

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:

Eastern Gas Transmission and Storage, Inc.

Hastings Compressor Station

R30-10300006-2022

Laura M. Crowder

Director, Division of Air Quality

Issued: April 13, 2022 • Effective: April 27, 2022
Expiration: April 13, 2027 • Renewal Application Due: October 13, 2026

Permit Number: **R30-10300006-2022**
Permittee: **Eastern Gas Transmission and Storage, Inc.**
Facility Name: **Hastings Compressor Station**
Permittee Mailing Address: **925 White Oaks Blvd., Bridgeport, WV 26330**

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:	Pine Grove, Wetzel County, West Virginia
Facility Mailing Address:	Route 20, Pine Grove, WV 26419
Telephone Number:	(304) 889-3177
Type of Business Entity:	Corporation
Facility Description:	Natural gas transmission facility
SIC Codes:	4922
UTM Coordinates:	528.09 km Easting • 4377.66 km Northing • Zone 17

Permit Writer: Natalya V. Chertkovsky-Veselova

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 / Modified	Design Capacity	Control Device
Hastings Station					
001-01* **	EN01	Reciprocating Engine/Integral Compressor; Cooper GMXE-6, SI 2SLB	1968	500 HP	N/A
001-02* **	EN02	Reciprocating Engine/Integral Compressor; Cooper GMXE-6, SI 2SLB	1968	500 HP	N/A
EN06*	EN06	Reciprocating Engine configured with compressor Spark Ignited (SI), 2-stroke lean burn (2SLB) Ajax DPC-2804-LE	2019	722 bhp	Oxidation Catalyst
AUX06*	AUX06	Generac Model QT080 Natural Gas-Fired Emergency Generator, SI 4-stroke lean-burn, emergency	2012	80 kW 128 HP	N/A
003-01	FUG	Fugitive Emissions	1968		N/A
DEHY01*	DEHY01	TEG Dehydration Unit with flash tank	2016	7.5 mmscf/day	DEHY1
RBR02*	RBR02	Reboiler (0.55 MMBtu/hr) for glycol regenerator	2016	0.55 MMBtu/hr	N/A
DEHY1*	DEHY1	Enclosed Combustion Device – Questor Q50	2016	2 MMBtu/hr	N/A
TK2	TK2	Horizontal, above ground tank containing Ethylene Glycol and Water	2008	5,000 gallon	N/A
TK3	TK3	Horizontal, above ground tank containing Used Oil	1996	2,000 gallon	N/A
TK6	TK6	Horizontal, above ground tank containing Glycol	Unknown	240 gallon	N/A
TK7	TK7	Horizontal, above ground tank containing Produced Fluids	2006	1,000 gallon	N/A
Mockingbird Hill Station					
002-02*	AUX02 (Aux Gen. 02)	Auxiliary Generator; Capstone Microturbine	2004 / 2015	87 HP	N/A
002-03*	AUX03 (Aux Gen. 03)	Auxiliary Generator; Capstone Microturbine	2004 / 2011	87 HP	N/A
002-04*	AUX04 (Aux Gen. 04)	Auxiliary Generator; Capstone Microturbine	2004	80 HP	N/A

