

Laura M. Crowder

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Date: 2022.04.26 10:03:36 -04'00'

Issued: April 26, 2022 • Effective: May 10, 2022
Expiration: April 26,2027 • Renewal Application Due: October 26, 2026

Permit Number: **R30-01700027-2022**
Permittee: **EQM Gathering Opco, LLC**
Facility Name: **Saturn Compressor Station**
Permittee Mailing Address: **2200 Energy Drive, Canonsburg, PA 15317**

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45CSR30 — Requirements for Operating Permits. The permittee identified at the above-referenced facility is authorized to operate the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Facility Location:	Central Station, Doddridge County, West Virginia
Facility Mailing Address:	Same as above
Telephone Number:	(412) 395-5592
Type of Business Entity:	LLC
Facility Description:	Natural Gas Gathering Facility
SIC Codes:	Primary 1311; Secondary NA; Tertiary NA
UTM Coordinates:	515.528 km Easting • 4,349.752 km Northing • Zone 17

Permit Writer: Frederick Tipane

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.

Issuance of this Title V Operating Permit does not supersede or invalidate any existing permits under 45CSR13, 14 or 19, although all applicable requirements from such permits governing the facility's operation and compliance have been incorporated into the Title V Operating Permit.

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1.0 Emission Units and Active R13, R14, and R19 Permits

1.1. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
CE001	E001	Caterpillar G3608 Compressor Engine S/N #BEN00574 (Manufactured 4/23/2009)	2018	2,370 bhp	C001 [1] Oxidation Catalyst
CE002	E002	Caterpillar G3608 Compressor Engine S/N #BEN00604 (Manufactured 7/25/2009)	2018	2,370 bhp	C002 [1] Oxidation Catalyst
CE003	E003	Caterpillar G3608 Compressor Engine	2010	2,370 bhp	C003 [1] Oxidation Catalyst
CE004	E004	Caterpillar G3608 Compressor Engine	2011	2,370 bhp	C004 [1] Oxidation Catalyst
CE006	E006	Caterpillar G3608 Compressor Engine S/N #BEN00584 (Manufactured 5/14/2009)	2018	2,370 bhp	C005 [1] Oxidation Catalyst
CE007	E007	Caterpillar G3616 Compressor Engine	2014	4,735 bhp	C006 [1] Oxidation Catalyst
CE008	E008	Caterpillar G3616 Compressor Engine	2014	4,735 bhp	C007 [1] Oxidation Catalyst
C2001	C2001	Capstone C200 Microturbine	2014	200 KW	None
C2002	C2002	Capstone C200 Microturbine	2014	200 KW	None
C2003	C2003	Capstone C200 Microturbine	2014	200 KW	None
C2004	C2004	Capstone C200 Microturbine	2014	200 KW	None
C2005	C2005	Capstone C200 Microturbine	2014	200 KW	None
HTR-3	HTR-3	Fuel Gas Heater	2010	0.38 MMBtu/hr	None
HTR-4	HTR-4	Fuel Gas Heater	2014	0.38 MMBtu/hr	None
HTR-5	HTR-5	Fuel Gas Heater	2014	0.38 MMBtu/hr	None
RBV-1	RBV-1	Reboiler	2010	1.54 MMBtu/hr	None
RSV-1	TO-1	Dehydration Unit	2010	65 MMscf/day	TO-1 (Thermal Oxidizer)
TO-1	TO-1	Thermal Oxidizer	2010	3.62 MMBtu/hr	NA
RBV-2	RBV-2	Reboiler	2012	1.54 MMBtu/hr	None
RSV-2	TO-2	Dehydration Unit	2012	130 MMscf/day	TO-2 (Thermal Oxidizer)
TO-2	TOxl-2	Thermal Oxidizer	2012	3.62 MMBtu/hr	NA
RBV-3	RBV-3	Reboiler	2014	2.31 MMBtu/hr	None
RSV-3	TO-3	Dehydration Unit	2014	130 MMscf/day	TO-3 (Thermal Oxidizer)

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
TO-3	TO-3	Thermal Oxidizer	2014	3.62 MMBtu/hr	NA
TO-4	TO-4	Pipeline Enclosed Flare	2014	41.0 MMBtu/hr	None
T01	T01	Produced Liquids Tank	2010	8,820 gallons	None
T02	T02	Produced Liquids Tank	2010	8,820 gallons	None
T03	T03	Waste Oil Tank	2010	4,200 gallons	None
T04A/B	T04A/B	Two (2) Lube Oil Tanks	2010	2,000 gallons (each)	None
T05	T05	Triethylene Glycol Tank	2010	2,000 gallons	None
T06	T06	Ethylene Glycol Tank	2010	2,000 gallons	None
T08	T08	Natural Gas Liquids Tank	2010	30,000 gallons	None
T09	T09	Natural Gas Liquids Tank	2010	30,000 gallons	None
T10	TO-4	Pipeline Liquid (Condensate) Tank	2012	8,820 gallons	TO-4 (Thermal Oxidizer) [2]
T11	T11	Natural Gas Liquids Tank	2011	30,000 gallons	None
T12	TO-4	Pipeline Liquid (Condensate) Tank	2012	8,820 gallons	TO-4 (Thermal Oxidizer) [2]
T13	T13	Methanol Tank	2010	2,000 gallons	None
T14A-C	T14A-C	Three (3) Methanol Tanks	2010	500 gallons (each)	None
T16	TO-4	Pipeline Liquid (Condensate) Tank	2014	8,820 gallons	TO-4 (Thermal Oxidizer) [2]
T17	TO-4	Pipeline Liquid (Condensate) Tank	2014	8,820 gallons	TO-4 (Thermal Oxidizer) [2]
T18	T18	Triethylene Glycol Tank	2014	2,000 gallons	None
T19	T19	Used Ethylene Glycol Tank	2014	250 gallons	None
T20A-G	T20A-G	Seven (7) Lube Oil Day Tanks	2014	300 gallons (each)	None
T21A-G	T21A-G	Seven (7) Cylinder Oil Day Tanks	2014	300 gallons (each)	None
T23	T23	New Triethylene Glycol Storage Tank	2014	2,000 gallons	None
T24	T24	Used Triethylene Glycol Tank	2014	2,000 gallons	None
T25	T25	Methanol Storage Tank	2014	2,000 gallons	None
T26	T26	Used Glycol Storage Tank	2014	2,000 gallons	None
T27	T27	Methanol Storage Tank	2014	4,000 gallons	None
T28	T28	Ice Check Tank	2014	4,000 gallons	None

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
T29A-C	T29A-C	Three (3) Dehy Produced Fluid Tanks	2010 2014	146 gallons (each)	None
BD	BD	Pigging/Blowdowns	2010	Varies	None

1 R13-3150 shows Oxidation Catalyst C001 for compressor engines CE001 through CE004 and CE006 and Oxidation Catalyst C002 for engines CE007 and CE008. However, each engine has its own oxidation catalyst. Therefore, the oxidation catalysts have been renumbered in the Title V permit.

2 Tanks normally in non-volatile service are controlled by Flare T04 when natural gas liquids are manually diverted to tanks due to breakdown or emergency in the NGL separation system.

1.2. Active R13, R14, and R19 Permits

The underlying authority for any conditions from R13, R14, and/or R19 permits contained in this operating permit is cited using the original permit number (e.g. R13-1234). The current applicable version of such permit(s) is listed below.

Permit Number	Date of Issuance
R13-3150B	June 21, 2018

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.

2.1.4. Unless otherwise specified in a permit condition or underlying rule or regulation, all references to a "rolling yearly total" shall mean the sum of the monthly data, values or parameters being measured, monitored, or recorded, at any given time for the previous twelve (12) consecutive calendar months.

2.2. Acronyms

CAAA	Clean Air Act Amendments	**NSPS**	New Source Performance Standards
CBI	Confidential Business Information	**PM**	Particulate Matter
CEM	Continuous Emission Monitor	**PM_{10}**	Particulate Matter less than 10μm in diameter
CES	Certified Emission Statement	**pph**	Pounds per Hour
C.F.R. *or* CFR	Code of Federal Regulations	**ppm**	Parts per Million
CO	Carbon Monoxide	**PSD**	Prevention of Significant Deterioration
C.S.R. *or* CSR	Codes of State Rules	**psi**	Pounds per Square Inch
DAQ	Division of Air Quality	**SIC**	Standard Industrial Classification
DEP	Department of Environmental Protection	**SIP**	State Implementation Plan
FOIA	Freedom of Information Act	**SO_2**	Sulfur Dioxide
HAP	Hazardous Air Pollutant	**TAP**	Toxic Air Pollutant
HON	Hazardous Organic NESHAP	**TPY**	Tons per Year
HP	Horsepower	**TRS**	Total Reduced Sulfur
lbs/hr *or* lb/hr	Pounds per Hour	**TSP**	Total Suspended Particulate
LDAR	Leak Detection and Repair	**USEPA**	United States Environmental Protection Agency
m	Thousand	**UTM**	Universal Transverse Mercator
MACT	Maximum Achievable Control Technology	**VEE**	Visual Emissions Evaluation
mm	Million	**VOC**	Volatile Organic Compounds
mmBtu/hr	Million British Thermal Units per Hour		
$mmft^3$/hr *or* mmcf/hr	Million Cubic Feet Burned per Hour		
NA *or* N/A	Not Applicable		
NAAQS	National Ambient Air Quality Standards		
NESHAPS	National Emissions Standards for Hazardous Air Pollutants		
NO_x	Nitrogen Oxides		

2.3. Permit Expiration and Renewal

2.3.1. Permit duration. This permit is issued for a fixed term of five (5) years and shall expire on the date specified on the cover of this permit, except as provided in 45CSR§30-6.3.b. and 45CSR§30-6.3.c.
[45CSR§30-5.1.b.]

2.3.2. A permit renewal application is timely if it is submitted at least six (6) months prior to the date of permit expiration.
[45CSR§30-4.1.a.3.]

2.3.3. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with 45CSR§30-6.2. and 45CSR§30-4.1.a.3.
[45CSR§30-6.3.b.]