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed / Modified	Design Capacity	Control Device
005-04*	BLR02 (Boiler 02)	Boiler; Cleaver Brooks MTF700-1250-50	2004	1.25 MMBtu/hr	N/A
WH-1*	WH-1	Natural gas-fired Boiler	2018	8.72 MMBtu/hr	None
006-02*	TUR02	Solar Taurus 60 Turbine	2008	8,175 HP	N/A
CT-01*	CT-01	Combustion Turbine (CT)/Compressor Solar Titan 130-20502S (ISO rating 20,500 bhp)	2018	21,765 bhp (20,500 HP)	SoLoNOx & Ox Cat***
CT-02*	CT-02	Combustion Turbine (CT)/Compressor Solar Titan 130-20502S (ISO rating 20,500 bhp)	2018	21,765 bhp (20,500 HP)	SoLoNOx & Ox Cat***
EG-01*	EG-01	Natural gas-fired Auxiliary Emergency Generator Caterpillar G3412C (lean burn 4-stroke reciprocating engine)	2018	755 bhp	None
TK1	TK1	Horizontal, above ground tank containing Wastewater	2004	1,000 gallon	N/A
TK2	TK2	Horizontal, above ground tank containing Pipeline Fluids	2004	1,000 gallon	N/A
TK3	TK3	Horizontal, above ground tank containing Ethylene Glycol	2004	220 gallon	N/A
TK4 (TK-1 in R14-0033)	TK4 (TK-1 in R14-0033)	Accumulator Tank for pipeline fluids	2018	1,000 gallons	None
TK5 (TK-2 in R14-0033)	TK5 (TK-2 in R14-0033)	Hydrocarbon (Used Oil) Tank	2018	550 gallons	None
LR-1	--	Tank unloading operations	2018	N/A	None
Lewis Wetzel Station					
001-03*	EN03	Caterpillar Model G3612TA Compressor Engine, SI 4SLB	2011	3,550 HP	CC1
002-05*	AUX05	Cummins Model KTA19G Auxiliary Generator, SI 4SLB Emergency	2011	530 HP	N/A
005-05*	BLR05	Bryan Model RV 450W-FDG Boiler	2011	4.5 MMBtu/hr	N/A
CC1	CC1	Catalytic Converter	2011	N/A	N/A
TK1	TK1	Horizontal, above ground tank containing Lube Oil	2012	2,000 gallon	N/A
TK2	TK2	Horizontal, above ground tank containing Lube Oil	2012	1,000 gallon	N/A

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed / Modified	Design Capacity	Control Device
TK3	TK3	Horizontal, above ground tank containing Wastewater	2012	1,500 gallon	N/A
TK4	TK4	Horizontal, above ground tank containing Used Oil	2012	2,000 gallon	N/A
TK5	TK5	Horizontal, above ground tank containing Pipeline Fluids	2012	1,000 gallon	N/A
TK6	TK6	Horizontal, above ground tank containing Ethylene Glycol and Water	2012	10,000 gallon	N/A
Carnegie Warehouse, Gate Site 427/XS 2239					
005-01*	HTR01	Heater R31; Natco 96x30 <i>(Note – This heater will be removed within 60 days after initial startup of the heater H1 in accordance with Condition 4.1.2)</i>	1977	10.0 MMBtu/hr	N/A
H1*	H1	TERI Pipeline Heater - Natural Gas Fired	2025	12.48 MMBtu/hr	N/A

* This equipment burns or combusts pipeline quality natural gas only.

** These engines will be abandoned in place upon commercial operation of engine EN06.

*** SoLoNOx – Lean-premix combustion controls; Ox Cat – Oxidation Catalyst to control carbon monoxide and VOCs.

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
R13-2555C	May 2, 2016
R13-2870A	August 30, 2012
R13-3249C	May 30, 2019
R14-0033	June 13, 2018
R13-3692	December 9, 2024

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§30-2.39, ~~42~~). 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	PM₁₀	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	SO₂	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		
mmft³/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 ~~39~~]

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. ~~Reserved~~ 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. and ~~45CSR38~~]

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)(~~15~~ 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. **Minor Source of Hazardous Air Pollutants (HAP).** HAP emissions from the facility shall be less than 10 tons/year of any single HAP and 25 tons/year of any combination of HAPs. Compliance with this Section shall ensure that the facility is a minor HAP source.

[45CSR13, R13-2870, 4.1.2]

3.2. Monitoring Requirements

- 3.2.1. None.

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. [If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit shall be revised in accordance with 45CSR§30-6.4 or 45CSR§30-6.5 as applicable.](#)

- c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.
- d. The permittee shall submit a report of the results of the stack test within 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)(~~14-15-16~~) 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, R13-2555, 4.4.1, ~~and R13-2870, 4.1.1~~ and R13-3692, 4.4.1.]

- 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.]

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 Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.

[45CSR13, R13-3249, 4.4.2 and 5.4.2; 45CSR14, R14-0033, 4.4.2]

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

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

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

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

[45CSR13, R13-3249, 4.4.3 and 5.4.3; 45CSR14, R14-0033, 4.4.3]

3.4.6. The permittee shall install and maintain an industrial fence around this permitted facility as outlined in the August 28, 2017 submittal of the Prevention of Significant Deterioration Air Quality Dispersion Modeling Report. This industrial fence shall construct in such a manner to prevent the general public from accessing this permitted facility.

[45CSR14, R14-0033, 3.4.3]

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, [RCRA and Toxics Branch](#) ~~Section~~ (3ED21)
[Four Penn Center](#)
[1600 John F. Kennedy Boulevard](#) ~~1650 Arch Street~~
Philadelphia, PA 19103-~~2852~~ ~~2029~~

DAQ Compliance and Enforcement¹:

DEPAirQualityReports@wv.gov

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

3.5.4. ~~Fees~~ **Certified emissions statement.** The permittee shall ~~submit a certified emissions statement and~~ pay fees on an annual basis in accordance with [45CSR§30-8](#). ~~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. ~~Reserved. 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. ~~Reserved. 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 ~~email~~ 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. None.

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. 40 CFR 60 Subpart JJJJ – The compressor engines (EN01 and EN02) are not subject to this subpart since they were installed in 1968, before the applicability date.
 - b. 40 CFR 60 Subpart OOOO – This subpart applies only to production facilities (as per 40 CFR §60.5360), therefore it doesn't apply to Mockingbird Hill and Lewis Wetzel Stations since they are transmission facilities. The Hastings Station is a production facility, but it does not have tanks, gas wells, centrifugal compressors, reciprocating compressors, and/or pneumatic controllers that were constructed, modified, or reconstructed after August 23, 2011, and on or before September 18, 2015, therefore this subpart is not applicable.
 - c. 40 CFR 63 Subpart HHH – This subpart does not apply to the facility since the facility is not a transmission or storage station and is not a major source of HAPs.
 - d. 40 CFR 63 Subpart DDDDD – The reboiler (RBR02), [pipeline heater \(H1\)](#) and three boilers (BLR02, BLR05, and WH-1) are not subject to this subpart since the facility is not a major source of HAPs.
 - e. 40 CFR 63 Subpart JJJJJ – The reboiler (RBR02) and the [pipeline heater \(H1\)](#) are ~~is~~ not subject to this subpart since ~~each~~ ~~it~~ is considered a “process heater,” which is excluded from the definition of “boiler” in 40 CFR §63.11237. Boilers BLR02, BLR05, and WH-1 are not subject to this subpart per 40 CFR §63.11195(e) since they are gas-fired boilers. ~~Heater HTR01 doesn't meet “boiler” definition in 40 CFR §63.11237, therefore it is not subject to this subpart.~~
 - f. 40 CFR 64 CAM - Engines EN01, EN02, AUX02, AUX03, AUX04, AUX05, AUX06 do not have any controls, and their emissions are below Title V Major Source applicability thresholds, therefore, CAM is not applicable.

Engine EN06 has emission limits specified in requirements 6.1.4 (Table 1 to Subpart JJJJ of Part 60), and 6.1.5. Also, it has a control device (Oxidation Catalyst), but it is considered integral to the design of the equipment. Therefore, engine EN06 is not subject to CAM.

Engine EN03 has a control device (Catalytic Converter CC1) and emission limits specified in requirement 8.1.3, but uncontrolled emissions of CO and VOC are below Title V Major Source applicability thresholds, therefore, CAM for CO and VOC emissions is not applicable. Uncontrolled emissions of Formaldehyde are estimated above the Title V Major Source applicability threshold, but conditions 8.1.5, 8.2.1 and 8.4.1 specify a continuous compliance determination method, therefore Formaldehyde emissions are exempt from CAM requirements per §64.2(b)(1)(vi).

The dehydration unit (Emission Unit DEHY01) is subject to 40 C.F.R. 63 Subpart HH standards, which have provisions for compliance monitoring established after 1990, therefore per §64.2(b)(1)(i) it is

exempt from requirements of CAM.