2.3.4. If the Secretary fails to take final action to deny or approve a timely and complete permit application before the end of the term of the previous permit, the permit shall not expire until the renewal permit has been issued or denied, and any permit shield granted for the permit shall continue in effect during that time.
[45CSR§30-6.3.c.]

2.4. Permit Actions

2.4.1. This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
[45CSR§30-5.1.f.3.]

2.5. Reopening for Cause

2.5.1. This permit shall be reopened and revised under any of the following circumstances:

a. Additional applicable requirements under the Clean Air Act or the Secretary's legislative rules become applicable to a major source with a remaining permit term of three (3) or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 45CSR§§30-6.6.a.1.A. or B.

b. Additional requirements (including excess emissions requirements) become applicable to an affected source under Title IV of the Clean Air Act (Acid Deposition Control) or other legislative rules of the Secretary. Upon approval by U.S. EPA, excess emissions offset plans shall be incorporated into the permit.

c. The Secretary or U.S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

d. The Secretary or U.S. EPA determines that the permit must be revised or revoked and reissued to assure compliance with the applicable requirements.

[45CSR§30-6.6.a.]

2.6. Administrative Permit Amendments

2.6.1. The permittee may request an administrative permit amendment as defined in and according to the procedures specified in 45CSR§30-6.4.
[45CSR§30-6.4.]

2.7. Minor Permit Modifications

2.7.1. The permittee may request a minor permit modification as defined in and according to the procedures specified in 45CSR§30-6.5.a.
[45CSR§30-6.5.a.]

2.8. Significant Permit Modification

2.8.1. The permittee may request a significant permit modification, in accordance with 45CSR§30-6.5.b., for permit modifications that do not qualify for minor permit modifications or as administrative amendments.
[45CSR§30-6.5.b.]

2.9. Emissions Trading

2.9.1. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in the permit and that are in accordance with all applicable requirements.
[45CSR§30-5.1.h.]

2.10. Off-Permit Changes

2.10.1. Except as provided below, a facility may make any change in its operations or emissions that is not addressed nor prohibited in its permit and which is not considered to be construction nor modification under any rule promulgated by the Secretary without obtaining an amendment or modification of its permit. Such changes shall be subject to the following requirements and restrictions:

a. The change must meet all applicable requirements and may not violate any existing permit term or condition.

b. The permittee must provide a written notice of the change to the Secretary and to U.S. EPA within two (2) business days following the date of the change. Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change.

c. The change shall not qualify for the permit shield.

d. The permittee shall keep records describing all changes made at the source that result in emissions of regulated air pollutants, but not otherwise regulated under the permit, and the emissions resulting from those changes.

e. No permittee may make any change subject to any requirement under Title IV of the Clean Air Act (Acid Deposition Control) pursuant to the provisions of 45CSR§30-5.9.

f. No permittee may make any changes which would require preconstruction review under any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) pursuant to the provisions of 45CSR§30-5.9.

[45CSR§30-5.9.]

2.11. Operational Flexibility

2.11.1. The permittee may make changes within the facility as provided by § 502(b)(10) of the Clean Air Act. Such operational flexibility shall be provided in the permit in conformance with the permit application and applicable requirements. No such changes shall be a modification under any rule or any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) promulgated by the Secretary in accordance with Title I of the Clean Air Act and the change shall not result in a level of emissions exceeding the emissions allowable under the permit.
[45CSR§30-5.8]

2.11.2. Before making a change under 45CSR§30-5.8., the permittee shall provide advance written notice to the Secretary and to U.S. EPA, describing the change to be made, the date on which the change will occur, any changes in emissions, and any permit terms and conditions that are affected. The permittee shall thereafter maintain a copy of the notice with the permit, and the Secretary shall place a copy with the permit in the public file. The written notice shall be provided to the Secretary and U.S. EPA at least seven (7) days prior to the date that the change is to be made, except that this period may be shortened or eliminated as necessary for a change that must be implemented more quickly to address unanticipated conditions posing a significant health, safety, or environmental hazard. If less than seven (7) days notice is provided because of a need to respond more quickly to such unanticipated conditions, the permittee shall provide notice to the Secretary and U.S. EPA as soon as possible after learning of the need to make the change.
[45CSR§30-5.8.a.]

2.11.3. The permit shield shall not apply to changes made under 45CSR§30-5.8., except those provided for in 45CSR§30-5.8.d. However, the protection of the permit shield will continue to apply to operations and emissions that are not affected by the change, provided that the permittee complies with the terms and conditions of the permit applicable to such operations and emissions. The permit shield may be reinstated for emissions and operations affected by the change:

a. If subsequent changes cause the facility's operations and emissions to revert to those authorized in the permit and the permittee resumes compliance with the terms and conditions of the permit, or

b. If the permittee obtains final approval of a significant modification to the permit to incorporate the change in the permit.

[45CSR§30-5.8.c.]

2.11.4. "Section 502(b)(10) changes" are changes that contravene an express permit term. Such changes do not include changes that would violate applicable requirements or contravene enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
[45CSR§30-2.40]

2.12. Reasonably Anticipated Operating Scenarios

2.12.1. The following are terms and conditions for reasonably anticipated operating scenarios identified in this permit.

a. Contemporaneously with making a change from one operating scenario to another, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating and to document the change in reports submitted pursuant to the terms of this permit and 45CSR30.

b. The permit shield shall extend to all terms and conditions under each such operating scenario; and

c. The terms and conditions of each such alternative scenario shall meet all applicable requirements and the requirements of 45CSR30.

[45CSR§30-5.1.i.]

2.13. Duty to Comply

2.13.1. 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; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.
[45CSR§30-5.1.f.1.]

2.14. Inspection and Entry

2.14.1. 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.

[45CSR§30-5.3.b.]

2.15. Schedule of Compliance

2.15.1. For sources subject to a compliance schedule, certified progress reports shall be submitted consistent with the applicable schedule of compliance set forth in this permit and 45CSR§30-4.3.h., but at least every six (6) months, and no greater than once a month, and shall include the following:

a. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when such activities, milestones or compliance were achieved; and

b. An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measure adopted.

[45CSR§30-5.3.d.]

2.16. Need to Halt or Reduce Activity not a Defense

2.16.1. It shall not be a defense for a permittee in an enforcement action that it would 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.
[45CSR§30-5.1.f.2.]

2.17. Emergency

2.17.1. An "emergency" means any situation arising from sudden and reasonably 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.
[45CSR§30-5.7.a.]

2.17.2. 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 45CSR§30-5.7.c. are met.
[45CSR§30-5.7.b.]

2.17.3. 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. Subject to the requirements of 45CSR§30-5.1.c.3.C.1, 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, report, and variance request fulfills the requirement of 45CSR§30-5.1.c.3.B. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

[45CSR§30-5.7.c.]

2.17.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.
[45CSR§30-5.7.d.]

2.17.5. This provision is in addition to any emergency or upset provision contained in any applicable requirement.
[45CSR§30-5.7.e.]

2.18. Federally-Enforceable Requirements

2.18.1. All terms and conditions in this permit, including any provisions designed to limit a source's potential to emit and excepting those provisions that are specifically designated in the permit as "State-enforceable only", are enforceable by the Secretary, USEPA, and citizens under the Clean Air Act.
[45CSR§30-5.2.a.]

2.18.2. Those provisions specifically designated in the permit as “State-enforceable only” shall become “Federally-enforceable” requirements upon SIP approval by the USEPA.

2.19. Duty to Provide Information

2.19.1. 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 modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records required 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.
[45CSR§30-5.1.f.5.]

2.20. Duty to Supplement and Correct Information

2.20.1. 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.
[45CSR§30-4.2.]

2.21. Permit Shield

2.21.1. Compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance provided that such applicable requirements are included and are specifically identified in this permit or the Secretary has determined that other requirements specifically identified are not applicable to the source and this permit includes such a determination or a concise summary thereof. **[45CSR§30-5.6.a.]**

2.21.2. Nothing in this permit shall alter or affect the following:

a. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance; or

b. The applicable requirements of the Code of West Virginia and Title IV of the Clean Air Act (Acid Deposition Control), consistent with § 408 (a) of the Clean Air Act.

c. The authority of the Administrator of U.S. EPA to require information under § 114 of the Clean Air Act or to issue emergency orders under § 303 of the Clean Air Act.

[45CSR§30-5.6.c.]

2.22. Credible Evidence

2.22.1. 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 defenses otherwise available to the permittee including but not limited to any challenge to the credible evidence rule in the context of any future proceeding. **[45CSR§30-5.3.e.3.B.]**

2.23. Severability

2.23.1. The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid by a court of competent jurisdiction, the remaining permit terms and conditions or their application to other circumstances shall remain in full force and effect. **[45CSR§30-5.1.e.]**

2.24. Property Rights

2.24.1. This permit does not convey any property rights of any sort or any exclusive privilege. **[45CSR§30-5.1.f.4]**

2.25. Acid Deposition Control

2.25.1. Emissions shall not exceed any allowances that the source lawfully holds under Title IV of the Clean Air Act (Acid Deposition Control) or rules of the Secretary promulgated thereunder.

a. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid deposition control program, provided that such increases do not require a permit revision under any other applicable requirement.

b. No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement.

c. Any such allowance shall be accounted for according to the procedures established in rules promulgated under Title IV of the Clean Air Act.

[45CSR§30-5.1.d.]

2.25.2. Where applicable requirements of the Clean Air Act are more stringent than any applicable requirement of regulations promulgated under Title IV of the Clean Air Act (Acid Deposition Control), both provisions shall be incorporated into the permit and shall be enforceable by the Secretary and U. S. EPA.
[45CSR§30-5.1.a.2.]