Engine EG-01 has emission limits specified in requirement 7.1.13 (based on Table 1 to Subpart JJJJ of Part 60), and it doesn't have a control device, therefore it is not subject to CAM.

Boiler WH-1 [and Pipeline heater H1](#) ~~are~~ **is** not subject to CAM since ~~neither it doesn't has~~ **have** a control device.

Combustion turbines CT-01 and CT-02 have emission limits in requirement 7.1.10.a (including 27.04 TPY of NO_x, 27.8 TPY of CO, 3.57 TPY of VOC) and control devices (lean-premix combustion controls SoLoNO_x and an oxidation catalyst Ox Cat) to control CO, VOC and NO_x emissions. **The oxidation catalyst** provides 50% reduction in VOC emissions and 80% reduction in CO emissions, therefore pre-controlled VOC emissions are estimated at 7.14 TPY (below 100 TPY threshold) and total uncontrolled CO emissions are estimated at 62.3 TPY (including 43.0 TPY of pre-controlled emissions and 19.3 TPY of uncontrolled emissions resulting from 100 estimated start-up and shut-down events; it puts total pre-controlled CO emissions below 100 TPY threshold). **The lean-premix combustion controls SoLoNO_x** provide reduction of NO_x emissions of each turbine, but since NO_x emission limits are based on the requirements of 40 C.F.R. 60 Subpart KKKK, CAM is not applicable per 40 C.F.R. §64.2(b)(1)(i).

3.8. Emergency Operating Scenario

For emergency situations which interrupt the critical supply of natural gas to the public, and which pose a life threatening circumstance to the customer, the permittee is allowed to temporarily replace failed engine(s) as long as all of the following conditions are met:

- a. The replacement engine(s) is only allowed to operate until repair of the failed engine(s) is complete, but under no circumstance may the replacement engine(s) operate in excess of sixty (60) days;
- b. Both the replacement engine(s) and the repaired failed engine(s) shall not operate at the same time with the exception of any necessary testing of the repaired engine(s) and this testing may not exceed five (5) hours;
- c. Potential hourly emissions from the replacement engine(s) are less than or equal to the potential hourly emissions from the engine(s) being replaced;
- d. Credible performance emission test data verifying the emission rates associated with the operation of the substitute engine shall be submitted to the Director within five (5) days;
- e. The permittee must provide written notification to the Director within five (5) days of the replacement. This notification must contain:
 - i. Information to support the claim of life threatening circumstances to justify applicability of this emergency provision;
 - ii. Identification of the engine(s) being temporarily replaced;
 - iii. The design parameters of the replacement engine(s) including, but not limited to, the design horsepower and emission factors;
 - iv. Projected duration of the replacement engine(s); and
 - v. The appropriate certification by a responsible official.

[45CSR§30-12.7]

4.0. Source-Specific Requirements for Heater [H1 HTR01]

4.1. Limitations and Standards

- 4.1.1. ~~The following conditions and requirements are specific to Pipeline Heater H1: No person shall cause, suffer, allow or permit the discharge of particulate matter into the open air in excess of 0.90 pounds per hour. [45CSR§2-4.1.b]~~
- a. The heater shall be fired with natural gas at all times.
 - b. CO emissions from Emission Point H1 shall not exceed 1.05 pounds per hour.
 - c. NO_x emissions from Emission Point H1 shall not exceed 1.25 pounds per hour.
 - d. PM emissions from Emission Point H1 shall not exceed 0.02 pounds per hour.
(Compliance with this streamlined PM limit assures compliance with 45CSR§2-4.1.2.)
 - e. PM₁₀ emissions from Emission Point H1 shall not exceed 0.09 pounds per hour.
 - f. PM_{2.5} emissions from Emission Point H1 shall not exceed 0.09 pounds per hour.
 - g. This heater shall not exhibit visible emissions from Emission Point H1 greater than 10% opacity on a six (6) minute average basis.
 - h. This heater shall be limited to firing exclusively on natural gas. The heater is exempt from the requirements of subdivision 8.1.1. and subsections 8.2 of 45CSR2; and the requirements of section 8 of 45CSR10.
 - i. The heater shall have a maximum heat input not to exceed 12.48 MMBtu/hr of heat input. Compliance with this limit shall be satisfied by limiting the flow rate of natural gas to the heater to no more 109.35 million standard cubic feet (MMscf) per year on a 12-month rolling basis.
(Compliance with this streamlined fuel consumption limit assures compliance with the SO₂ 38.69 lb/hr allowable limit of 45CSR§10-3.1.5. by ensuring the PTE of 0.01 lb/hr)
- [45CSR13, R13-3692, 4.1.1.; 45CSR§§2-3.1. and 4.1.2; 45CSR§10-3.1.5.]**
- 4.1.2. ~~The permittee shall remove the NATCO heater (HTR01) from the facility within 60 days after initial startup of the pipeline heater H1. No person shall cause, suffer, allow or permit the discharge of sulfur dioxide into the open air in excess of 31.0 pounds per hour. [45CSR13, R13-3692, 4.1.2. 45CSR§10-3.1.e]~~
- 4.1.3. The following requirements are applicable to heater HTR01 until such time that it is removed in accordance with condition 4.1.2.:
- a. No person shall cause, suffer, allow or permit the discharge of particulate matter into the open air in excess of 0.90 pounds per hour.
 - b. No person shall cause, suffer, allow or permit the discharge of sulfur dioxide into the open air in excess of 31.0 pounds per hour.

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

[\[45CSR§2-4.1.2, 45CSR§2-3.1, 45CSR§10-3.1.5.\]](#) [HTR01]

4.2. Monitoring Requirements

- 4.2.1. None.

4.3. Testing Requirements

- 4.3.1. None.

4.4. Recordkeeping Requirements

- 4.4.1. [For each month, the permittee shall record the amount of fuel consumed and hours operated of the Pipeline Heater H1 for each month. By no later than the 15th of each preceding month, the permittee shall determine the total amount of fuel consumed by the heater for the previous 12-months to demonstrate compliance with the annual fuel limitation in Condition 4.1.1.i. Such records shall be maintained in accordance with Condition 3.4.2. of this permit and shall include the date and time of start-up and shut-down. \(Compliance with the streamlined record retention in accordance with Condition 3.4.2. of this permit assures compliance with 40 CFR §60.48c\(i\)\)](#)

[For heater HTR01, until such time that it is removed in accordance with condition 4.1.2.,](#) ~~F~~the owner or operator shall maintain records of the operating schedule and the quantity and quality of fuel consumed in each fuel burning unit in a manner to be established by the Director. Such records are to be maintained on-site and made available to the Director or his duly authorized representative upon request.

[\[45CSR13, R13-3692, 4.2.1.; 45CSR16: 40 CFR §§60.48c\(g\)\(2\) and \(i\); 45CSR§2-8.3.3., and 45CSR§2A-7.1.a.1, ~~45CSR§2-8.3.e\]~~](#)

4.5. Reporting Requirements

- 4.5.1. [The permittee shall notify the Director no later than 30 days after satisfying Condition 4.1.2. in accordance with Condition 3.5.1. ~~None.~~](#)
[\[45CSR13, R13-3692, 4.5.1.\]](#)
- 4.5.2. [The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by 40 CFR §60.7. This notification shall include the applicable requirements of 40 CFR §60.48c\(a\).](#)
[\[45CSR16; 40 CFR §60.48c\(a\)\]](#)

4.6. Compliance Plan

- 4.6.1. None.