3.0 Facility-Wide Requirements

3.1. Limitations and Standards

3.1.1. **Open burning.** The open burning of refuse by any person 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 or allow 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.
[40 C.F.R. §61.145(b) and 45CSR34]

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. **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]

3.1.6. **Emission inventory.** The permittee is responsible for submitting, on an annual basis, an emission inventory in accordance with the submittal requirements of the Division of Air Quality.
[W.Va. Code § 22-5-4(a)(14)]

3.1.7. **Ozone-depleting substances.** For those facilities performing maintenance, service, repair or disposal of appliances, the permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 C.F.R. Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:

a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the prohibitions and required practices pursuant to 40 C.F.R. §§ 82.154 and 82.156.

b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 C.F.R. § 82.158.

c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 C.F.R. § 82.161.

[40 C.F.R. 82, Subpart F]

3.1.8. **Risk Management Plan.** Should this stationary source, as defined in 40 C.F.R. § 68.3, become subject to Part 68, then the owner or operator shall submit a risk management plan (RMP) by the date specified in 40 C.F.R. § 68.10 and shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by 40 C.F.R. Part 70 or 71.
[40 C.F.R. 68]

3.1.9. No person shall cause, suffer, allow or permit fugitive particulate matter to be discharged beyond the boundary lines of the property on which the discharge originates or at any public or residential location, which causes or contributes to statutory air pollution
[45CSR§17-3.1; State Enforceable Only]

3.1.10. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate the control devices listed in Section 1.1 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.
[45CSR13, R13-3150 §4.1.2.]

3.2. Monitoring Requirements

3.2.1. 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, if applicable, in accordance with the Secretary's delegated authority and any established equivalency determination methods which are 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.

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 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.

3. A statement of compliance or non-compliance with each permit or rule condition.

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

3.4. Recordkeeping Requirements

3.4.1. **Monitoring information.** 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.

[45CSR§30-5.1.c.2.A.; 45CSR13, R13-3150 §4.1.1.]

3.4.2. **Retention of records.** The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of monitoring sample, measurement, report, application, or record creation date. Support information includes all calibration and maintenance records

and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Where appropriate, records may be maintained in computerized form in lieu of the above records.
[45CSR§30-5.1.c.2.B.; 45CSR13, R13-3150 §3.4.1.]

3.4.3. **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§30-5.1.c. State-Enforceable only.]

3.4.4. **Record of Malfunctions of Air Pollution Control Equipment.** For the control devices listed in Section 1.1, 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.

[45CSR13, R13-3150 §4.1.3.]

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.
[45CSR§§30-4.4. *and* 5.1.c.3.D.]

3.5.2. A permittee may request confidential treatment for the submission of reporting required under 45CSR§30-5.1.c.3. pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.
[45CSR§30-5.1.c.3.E.]

3.5.3. Except for the electronic submittal of the annual compliance certification and semi-annual monitoring reports to the DAQ and USEPA as required in 3.5.5 and 3.5.6 below, 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

or by private carrier with postage prepaid to the address(es), or submitted in electronic format by e-mail as set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

DAQ:

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

US EPA:

Section Chief
U. S. Environmental Protection Agency, Region III
Enforcement and Compliance Assurance Division
Air Section (3ED21)
1650 Arch Street
Philadelphia, PA 19103-2029

DAQ Compliance and Enforcement[1]:
DEPAirQualityReports@wv.gov

[1]For all self-monitoring reports (MACT, GACT, NSPS, etc.), stack tests and protocols, Notice of Compliance Status reports, Initial Notifications, etc.

3.5.4. **Certified emissions statement.** The permittee shall submit a certified emissions statement and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality. **[45CSR§30-8.]**

3.5.5. **Compliance certification.** The permittee shall certify compliance with the conditions of this permit on the forms provided by the DAQ. In addition to the annual compliance certification, the permittee may be required to submit certifications more frequently under an applicable requirement of this permit. The annual certification shall be submitted to the DAQ and USEPA on or before March 15 of each year, and shall certify compliance for the period ending December 31. The permittee shall maintain a copy of the certification on site for five (5) years from submittal of the certification. The annual certification shall be submitted in electronic format by e-mail to the following addresses:

DAQ:
DEPAirQualityReports@wv.gov

US EPA:
R3_APD_Permits@epa.gov

[45CSR§30-5.3.e.]

3.5.6. **Semi-annual monitoring reports.** The permittee shall submit reports of any required monitoring on or before September 15 for the reporting period January 1 to June 30 and on or before March 15 for the reporting period July 1 to December 31. All instances of deviation from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with 45CSR§30-4.4. The semi-annual monitoring reports shall be submitted in electronic format by e-mail to the following address:

DAQ:
DEPAirQualityReports@wv.gov

[45CSR§30-5.1.c.3.A.]

3.5.7. **Emergencies.** For reporting emergency situations, refer to Section 2.17 of this permit.

3.5.8. **Deviations.**

a. In addition to monitoring reports required by this permit, the permittee shall promptly submit supplemental reports and notices in accordance with the following:

1. Any deviation resulting from an emergency or upset condition, as defined in 45CSR§30-5.7., shall be reported by telephone or telefax within one (1) working day of the date on which the permittee becomes aware of the deviation, if the permittee desires to assert the affirmative defense in accordance with 45CSR§30-5.7. A written report of such deviation, which shall include the probable cause of such deviations, and any corrective actions or preventative measures taken, shall be submitted and certified by a responsible official within ten (10) days of the deviation.

2. Any deviation that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to the Secretary immediately by telephone or telefax. A written report of such deviation, which shall include the probable cause of such deviation, and any corrective actions or preventative measures taken, shall be submitted by the responsible official within ten (10) days of the deviation.

3. Deviations for which more frequent reporting is required under this permit shall be reported on the more frequent basis.

4. All reports of deviations shall identify the probable cause of the deviation and any corrective actions or preventative measures taken.

[45CSR§30-5.1.c.3.C.]

b. The permittee shall, in the reporting of deviations from permit requirements, including those attributable to upset conditions as defined in this permit, report the probable cause of such deviations and any corrective actions or preventive measures taken in accordance with any rules of the Secretary.
[45CSR§30-5.1.c.3.B.]

3.5.9. **New applicable requirements.** If any applicable requirement is promulgated during the term of this permit, the permittee will meet such requirements on a timely basis, or in accordance with a more detailed schedule if required by the applicable requirement.
[45CSR§30-4.3.h.1.B.]

3.6. Compliance Plan

3.6.1. Reserved.

3.7. Permit Shield

3.7.1. The permittee is hereby granted a permit shield in accordance with 45CSR§30-5.6. The permit shield applies provided the permittee operates in accordance with the information contained within this permit.

3.7.2. The following requirements specifically identified are not applicable to the source based on the determinations set forth below. The permit shield shall apply to the following requirements provided the conditions of the determinations are met.

a. None Requested.

4.0 Engines [emission point ID(s): *E001, E002, E003, E004, E006, E007, E008*]

4.1. Limitations and Standards

4.1.1. To demonstrate compliance with Section 4.1.2, the quantity of natural gas that shall be consumed in each of the five (5) 2,370 hp natural gas fired reciprocating engines, Caterpillar G3608 (CE001, CE002, CE003, CE004, CE006) shall not exceed 15,736 cubic feet per hour and 138 x 10^6 cubic feet per year for each engine. **[45CSR13, R13-3150 §5.1.1.]**

4.1.2. Maximum emissions from each of the five (5) 2,370 hp natural gas fired reciprocating engines, Caterpillar G3608 (CE001, CE002, CE003, CE004, CE006) shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	2.61	11.44
Carbon Monoxide	1.01	4.41
Volatile Organic Compounds	2.00	8.76
Formaldehyde	0.36	1.56

[45CSR13, R13-3150 §5.1.2.]

4.1.3. To demonstrate compliance with Section 4.1.4, the quantity of natural gas that shall be consumed in each of the two (2) 4,735 hp natural gas fired reciprocating engines, Caterpillar G3616 (CE007, CE008) shall not exceed 31,455 cubic feet per hour and 276 x 10^6 cubic feet per year for each engine.
[45CSR13, R13-3150 §5.1.3.]

4.1.4. Maximum emissions from each of the two (2) 4,735 hp natural gas fired reciprocating engines, Caterpillar G3616 (CE007, CE008) shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	5.22	22.86
Carbon Monoxide	2.01	8.80
Volatile Organic Compounds	4.69	20.54
Formaldehyde	0.46	2.02

[45CSR13, R13-3150 §5.1.4.]

4.1.5. Requirements for Use of Catalytic Reduction Devices

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

b. No person shall knowingly:

1. Remove or render inoperative any air pollution or auxiliary air pollution control device installed;

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; or

3. Cause or allow engine exhaust gases to bypass any catalytic reduction device.

[45CSR13, R13-3150 §5.1.5.]

4.1.6. 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 40 CFR 60 Subpart JJJJ for their stationary SI ICE as follows.

Emissions standards for engines: CE001, CE002, and CE006

Engine type and fuel	Maximum engine power	Manufacture dates	Emission standards [a] g/HP-hr		
			NOx	CO	VOC [d]
Non-Emergency SI Natural Gas	HP ≥ 500 HP	From 7/1/2007 until before 7/1/2010	2.0	4.0	1.0

Emissions standards for engines: CE003, CE004, CE007and CE008

Engine type and fuel	Maximum engine power	Manufacture date	Emission standards [a] g/HP-hr		
			NOx	CO	VOC [d]
Non-Emergency SI Natural Gas	HP ≥ 500 HP	7/1/2010	1.0	2.0	0.7

[a] Owners and operators of stationary non-certified SI engines may choose to comply with the emission standards in units of either g/HP-hr or ppmvd at 15 percent O_2.

[d] For purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

[45CSR13, R13-3150 §§6.2.1. and 6.2.2.; 45CSR16; 40 CFR §60.4233(e), Table 1 to 40 CFR 60 Subpart JJJJ]

4.1.7. 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.
[45CSR13, R13-3150 §6.2.3.; 45CSR16; 40 CFR §60.4234]

4.1.8. 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(e), you must demonstrate compliance according to the method specified below.

(1) Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in §60.4233(e) and according to the requirements specified in §60.4244, as applicable, and according to 40 CFR §60.4243(b)(2)(ii).

[45CSR13, R13-3150 §6.4.1.; 45CSR16; 40 CFR §60.4243(b)(2)]

4.1.9. If you own or operate an affected source, you must meet the applicable notification requirements in 40 CFR §63.6645 and in 40 CFR part 63, Subpart A.
[45CSR13, R13-3150 §7.2.2.; 45CSR34; 40 CFR §63.6595(c)]

4.1.10. Compliance with the numerical emission limitations established in 40 CFR 63 Subpart ZZZZ is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in 40 CFR §63.6620 and Table 4 to 40 CFR 63 Subpart ZZZZ.

a. If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2a to 40 CFR 63 Subpart ZZZZ and the operating limitations in Table 2b to 40 CFR 63 Subpart ZZZZ.

b. As stated in 40 CFR §§63.6600 and 63.6640, you must comply with the following emission limitations at 100 percent load plus or minus 10 percent except during periods of startup for each engine:

1. Reduce CO emissions by 93 percent or more; or

2. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O_2

c. As stated in 40 CFR §§63.6600, 63.6601, 63.6603, 63.6630, and 63.6640, you must comply with the following operating limitations except during periods of startup for each engine:

1. Maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and

2. Maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F. (Note: *Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range*.)

[45CSR13, R13-3150 §7.3.1.; 45CSR34; 40 CFR §63.6600(b), Table 2a Item2 and Table 2b Item 1 to 40 CFR 63 Subpart ZZZZ]

4.1.11. You must be in compliance with the emission limitations, operating limitations, and other requirements in this 40 CFR 63 Subpart ZZZZ that apply to you at all times.
[45CSR13, R13-3150 §7.4.1.; 45CSR34; 40 CFR §63.6605(a)]

4.1.12. At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.
[45CSR13, R13-3150 §7.4.2.; 45CSR34; 40 CFR §63.6605(b)]

4.1.13. If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of 40 CFR 63 Subpart ZZZZ, you must install, operate, and maintain each CPMS according to the requirements in this condition.

a. You must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in paragraphs §§a.1. through 5. of this condition and in 40 CFR §63.8(d). As specified in 40 CFR §63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified §a. through §e. of this condition in your site-specific monitoring plan.

1. The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;

2. Sampling interface (*e.g.,* thermocouple) location such that the monitoring system will provide representative measurements;

3. Equipment performance evaluations, system accuracy audits, or other audit procedures;

4. Ongoing operation and maintenance procedures in accordance with provisions in 40 CFR §63.8(c)(1)(ii) and (c)(3); and

5. Ongoing reporting and recordkeeping procedures in accordance with provisions in 40 CFR §63.10(c), (e)(1), and (e)(2)(i).

b. You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan.

c. The CPMS must collect data at least once every 15 minutes (see also 40 CFR §63.6635).

d. For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.

e. You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually.

f. You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.

[45CSR13, R13-3150 §7.6.1.; 45CSR34; 40 CFR §63.6625(b)]

4.1.14. You must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Table 2a to 40 CFR 63 Subpart ZZZZ apply.
[45CSR13, R13-3150 §7.6.2.; 45CSR34; 40 CFR §63.6625(h)]

4.1.15. Table 8 to 40 CFR 63 Subpart ZZZZ shows which parts of the General Provisions in §§63.1 through 63.15 apply to you.
[45CSR13, R13-3150 §7.12.1.; 45CSR34; 40 CFR §63.6665]

4.2. Monitoring Requirements

4.2.1. 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.

[45CSR13, R13-3150 §5.2.1.]

4.2.2. If you must comply with emission and operating limitations, you must monitor and collect data according to 40 CFR §63.6635 (i.e., this condition).

a. Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, you must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

b. You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

[45CSR13, R13-3150 §§7.8.1., 7.8.2. and 7.8.3; 45CSR34; 40 CFR §63.6635]

4.2.3. You must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Tables 2a and 2b, to this 40 CFR 63 Subpart ZZZZ that apply to you according to methods specified in Table 6 to 40 CFR 63 Subpart ZZZZ.

a. To comply with the requirements to reduce CO emissions and using an oxidation catalyst, and using a CPMS, you must demonstrate continuous compliance by:

1. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved[a]; and

2. Collecting the catalyst inlet temperature data according to 40 CFR §63.6625(b); and

3. Reducing these data to 4-hour rolling averages; and

4. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and

5. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.

[a]After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[45CSR13, R13-3150 §7.8.4.; 45CSR34; 40 CFR §63.6640(a), and Table 6 Item 1 to 40 CFR 63 Subpart ZZZZ]

4.3. Testing Requirements

4.3.1. Also See Facility-Wide Testing Requirements Section 3.4.
[45CSR13, R13-3150 §5.3.1.]

4.3.2. 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 40 CFR 60 Subpart JJJJ.

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.

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.

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

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

Where:

ER = Emission rate of NOx in g/HP-hr.

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

1.912×10^{-3} = Conversion constant for ppm NOx 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).

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:

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

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.

f. For purposes of 40 CFR 60 Subpart JJJJ, 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:

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

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.

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.

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

Where:

RFi = 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.

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

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.

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

Where:

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

[45CSR13, R13-3150 §6.5.1.; 45CSR16; 40 CFR §60.4244 and Table 2 to 40 CFR 60 Subpart JJJJ]

4.3.3. You must conduct the initial performance test or other initial compliance demonstrations in Table 4 to 40 CFR 63 Subpart ZZZZ that apply to you within 180 days after the compliance date that is specified for your stationary RICE in 40 CFR §63.6595 and according to the provisions in 40 CFR §63.7(a)(2).
[45CSR13, R13-3150 §7.5.2.; 45CSR34; 40 CFR §63.6610(a)] (*CE001, CE002, CE003, CE004, CE006*)

4.3.4. During the initial performance test, you must establish each operating limitation in Table 2b of 40 CFR 63 Subpart that applies to you.
[45CSR13, R13-3150 §7.7.2.; 45CSR34; 40 CFR §63.6630(b)] (*CE001, CE002, CE003, CE004, CE006*)

4.3.5. An owner or operator is not required to conduct an initial performance test on units for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (a) through (e) of this condition.

a. The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

b. The test must not be older than 2 years.

c. The test must be reviewed and accepted by the Administrator.

d. Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

e. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

[45CSR13, R13-3150 §7.5.3.; 45CSR34; 40 CFR §63.6610(d)] (*CE001, CE002, CE003, CE004, CE006*)

4.3.6. You must conduct performance tests to comply with the CO emissions reduction (i.e., 93 percent or more reduction) semiannually. After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests. You must:

a. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device;

1. For CO and O_2 measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (`3-point long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A-1, the duct may be sampled at `3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4.

b. Measure the O_2 at the inlet and outlet of the control device using Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)[a] (heated probe not necessary). Measurements to determine O_2 must be made at the same time as the measurements for CO concentration.

c. Measure the CO at the inlet and the outlet of the control device using ASTM D6522-00 (Reapproved 2005)[ab] (heated probe not necessary) or Method 10 of 40 CFR part 60, appendix A-4. The CO concentration must be at 15 percent O_2, dry basis.

[a]You may also use Methods 3A and 10 as options to ASTM-D6522-00 (2005). You may obtain a copy of ASTMD6522- 00 (2005) from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106

[b]You may obtain a copy of ASTM-D6348-03 from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

[45CSR13, R13-3150 §§7.5.2., 7.5.4., 7.5.5.; 45CSR34; 40 CFR §63.6615, §63.6620(a), Table 3 Item 1 and Table 4 Item 1 to 40 CFR 63 Subpart ZZZZ]

4.3.7. Each performance test must be conducted according to the requirements that 40 CFR 63 Subpart ZZZZ specifies in Table 4 to Subpart ZZZZ. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load. **[45CSR13, R13-3150 §7.5.6.; 45CSR34; 40 CFR §63.6620(b)]**

4.3.8. You must conduct three separate test runs for each performance test required, as specified in §63.7(e)(3). Each test run must last at least 1 hour, unless otherwise specified in 40 CFR 63 Subpart ZZZZ. **[45CSR13, R13-3150 §7.5.7.; 45CSR34; 40 CFR §63.6620(d)]**

4.3.9. You must use Equation 1 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \qquad (Eq. 1)$$

Where:

C_i = concentration of carbon monoxide (CO), total hydrocarbons (THC), or formaldehyde at the control device inlet,

C_o = concentration of CO, THC, or formaldehyde at the control device outlet, and

R = percent reduction of CO, THC, or formaldehyde emissions.

[45CSR13, R13-3150 §7.5.8.; 45CSR34; 40 CFR §63.6620(e)(1)]

4.3.10. You must normalize the CO, THC, or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO_2). If pollutant concentrations are to be corrected to 15 percent oxygen and CO_2 concentration is measured in lieu of oxygen concentration measurement, a CO_2 correction factor is needed. Calculate the CO_2 correction factor as described in this condition.

a. Calculate the fuel-specific F_o value for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation:

$$F_o = \frac{0.209\ F_d}{F_c} \qquad (Eq. 2)$$

Where:

F_o = Fuel factor based on the ratio of oxygen volume to the ultimate CO_2 volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is oxygen, percent/100.

F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm^3/J ($dscf/10^6$ Btu).

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm^3/J ($dscf/10^6$ Btu)

b. Calculate the CO_2 correction factor for correcting measurement data to 15 percent O_2, as follows:

$$X_{CO2} = \frac{5.9}{F_o} \quad (Eq. 3)$$

Where:

X_{CO2} = CO_2 correction factor, percent.

5.9 = 20.9 percent O_2—15 percent O_2, the defined O_2 correction value, percent.

c. Calculate the CO, THC, and formaldehyde gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

$$C_{adj} = C_d \frac{X_{CO2}}{\%CO_2} \quad (Eq. 4)$$

Where:

C_{adj} = Calculated concentration of CO, THC, or formaldehyde adjusted to 15 percent O_2.

C_d = Measured concentration of CO, THC, or formaldehyde, uncorrected.

X_{CO2} = CO_2 correction factor, percent.

$\%CO_2$ = Measured CO_2 concentration measured, dry basis, percent.