5.0. Source-Specific Requirements for Hastings Station Dehydration Unit [DEHY01], Reboiler [RBR02], and Flare [DEHY1]

5.1. Limitations and Standards

5.1.1. The limitations set forth in this condition are hereby established to ensure that the permittee operates and maintains the glycol dehydration unit (affected source) with associated control device(s) that limit hazardous air pollutant emissions to below the major source threshold value of HAPs as defined in 40 CFR §63.761 (Subpart HH - National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities) as follows:

- a. The maximum amount of wet natural gas processed through the dehydration unit shall not exceed 7.5 MMscf per day. Compliance with this limit shall be determined using a 12-month rolling total.
- b. The effluent generated by the flash tank of the dehydration unit shall be routed through a closed vent system to the control device identified as DEHY1 at all times while the dehydration unit is in operation.
- c. The effluent generated by the still vent shall be routed through a closed vent system to the control device (DEHY1) at all times while the dehydration unit is in operation.
- d. The control device (DEHY1) shall be operated and maintained in accordance with Condition 5.1.2.
- e. The re-boiler shall be operated and maintained in accordance with Condition 5.1.3.
- f. The closed vent system as required in this condition shall meet the following:
 - i. The system shall be constructed of hard piping.
 - ii. The system shall be constructed and maintained free of leaks. A leaking component is defined as a measured instrument reading greater than 500 ppm above background or by visual inspection.
 - iii. Detected leaks shall be repaired as soon as practicable with the first attempt at repair within 5 calendar days after detecting the leak. Repair shall be completed no later than 15 calendar days after the leak is detected.

[45 CSR §13-5.11 and 45CSR13, R13-3249, 4.1.1] [DEHY1]

- 5.1.2. The permittee shall operate and maintain the control device (DEHY1) for the dehydration unit in accordance with the following emission limitations and operating parameters.
- a. Emissions of VOC from DEHY1 shall not exceed 1.64 pounds per hour. Annual VOC emissions from the DEHY1 shall not exceed 7.17 tons per year.
 - b. Total hazardous air pollutants (HAPs), which includes benzene, toluene, ethylbenzene, and xylene (BTEX), from the flare shall not exceed 0.22 pounds per hour. Annual HAP emissions from the DEHY1 shall not exceed 0.98 tons per year.
 - c. Compliance determination with the emission limits in items a & b of this condition shall be made by using GRI-GLYCALC™ 3.0 or higher.
 - d. Particulate matter emissions from the flare shall not exceed 0.01 pounds per hour. Compliance with this limit is satisfied by complying with requirements of Condition 5.1.2.f.

Compliance with this limit will assure compliance with the PM emission standard per 45CSR§6-4.1
[45 CSR §6-4.1]

- e. The effluent routed to DEHY1 shall not contain hydrogen sulfide greater than 50 grains per 100 cubic feet of gas. Compliance with this limit is satisfied by limiting the hydrogen sulfide (H₂S) loading of the incoming natural gas to the facility to no greater than 10 grains of H₂S per 100 cubic feet of natural gas.
[45 CSR §10-5.1]
- f. The permittee shall operate and maintain DEHY1 in a manner to minimize emissions. Such operation of the control device shall constitute the following:
 - i. DEHY1 shall not exhibit any visible emissions, except for periods not to exceed a total of 5 minutes during two consecutive hours. *Compliance with this limit will assure compliance with the opacity limit in 45CSR§6-4.3.*
[45 CSR §6-4.3]
 - ii. The pilot flame for DEHY1 shall be lit at all times when the dehydration unit is operating. The fuel source for the pilot light shall be either natural gas, flash tank off gas, or a combination of the two fuels.
 - iii. The actual flowrate of effluent to DEHY1 shall not exceed 35 standard cubic feet per minute, which is the maximum flowrate rated by the manufacturer. Compliance with this limit is satisfied by using the predicted flowrates from the GRI-GLYCALC™ 3.0 results.
- g. The flare shall be constructed, operated, and maintained to achieve, at the minimum, 95% destruction efficiency for VOCs and volatile HAPs.

[45CSR13, R13-3249, 4.1.2]

- 5.1.3. The permittee shall operate and maintain the reboiler (RBR02) for the dehydration unit in accordance with the following emission limitations and operating parameters.
 - a. Visible emissions from the emission point RBR02 shall not exceed 10% opacity on a 6-minute block average. Compliance with this requirement is satisfied by complying with the fuel type restriction in Condition 5.1.3.b.
[45 CSR §2-3.1]
 - b. The reboiler shall only be fueled with natural gas.