[45CSR13, R13-3150 §7.5.8.(2); 45CSR34; 40 CFR §63.6620(e)(2)]

4.3.11. If you are required to conduct a performance test, you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in 40 CFR §63.7(b)(1).
[45CSR13, R13-3150 §7.9.5.; 45CSR34; 40 CFR §63.6645(g)]

4.4. Recordkeeping Requirements

4.4.1. To demonstrate compliance with sections 4.1.1 – 4.1.4, the permittee shall maintain records of the amount of natural gas consumed in each engine and the hours of operation of each engine.
[45CSR13, R13-3150 §5.4.1.]

4.4.2. To demonstrate compliance with section 4.1.5, the permittee shall maintain records of the maintenance performed on each engine.
[45CSR13, R13-3150 §5.4.2.]

4.4.3. If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain

and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.
[45CSR13, R13-3150 §6.4.1.2.ii.; 45CSR16; 40 CFR §60.4243(b)(2)(ii)]

4.4.4. Owners and operators of all stationary SI ICE must keep records of the information below.

a. All notifications submitted to comply with 40 CFR 60 Subpart JJJJ and all documentation supporting any notification.

b. Maintenance conducted on the engine.

c. 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 40 CFR §60.4243(a)(2), documentation that the engine meets the emission standards.

[45CSR13, R13-3150 §6.6.1.a.; 45CSR16; 40 CFR §§60.4245(a)(1), (2), (4)]

4.4.5. The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.
[45CSR13, R13-3150 §7.5.10.; 45CSR34; 40 CFR §63.6620(i)]

4.4.6. If you must comply with the emission and operating limitations, you must keep the following records.

a. A copy of each notification and report that you submitted to comply with 40 CFR 63 Subpart ZZZZ, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in 40 CFR §63.10(b)(2)(xiv).

b. Records of the occurrence and duration of each malfunction of operation (*i.e.,* process equipment) or the air pollution control and monitoring equipment.

c. Records of performance tests and performance evaluations as required in 40 CFR §63.10(b)(2)(viii).

d. Records of all required maintenance performed on the air pollution control and monitoring equipment.

e. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

[45CSR13, R13-3150 §7.11.1.; 45CSR34; 40 CFR §63.6655(a)]

4.4.7. For each CPMS, you must keep the following records.

a. Records described in 40 CFR §63.10(b)(2)(vi) through (xi).

b. Previous (*i.e.*, superseded) versions of the performance evaluation plan as required in 40 CFR §63.8(d)(3).

c. Requests for alternatives to the relative accuracy test for CPMS as required in 40 CFR §63.8(f)(6)(i), if applicable.

[45CSR13, R13-3150 §7.11.2.; 45CSR34; 40 CFR §63.6655(b)]

4.4.8. You must keep the records required in Table 6 of 40 CFR 63 Subpart ZZZZ to show continuous compliance with each emission or operating limitation that applies to you.
[45CSR13, R13-3150 §7.11.3.; 45CSR34; 40 CFR §63.6655(d)]

4.4.9. Your records must be in a form suitable and readily available for expeditious review according to 40 CFR §63.10(b)(1).
[45CSR13, R13-3150 §7.11.4.; 45CSR34; 40 CFR §63.6660(a)]

4.4.10. As specified in 40 CFR §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.
[45CSR13, R13-3150 §7.11.5.; 45CSR34; 40 CFR §63.6660(b)]

4.4.11. You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1).
[45CSR13, R13-3150 §7.11.6.; 45CSR34; 40 CFR §63.6660(c)]

4.5. Reporting Requirements

4.5.1. Also see Facility-Wide Reporting Requirements in Section 3.5.
[45CSR13, R13-3150 §5.5.1.]

4.5.2. Owners and operators of stationary SI ICE that are subject to performance testing must submit a copy of each performance test as conducted in 40 CFR §60.4244 within 60 days after the test has been completed.
[45CSR13, R13-3150 §6.6.1.d.; 45CSR16; 40 CFR §60.4245(d)]

4.5.3. You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in 40 CFR §63.6645. If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to 40 CFR 63 Subpart ZZZZ, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii).

a. For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

b. For each initial compliance demonstration required in Table 5 to this subpart that includes a performance test conducted according to the requirements in Table 3 to this subpart, you must submit the Notification

of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to §63.10(d)(2).

[45CSR13, R13-3150 §§7.7.1., 7.7.3., 7.9.6; 45CSR34; 40 CFR §§63.6630(a) and (c), §63.6645(h)] (*CE001, CE002, CE003, CE004, CE006*)

4.5.4. You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 2a and 2b to 40 CFR 63 Subpart ZZZZ that apply to you. These instances are deviations from the emission and operating limitations in Subpart ZZZZ. These deviations must be reported according to the requirements in 40 CFR §63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.
[45CSR13, R13-3150 §7.8.5.; 45CSR34; 40 CFR §63.6640(b)]

4.5.5. You must also report each instance in which you did not meet the requirements in Table 8 to 40 CFR 63 Subpart ZZZZ that apply to you.
[45CSR13, R13-3150 §7.8.7.; 45CSR34; 40 CFR §63.6640(e)]

4.5.6. You must submit all of the notifications in 40 CFR §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified.
[45CSR13, R13-3150 §7.9.1.; 45CSR34; 40 CFR §63.6645(a)]

4.5.7. You must submit a compliance report Semiannually according to the requirements in 40 CFR §63.6650(b)(1)-(5) that contains;

a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in 40 CFR §63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or

b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in 40 CFR §63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in 40 CFR §63.8(c)(7), the information in 40 CFR §63.6650(e); or

c. If you had a malfunction during the reporting period, the information in 40 CFR§63.6650(c)(4).

[45CSR13, R13-3150 §7.10.1.; 45CSR34; 40 CFR §63.6650(a), Table 7 Item 1 to 40 CFR 63 Subpart ZZZZ]

4.5.8. Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 7 of 40 CFR 63 Subpart ZZZZ and according to the following requirements.

a. For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in 40 CFR §63.6595 and ending on June 30 or

December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in 40 CFR §63.6595.

b. For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in 40 CFR §63.6595.

c. For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

d. For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

e. For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR §70.6(a)(3)(iii)(A) or 40 CFR §71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (a) through (d) of this section.

f. For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in 40 CFR §63.6595 and ending on December 31.

g. For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in 40 CFR §63.6595.

h. For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.

i. For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

[45CSR13, R13-3150 §7.10.2.; 45CSR34; 40 CFR §63.6650(b)]

4.5.9. The Compliance report must contain the following information.

a. Company name and address.

b. Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

c. Date of report and beginning and ending dates of the reporting period.

d. If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report

must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with 40 CFR §63.6605(b), including actions taken to correct a malfunction.

e. If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

f. If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

[45CSR13, R13-3150 §7.10.3.; 45CSR34; 40 CFR §63.6650(c)]

4.5.10. For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in 40 CFR 63 Subpart ZZZZ, you must include the following information and information in paragraphs (c)(1) through (4) of 40 CFR §63.6650.

a. The date and time that each malfunction started and stopped.

b. The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

c. The date, time, and duration that each CMS was out-of-control, including the information in 40 CFR §63.8(c)(8).

d. The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

e. A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

f. A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

g. A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

h. An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.

i. A brief description of the stationary RICE.

j. A brief description of the CMS.

k. The date of the latest CMS certification or audit.

l. A description of any changes in CMS, processes, or controls since the last reporting period.

[45CSR13, R13-3150 §7.10.5.; 45CSR34; 40 CFR §63.6650(e)]

4.5.11. Each affected source that has obtained a Title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR §70.6 (a)(3)(iii)(A) or 40 CFR §71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR §70.6(a)(3)(iii)(A) or 40 CFR §71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority **[45CSR13, R13-3150 §7.10.6.; 45CSR34; 40 CFR §63.6650(f)]**

4.6. Compliance Plan

4.6.1. Reserved.

5.0 Reciprocating Compressors [emission point ID(s): *E001, E002, E003, E004, E006, E007, E008*]

5.1. Limitations and Standards

5.1.1. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source
[45CSR16; 40 CFR §60.5370(b)]

5.1.2. You must comply with the following standards for each reciprocating compressor affected facility.

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

1. Before the compressor has operated for 26,000 hours. The number of hours of operation must be continuously monitored beginning upon initial startup of your reciprocating compressor affected facility, or October 15, 2012, or the date of the most recent reciprocating compressor rod packing replacement, whichever is later.

2. Prior to 36 months from the date of the most recent rod packing replacement, or 36 months from the date of startup for a new reciprocating compressor for which the rod packing has not yet been replaced.

b. You must demonstrate initial compliance with standards that apply to reciprocating compressor affected facilities as required by 40 CFR §60.5410.

c. You must demonstrate continuous compliance with standards that apply to reciprocating compressor affected facilities as required by 40 CFR §60.5415.

d. You must perform the required notification, recordkeeping, and reporting as required by 40 CFR §60.5420.

[45CSR13, R13-3150 §8.1.1.; 45CSR16; 40 CFR §60.5385]

5.1.3. For each reciprocating compressor affected facility complying with §60.5385(a)(1) or (2), you must demonstrate continuous compliance according to paragraphs a. through c.

a. You must continuously monitor the number of hours of operation for each reciprocating compressor affected facility or track the number of months since initial startup, or October 15, 2012, or the date of the most recent reciprocating compressor rod packing replacement, whichever is later.

b. You must submit the annual report as required in 40 CFR §60.5420(b) and maintain records as required in 40 CFR §60.5420(c)(3).

c. You must replace the reciprocating compressor rod packing before the total number of hours of operation reaches 26,000 hours or the number of months since the most recent rod packing replacement reaches 36 months.

[45CSR13, R13-3150 §8.3.1.; 45CSR16; 40 CFR §60.5415(c)]

5.2. Monitoring Requirements

5.2.1. Reserved.

5.3. Testing Requirements

5.3.1. Reserved.

5.4. Recordkeeping Requirements

5.4.1. For each reciprocating compressors affected facility, you must maintain the records identified as specified in 40 CFR §60.7(f) and in this condition. All records required by 40 CFR 60 Subpart OOOO must be maintained either onsite or at the nearest local field office for at least 5 years.

a. Records of the cumulative number of hours of operation or number of months since initial startup or October 15, 2012, or the previous replacement of the reciprocating compressor rod packing, whichever is later.

b. Records of the date and time of each reciprocating compressor rod packing replacement, or date of installation of a rod packing emissions collection system and closed vent system as specified in 40 CFR §60.5385(a)(3).

c. Records of deviations in cases where the reciprocating compressor was not operated in compliance with the requirements specified in 40 CFR §60.5385.

[45CSR13, R13-3150 §8.4.3.; 45CSR16; 40 CFR §60.5420(c)(3)]

5.5. Reporting Requirements

5.5.1. You must submit annual reports containing the information specified in paragraphs a. and b. of this section to the Administrator and performance test reports as specified in paragraph c. of this section. Annual reports are due no later than 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 a. and b. 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 40 CFR Part 60 may be submitted as long as the schedule does not extend the reporting period.

a. The following general information specified.

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

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

3. Beginning and ending dates of the reporting period.

4. A certification by a certifying 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.

b. For each reciprocating compressor affected facility, the following information specified.

1. The cumulative number of hours of operation or the number of months since initial startup, since October 15, 2012, or since the previous reciprocating compressor rod packing replacement, whichever is later.

2. Records of deviations specified in condition 5.4.1.c. that occurred during the reporting period.

c. Within 60 days after the date of completing each performance test (see 40 CFR §60.8) as required by 40 CFR 60 Subpart OOOO, except testing conducted by the manufacturer as specified in 40 CFR §60.5413(d), you must submit the results of the performance tests required by Subpart OOOO to the EPA as follows. You must use the latest version of the EPA's Electronic Reporting Tool (ERT) (see *http://www.epa.gov/ttn/chief/ert/index.html*) existing at the time of the performance test to generate a submission package file, which documents the performance test. You must then submit the file generated by the ERT through the EPA's Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed by logging in to the EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/*). Only data collected using test methods supported by the ERT as listed on the ERT Web site are subject to this requirement for submitting reports electronically. Owners or operators who claim that some of the information being submitted for performance tests is confidential business information (CBI) must submit a complete ERT file including information claimed to be CBI on a compact disk or other commonly used electronic storage media (including, but not limited to, flash drives) to EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT file with the CBI omitted must be submitted to EPA via CDX as described earlier in this paragraph. At the discretion of the delegated authority, you must also submit these reports, including the confidential business information, to the delegated authority in the format specified by the delegated authority. For any performance test conducted using test methods that are not listed on the ERT Web site, the owner or operator shall submit the results of the performance test to the Administrator at the appropriate address listed in §60.4.

All reports, required by 40 CFR 60 Subpart OOOO not subject to the requirements in 40 CFR §60.5420(a)(2)(i) must be sent to the Administrator at the appropriate address listed in 40 CFR §60.4. 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).

[45CSR13, R13-3150 §8.4.2.; 45CSR16; 40 CFR §§60.5420(b)(1), (4) and (7)]

5.6. Compliance Plan

5.6.1. Reserved.

6.0 Microturbines [emission point ID(s): *C2001, C2002, C2003, C2004, C2005*]

6.1. Limitations and Standards

6.1.1. To demonstrate compliance with condition 6.1.2., the quantity of natural gas that shall be consumed in each 200KWe natural gas fired microturbine generator, Capstone C200 (C2001 – C2005) shall not exceed 2,014 cubic feet per hour and 17.6 x 10^6 cubic feet per year for each engine.
[45CSR13, R13-3150 §9.1.1.]

6.1.2. Maximum emissions from each of the 200KWe natural gas fired microturbine generators, Capstone C200 (C2001 – C2005) shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	0.08	0.35
Carbon Monoxide	0.22	0.96
Volatile Organic Compounds	0.02	0.09

[45CSR13, R13-3150 §9.1.2.]

6.2. Monitoring Requirements

6.2.1. Reserved.

6.3. Testing Requirements

6.3.1. Reserved.

6.4. Recordkeeping Requirements

6.4.1. To demonstrate compliance with sections 6.1.1. and 6.1.2., the permittee shall maintain records of the amount of natural gas consumed in the microturbine generator and the hours of operation.
[45CSR13, R13-3150 §9.2.1.]

6.5. Reporting Requirements

6.5.1. Reserved.

6.6. Compliance Plan

6.6.1. Reserved.

7.0 Natural Gas Dehydration [emission point ID(s): *TO-1, TO-2, TO-3*]

7.1. Limitations and Standards

7.1.1. Maximum Throughput Limitation. The maximum wet natural gas throughput to the glycol dehydration units/still columns shall not exceed the following.

Emission Unit ID	Maximum Throughput Limitation
RSV-1	65MMscf/day
RSV-2	130 MMscf/day
RSV-3	130 MMscf/day

[45CSR13, R13-3150 §10.1.1.]

7.1.2. To help demonstrate compliance with Section 7.1.3.c, the quantity of waste gas that shall be consumed in enclosed flare combustor TO-1 shall not exceed 4,022 cubic feet per hour. To help demonstrate compliance with Section 7.1.3.c, the quantity of waste gas that shall be consumed in each enclosed flare combustor (TO-2 and TO-3) shall not exceed 9,210 cubic feet per hour. Compliance with the waste gas throughput limits shall be demonstrated using a rolling 12-month total.
[45CSR13, R13-3150 §10.1.2.]

7.1.3. The thermal oxidizers (TO-1, TO-2, and TO-3) shall be designed and operated in accordance with the following:

a. The permittee shall install the enclosed combustors (TO-1, TO-2, TO-3) to control VOC and HAP emissions from the glycol dehydration units/still columns (RSV-1, RSV-2, and RSV-3). The enclosed combustor TO-1, shall be designed and operated to achieve a minimum guaranteed control efficiency of 95% for volatile organic compounds (VOC) and hazardous air pollutants (HAP) emissions;

b. The thermal oxidizers (TO-1, TO-2, TO-3) shall be operated with a minimum residence time of 0.5 seconds at a minimum combustion chamber temperature of 1,400°F or establish during testing in accordance with 7.3.1. The combustion chamber temperature shall be monitored using a system to continuously measure and record the temperature of the combustion chamber;

c. Emissions from the thermal oxidizer shall not exceed the maximum hourly and annual emission limits set forth below.

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Yearly Emissions (tpy)
TO-1	Nitrogen Oxides	0.30	1.30
	Carbon Monoxide	0.25	1.09
	Particulate Matter* (PM/PM10)	0.02	0.10
	Volatile Organic Compounds	1.19	5.22
	Benzene	0.03	0.14
	Toluene	0.10	0.46

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Yearly Emissions (tpy)
	Ethylbenzene	0.02	0.08
	Xylenes	0.16	0.70
TO-2	Nitrogen Oxides	0.30	1.30
	Carbon Monoxide	0.25	1.09
	Particulate Matter* (PM/PM10)	0.02	0.10
	Volatile Organic Compounds	2.13	9.32
	Benzene	0.07	0.31
	Toluene	0.17	0.72
	Xylenes	0.21	0.92
TO-3	Nitrogen Oxides	0.30	1.30
	Carbon Monoxide	0.25	1.09
	Particulate Matter* (PM/PM10)	0.02	0.10
	Volatile Organic Compounds	2.13	9.32
	Benzene	0.07	0.31
	Toluene	0.17	0.72
	Xylenes	0.21	0.92

** Compliance with these streamlined particulate matter lb/hr emission limits will ensure compliance with the particulate matter allowable limits of 45CSR§6-4.1. and R13-3150 §10.1.7.*

d. The vapors/overheads from the still column and flash tank shall be routed through a closed vent system to the thermal oxidizers at all times when there is a potential that vapors (emissions) can be generated from the still column and/or flash tank.

e. The thermal oxidizers 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.

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

[45CSR13, R13-3150 §10.1.3.]

7.1.4. For the purposes of determining potential HAP emissions at production –related facilities the methods specified in 40 CFR 63, Subpart HH (i.e. excluding compressor engines from HAP PTE) shall be used. Major source of hazardous air pollutants for this subpart, 40 CFR 63 Subpart HH, is defined in §63.761.
[45CSR13, R13-3150 §10.1.4.]

7.1.5. The owner or operator of an area source is exempt from the requirements of 40 CFR §63.764(d) if the criteria below is met, except that the records of the determination of these criteria must be maintained as required in 40CFR§63.774(d)(1).

a. The actual average emissions of benzene from the glycol dehydration unit process vent to the atmosphere are less than 0.90 megagram per year (1 ton/yr), as determined by the procedures specified in 40 CFR §63.772(b)(2).

[45CSR13, R13-3150 §10.1.5.; 45CSR34; 40 CFR §63.764(e)(1)]

7.1.6. At all times the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.
[45CSR13, R13-3150 §10.1.6.; 45CSR34; 40 CFR §63.764(j)]

7.1.7. The enclosed flare combustors (TO-1, TO-2, TO-3) are subject to 45CSR6. The requirements of 45CSR6 include but are not limited to the following:

a. 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 5.43 for an incinerator with a capacity of less than 15,000 lbs/hr. The incinerator capacity is 0.062 tons/hr. Therefore, the allowable emissions are 0.34 lb/hr for each combustor.

Note: This limit for each combustor will be streamlined with the particulate matter limits in condition 7.1.3.c.
[45CSR§6-4.1.]

b. 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.
[45CSR§6-4.3.]

c. The provisions of paragraph b. 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
[45CSR§6-4.4.]

d. 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.
[45CSR§6-4.5.]

e. Incinerators, including all associated equipment and grounds, shall be designed, operated and maintained so as to prevent the emission of objectionable odors.
[45CSR§6-4.6.]

f. 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.
[45CSR§6-8.2.]

[45CSR13, R13-3150 §10.1.7.]

7.2. Monitoring Requirements

7.2.1. The permittee shall monitor the throughput of wet natural gas fed to the dehydration system on a monthly basis for the glycol dehydration units (RSV-1, RSV-2, RSV-3).
[45CSR13, R13-3150 §10.2.1.]

7.2.2. The permittee shall monitor the throughput to the enclosed flare combustors (TO-1, TO-2, TO-3) on a monthly basis.
[45CSR13, R13-3150 §10.2.2.]

7.2.3. To demonstrate compliance with the flame requirements, the presence of a flame shall be continuously monitored using a thermocouple or any other equivalent device to detect the presence of a flame.
[45CSR13, R13-3150 §10.2.3.]

7.2.4. In order to demonstrate compliance with the area source status, claimed within sections 7.1.4 and 7.1.3.c, as well as the benzene exemption provided under section 7.1.5, the following parameters shall be measured at least once quarterly, with the exception of wet gas composition, in order to define annual average values or, if monitoring is not practical, some parameters may be assigned default values as listed below.

a. Natural Gas Flowrate

   1. Number of days operated per year

   2. Monthly throughput (MMscf/month)

   3. Annual daily average (MMscf/day), and

   4. Maximum design capacity (MMscf/day)

b. Absorber temperature and pressure

c. Lean glycol circulation rate

d. Glycol pump type and maximum design capacity (gpm)

e. Flash tank temperature and pressure, if applicable

f. Stripping Gas flow rate, if applicable

g. Wet gas composition (upstream of the absorber – dehydration column) sampled in accordance with GPA method 2166 and analyzed consistent with GPA extended method 2286 as well as the procedures presented in the GRI-GLYCalc™ Technical Reference User Manual and Handbook V4

h. Wet gas water content (lbs H_2O/MMscf)

i. Dry gas water content (lbs H_2O/MMscf) at a point directly after exiting the dehydration column and before any additional separation points

The following operating parameter(s) may be assigned default values when using GRI-GLYCalc:

a. Dry gas water content can be assumed to be equivalent to pipeline quality at 7 lb H_2O / MMscf

b. Wet gas water content can be assumed to be saturated

c. Lean glycol water content if not directly measured may use the default value of 1.5 % water as established by GRI

d. Lean glycol circulation rate may be estimated using the TEG recirculation ratio of 3 gal TEG / lb H_2O removed.

Note: If you are measuring and using actual wet or dry gas water content, then you should also measure the glycol recirculation rate rather than using the default TEG recirculation ratio.

[45CSR13, R13-3150 §10.2.4.]

7.2.5. In order to demonstrate compliance with the temperature requirements of 7.1.3.b the permittee shall monitor and record the combustion chamber temperature in four equally spaced periods per each hour the incinerator is operated.
[45CSR13, R13-3150 §10.2.5.]

7.2.6. The permittee shall conduct visible emission checks and/or opacity monitoring for the enclosed flares (TO-1, TO-2, TO-3). 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 40CFR Part 60, Appendix A, Method 22 or from the lecture portion of the 40CFR Part 60, Appendix A, Method 9 certification course.

Visible emission checks shall be conducted at least once per calendar month with a maximum of forty-five (45) days between consecutive readings. These checks shall be performed at the glycol dehydration unit for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present. Visible emission checks shall be performed during periods of normal affected facility operation and appropriate weather conditions.

If visible emissions are present for three (3) consecutive monthly checks, the permittee shall conduct an opacity reading at that source(s) using the procedures and requirements of Method 9 as soon as practicable, but within seventy-two (72) hours of the final visual emission check. A Method 9 observation at a source(s) restarts the count of the number of consecutive readings with the presence of visible emissions.

[45CSR13, R13-3150 §10.2.6.]

7.3. Testing Requirements

7.3.1. For the purposes of establishing a different minimum combustion chamber temperature for the thermal oxidizer, the permittee shall conduct performance testing to show compliance with the VOC and total HAPs limits set forth in 7.1.3 and determine that the destruction efficiency of the thermal oxidizer is at or greater than 95% for total organic compounds. Such testing shall be conducted in accordance with the procedure and test methods outlined in 40 CFR §§63.772(e)(3) and (e)(4). Such testing shall establish a new minimum operating temperature for the incinerator if such testing demonstrates compliance with the above mentioned conditions and requirements. The new temperature shall be established by taking the sum of all of the measured temperature readings taken in 15 minute blocks during the test and dividing them by the number of readings taken. Such testing shall be conducted in accordance with condition 3.3 of this permit.
[45CSR13, R13-3150 §10.3.2.]

7.3.2. The permittee shall determine the composition of the wet natural gas by sampling in accordance with GPA Method 2166 and analyzing according to extended GPA Method 2286 analysis as specified in the GRI-GLYCalc™ V4 Technical Reference User Manual and Handbook. As specified in the handbook, the permittee shall sample the wet gas stream at a location prior to the glycol dehydration contactor column, but after any type of separation device, in accordance with GPA method 2166. The permittee may utilize other equivalent methods provided they are approved in advance by DAQ as part of a testing protocol. If alternative methods are proposed, a test protocol shall be submitted for approval no later than 60 days before the scheduled test date.

Note: The DAQ defines a representative wet gas sample to be one that is characteristic of the average gas composition dehydrated throughout a calendar year. If an isolated sample is not indicative of the annual average composition, the permittee may opt to produce a weighted average based on throughput between multiple sampling events, which can be used to define a more representative average annual gas composition profile.

[45CSR13, R13-3150 §10.3.3.]

7.3.3. The following testing and compliance provisions of Part 63 Subpart HH National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities are applicable to the facility:

a. D*etermination of glycol dehydration unit flowrate, benzene emissions, or BTEX emissions*. The determination of actual average benzene emissions or BTEX emissions from a glycol dehydration unit shall be made using the following procedures. Emissions shall be determined either uncontrolled, or with federally enforceable controls in place.

1. The owner or operator shall determine actual average benzene emissions using the model GRI-GLYCalc™ , Version 3.0 or higher, and the procedures presented in the associated GRI-GLYCalc™ Technical Reference Manual. Inputs to the model shall be representative of actual operating conditions of the glycol dehydration unit and may be determined using the procedures documented in Gas Research Institute (GRI) report entitled “Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions “ (GRI-95/0368.1).

[45CSR13, R13-3150 §10.3.4.; 45CSR34; 40 CFR§63.772(b)(2)(i)]

7.4. Recordkeeping Requirements

7.4.1. The permittee shall maintain a record of the wet natural gas throughput through the glycol dehydration units/still columns (RSV-1, RSV-2, RSV-3) to demonstrate compliance with section 7.1.1.
[45CSR13, R13-3150 §10.4.1.]

7.4.2. The permittee shall maintain a record of the amount of gas combusted in the thermal oxidizers (TO-1, TO-2, TO-3) to demonstrate compliance with section 7.1.2.
[45CSR13, R13-3150 §10.4.2.]

7.4.3. For the purpose of documenting compliance with the emission limitations, HAP major source thresholds, as well as the benzene exemption, the permittee shall maintain records of all monitoring data, wet gas sampling, and annual GRI-GLYCalc™ emission estimates.
[45CSR13, R13-3150 §10.4.3.]

7.4.4. For the purpose of demonstrating compliance with section 7.1.3.f and 7.2.3, the permittee shall maintain records of the times and duration of all periods which the pilot flame was absent.
[45CSR13, R13-3150 §10.4.4.]

7.4.5. The permittee shall document and maintain the corresponding records specified by the on-going monitoring requirements of 7.2 and testing requirements of 7.3.
[45CSR13, R13-3150 §10.4.6.]

7.4.6. An owner or operator of a glycol dehydration unit that meets the exemption criteria in §63.764(e)(1)(ii) shall maintain the records specified below.

a. The actual average benzene emissions (in terms of benzene emissions per year) as determined in accordance with §63.772(b)(2).

[45CSR34; 40 CFR §63.774(d)(1)(ii)]

7.4.7. The owner or operator of an affected source subject to 40 CFR 63 Subpart HH shall maintain records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control equipment and monitoring equipment. The owner or operator shall maintain records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.764(j), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.
[45CSR13, R13-3150 §10.4.7.; 45CSR34; 40 CFR §63.774(g)]

7.5. Reporting Requirements

7.5.1. If the permittee is required by the Director to demonstrate compliance with section 7.3.2., then the permittee shall submit a testing protocol at least thirty (30) days prior to testing and shall submit a notification of the testing date at least fifteen (15) days prior to testing. The permittee shall submit the testing results within sixty (60) days of testing and provide all supporting calculations and testing data.
[45CSR13, R13-3150 §10.5.1.]

7.5.2. Any deviation(s) of the allowable visible emission requirement for any emission source discovered during observations using 40 CFR 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. **[45CSR13, R13-3150 §10.5.2.]**

7.5.3. Any deviation(s) from the thermal oxidizer design and/or operation criteria in Section 7.1.3, shall be reported in writing to the Director as soon as practicable, but within ten (10) calendars days. **[45CSR13, R13-3150 §10.5.3.]**

7.5.4. Upon request by the Director, the permittee shall report deviations within a requested time from any occurrences when the control device was operated outside of the parameters defined in the monitoring plan. **[45CSR13, R13-3150 §10.5.4.]**

7.6. Compliance Plan

7.6.1. Reserved.

8.0 Reboilers, Stabilizer Heaters, Fuel Gas Heaters [emission point ID(s): *RBV-1, RBV-2, RBV-3, HTR-3, HTR-4, HTR-5*]

8.1. Limitations and Standards

8.1.1. Maximum Design Heat Input. The maximum design heat input for each TEG Dehydration Unit Reboiler (RBV-1, RBV-2) shall not exceed 1.54 MMBtu/hr. The quantity of natural gas that shall be consumed in each reboiler shall not exceed 1,360 cubic feet per hour or 12 million cubic feet per year.
[45CSR13, R13-3150 §11.1.1.]

8.1.2. Maximum emissions from each of the TEG Dehydration Unit Reboilers (RBV-1, RBV-2) shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	0.13	0.55
Carbon Monoxide	0.11	0.46
Particulate Matter	0.01	0.04
Volatile Organic Compounds	0.01	0.03

[45CSR13, R13-3150 §11.1.2.]

8.1.3. Maximum Design Heat Input. The maximum design heat input for the TEG Dehydration Unit Reboiler (RBV-3) shall not exceed 2.31 MMBtu/hr. The quantity of natural gas that shall be consumed shall not exceed 2,040 cubic feet per hour or 18 million cubic feet per year.
[45CSR13, R13-3150 §11.1.3.]

8.1.4. Maximum emissions from the TEG Dehydration Unit Reboiler (RBV-3) shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	0.19	0.83
Carbon Monoxide	0.16	0.70
Particulate Matter	0.01	0.06
Volatile Organic Compounds	0.01	0.05

[45CSR13, R13-3150 §11.1.4.]

8.1.5. Maximum Design Heat Input. The maximum design heat input for each Fuel Gas Heater (HTR-3, HTR-4, HTR-5) shall not exceed 0.38 MMBtu/hr. The quantity of natural gas that shall be consumed shall not exceed 340 cubic feet per hour or 3 million cubic feet per year.
[45CSR13, R13-3150 §11.1.5.]

8.1.6. Maximum emissions from each of the Fuel Gas Heaters (HTR-3, HTR-4, HTR-5) shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	0.03	0.14
Carbon Monoxide	0.03	0.12

[45CSR13, R13-3150 §11.1.6.]

8.1.7. 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. **[45CSR13, R13-3150 §11.1.7.; 45CSR§2-3.1.]**

8.2. Monitoring Requirements

8.2.1. At such reasonable times as the Secretary may designate, the permittee shall conduct Method 9 emission observations for the purpose of demonstrating compliance with Section 8.1.7. Method 9 shall be conducted in accordance with 40 CFR 60 Appendix A.
[45CSR13, R13-3150 §11.2.1.]

8.3. Testing Requirements

8.3.1. Compliance with the visible emission requirements of section 8.1.7. shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9 or by using measurements from continuous opacity monitoring systems approved by the 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 8.1.7. Continuous opacity monitors shall not be required on fuel burning units which employ wet scrubbing systems for emission control.
[45CSR13, R13-3150 §11.3.1.; 45CSR§2-3.2.]

8.4. Recordkeeping Requirements

8.4.1. To help demonstrate compliance with sections 8.1.1. through 8.1.7., the permittee shall maintain records of the amount of natural gas consumed in each of the reboilers (RBV-1, RBV-2, RBV-3) and heaters (HTR-3, HTR-4, HTR-5).
[45CSR13, R13-3150 §11.4.1.]

8.4.2. The permittee shall maintain records of all monitoring data required by Section 8.2.1 documenting the date and time of each visible emission check, the emission point or equipment/source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80^{o}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.
[45CSR13, R13-3150 §11.4.2.]

8.5. Reporting Requirements

8.5.1. Any deviation(s) from the allowable visible emission requirement for any emission source discovered during observations using 40CFR Part 60, Appendix A, Method 9 or 22 shall be reported in writing to the Director of the Division of Air Quality as soon as practicable, but in any case within ten (10) calendar days of the occurrence and shall include at least the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.
[45CSR13, R13-3150 §11.5.1.]

8.6. Compliance Plan

8.6.1. Reserved.

9.0 Pipeline Liquid Tanks [emission point ID(s): *TO-4*]

9.1. Limitations and Standards

9.1.1. The maximum throughput to each Pipeline Liquid Tank shall not exceed 500,000 gallons per year. **[45CSR13, R13-3150 §12.1.1.]**

9.1.2. The maximum amount of pilot gas shall not exceed 90 cubic feet per hour. **[45CSR13, R13-3150 §12.1.2.]**

9.1.3. The thermal oxidizer (TO-4) shall be designed and operated in accordance with the following:

a. The thermal oxidizer (TO-4) shall operate when natural gas liquids need to be diverted to the pipeline liquid tanks during malfunctions and/or emergency conditions. The permittee shall follow Section 2.12. of R13-3150 for emergency conditions.

b. The enclosed combustor (TO-4) shall achieve a minimum guaranteed control efficiency of 95% for volatile organic compounds (VOC) and hazardous air pollutants (HAP) emissions for the emissions of pipeline liquid tanks T10, T12, T16, and T17;

c. The thermal oxidizer (TO-4) shall be operated with a minimum residence time of 0.5 seconds at a minimum combustion chamber temperature of 1,400°F or establish during testing in accordance with Section 3.3. The combustion chamber temperature shall be monitored using a system to continuously measure and record the temperature of the combustion chamber;

d. Emissions from the thermal oxidizer shall not exceed the maximum hourly and annual emission limits set forth below.

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	3.37	14.75
Carbon Monoxide	2.83	12.39
Volatile Organic Compounds	3.71	16.25
Benzene	0.01	0.04

e. The thermal oxidizer 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.

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

[45CSR13, R13-3150 §12.1.3.]

9.1.4. The enclosed flare combustor (TO-4) is subject to 45CSR6. The requirements of 45CSR6 include but are not limited to the following:

a. 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 5.43 for an incinerator with a capacity of less than 15,000 lbs/hr. The incinerator capacity is 0.70 tons/hr. Therefore, the allowable emissions are 3.8 lb/hr.

[45CSR§6-4.1.]

b. 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.
[45CSR§6-4.3]

c. The provisions of paragraph b. 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.
[45CSR§6-4.4]

d. 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.
[45CSR§6-4.5]

e. Incinerators, including all associated equipment and grounds, shall be designed, operated and maintained so as to prevent the emission of objectionable odors.
[45CSR§6-4.6]

f. 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.
[45CSR§6-8.2]

[45CSR13, R13-3150 §12.1.4.]

9.2. Monitoring Requirements

9.2.1. The permittee shall monitor the throughput to each pipeline liquid tank on a monthly basis.
[45CSR13, R13-3150 §12.2.1.]

9.2.2. The permittee shall monitor the throughput to the enclosed flare combustor (TO-4) on a monthly basis.
[45CSR13, R13-3150 §12.2.2.]

9.2.3. To demonstrate compliance with the flame requirements, the presence of a flame shall be continuously monitored using a thermocouple or any other equivalent device to detect the presence of a flame.
[45CSR13, R13-3150 §12.2.3.]

9.2.4. In order to demonstrate compliance with the temperature requirements of 9.1.3.c the permittee shall monitor and record the combustion chamber temperature in four equally spaced periods per each hour the incinerator is operated.
[45CSR13, R13-3150 §12.2.4.]

9.2.5. The permittee shall conduct visible emission checks and/or opacity monitoring for the thermal oxidizer (TO-4). 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 40CFR Part 60, Appendix A, Method 22 or from the lecture portion of the 40CFR Part 60, Appendix A, Method 9 certification course.

Visible emission checks shall be conducted at least once per calendar month with a maximum of forty-five (45) days between consecutive readings. These checks shall be performed at the thermal oxidizer (TO-4) for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present. Visible emission checks shall be performed during periods of normal affected facility operation and appropriate weather conditions.

If visible emissions are present for three (3) consecutive monthly checks, the permittee shall conduct an opacity reading at that source(s) using the procedures and requirements of Method 9 as soon as practicable, but within seventy-two (72) hours of the final visual emission check. A Method 9 observation at a source(s) restarts the count of the number of consecutive readings with the presence of visible emissions.

[45CSR13, R13-3150 §12.2.5.]

9.3. Testing Requirements

9.3.1. For the purposes of establishing a different minimum combustion chamber temperature for the thermal oxidizer, the permittee shall conduct performance testing to show compliance with the VOC and total HAPs limits set forth in 9.1.3.c. and determine that the destruction efficiency of the thermal oxidizer is at or greater than 95% for total organic compounds. Such testing shall be conducted in accordance with the procedure and test methods outlined in 40 CFR §§63.772(e)(3) and (e)(4). Such testing shall establish a new minimum operating temperature for the incinerator if such testing demonstrates compliance with the above mentioned conditions and requirements. The new temperature shall be established by taking the sum of all of the measured temperature readings taken in 15 minute blocks during the test and dividing them by the number of readings taken. Such testing shall be conducted in accordance with Section 3.3 of this permit.
[45CSR13, R13-3150 §12.3.2.]

9.4. Recordkeeping Requirements

9.4.1. For the purpose of demonstrating compliance with section 9.1.1, the permittee shall maintain monthly and yearly records of the amount of pipeline liquid to each tank.
[45CSR13, R13-3150 §12.4.1.]

9.4.2. For the purpose of demonstrating compliance with section 9.1.2 and 9.1.3, the permittee shall maintain records of the amount of gas combusted in the thermal oxidizer (TO-4).
[45CSR13, R13-3150 §12.4.2.]

9.4.3. For the purpose of demonstrating compliance with section 9.1.3.f and 9.2.3, the permittee shall maintain records of the times and duration of all periods which the pilot flame was absent.
[45CSR13, R13-3150 §12.4.3.]

9.4.4. The permittee shall document and maintain the corresponding records specified by the on-going monitoring requirements of section 9.2 and the testing requirements of section 9.3.
[45CSR13, R13-3150 §12.4.5.]

9.5. Reporting Requirements

9.5.1. If the permittee is required by the Director to demonstrate compliance with section 9.3.1., then the permittee shall submit a testing protocol at least thirty (30) days prior to testing and shall submit a notification of the testing date at least fifteen (15) days prior to testing. The permittee shall submit the testing results within sixty (60) days of testing and provide all supporting calculations and testing data.
[45CSR13, R13-3150 §12.5.1.]

9.5.2. Any deviation(s) of the allowable visible emission requirement for any emission source discovered during observations using 40 CFR 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.
[45CSR13, R13-3150 §12.5.2.]

9.5.3. Any deviation(s) from the thermal oxidizer design and/or operation criteria in Section 9.1.3.b. shall be reported in writing to the Director as soon as practicable, but within ten (10) calendars days.
[45CSR13, R13-3150 §12.5.3.]

9.6. Compliance Plan

9.6.1. Reserved.