[45CSR13, R13-3249, 4.1.3]

- 5.1.4. The permittee shall implement a leak detection and repair program for the dehydration unit in wet gas service:
 - a. For pressure relief devices:
 - i. The pressure relief devices for the flash tank and glycol reboiler shall be equipped with at the least a visual indicator that indicates that a pressurized release has occurred.
 - ii. The pressure relief devices for the flash tank and glycol reboiler shall be monitored to determine if the device has completely sealed within 5 days after each pressure release to detect leaks.

- b. The equipment, to include connectors, for the dehydration unit shall be free of defects including, but are not limited to, visible cracks, holes, or gaps in piping; loose connections; liquid leaks; or broken or missing caps or other closure devices. If using Method 21, an instrument reading of 10,000 ppm or greater is classified as a leak.
- c. When a defect or leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after it is detected.
- d. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.
- e. Sampling connection systems are exempt from the requirements of this condition.

[45CSR13, R13-3249, 4.1.4]

- 5.1.5. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.

[45CSR§13-5.10 and 45CSR13, R13-3249, 4.1.10]

- 5.1.6. Pursuant to 40 CFR 63 Subpart HH *National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities*, Dehydration unit at the facility is subject to the following limitations and standards given below:

§ 63.764 General standards.

(e) *Exemptions.* (1) The owner or operator is exempt from the requirements of paragraph (c)(1) and (d) of §63.764 if the criteria listed in paragraph (e)(1)(ii) of this section are met, except that the records of the determination of these criteria must be maintained as required in §63.774(d)(1).

(ii) The actual average emissions of benzene from the glycol dehydration unit process vent to the atmosphere are less than 0.90 megagram per year, as determined by the procedures specified in §63.772(b)(2) of this subpart.

[45CSR34; 40 C.F.R. 63 Subpart HH §63.764(e)] [DEHY01]

5.2. Monitoring Requirements

- 5.2.1. The permittee shall monitor and record the following parameters for the purpose of demonstrating compliance with Conditions 5.1.1, 5.1.2, and 5.1.3:
- a. The throughput of wet natural gas processed through the dehydration unit on a daily basis, days the dehydration unit operated, and annual natural gas flowrate.
 - b. Determine actual annual average natural gas throughput (in terms of natural gas flowrate to the glycol dehydration unit per day) by converting the annual natural gas flowrate to a daily average by dividing the annual flowrate by the number of days per year the glycol dehydration unit processed natural gas.
 - c. Identify any periods there was no flame present for the pilot of the flare when the dehydration unit was in operation.

d. Records of such monitoring shall be maintained in accordance with Condition 3.4.2.

[45CSR13, R13-3249, 4.2.1 (a) through (c) and (e)]

5.2.2. For the purpose of demonstrating compliance with Condition 5.1.2.e, the permittee shall conduct gas sampling at a point that is representative of the incoming natural gas to the facility and analyzing the sample to determine the hydrogen sulfide content of the sample. At a minimum, such sampling and analysis shall be conducted once per calendar year. Records of such monitoring shall be maintained in accordance with Condition 3.4.2 of this permit.

[45 CSR §10-8.3.a and 45CSR13, R13-3249, 4.2.2]

5.2.3. For the purpose of demonstrating proper operation of the flare, the permittee shall conduct a visible emission observation using Section 11 of Method 22 for one hour once every calendar quarter in which the dehydration unit operates. If during the first 30 minutes of the observation there were no visible emissions observed, the permittee may stop the observation.

If at the end of the observation and visible emission were observed for more than 2.5 minutes, then the permittee shall follow manufacturer's repair instructions, if available or best combustion engineering practice as outlined in the unit inspection and maintenance plan. To return the flare to compliant operation, the permittee shall repeat the visible emission observation. Records of such monitoring and repair activities shall be maintained in accordance with Condition 3.4.2.

[45CSR13, R13-3249, 4.2.3]

5.2.4. For the purposes of demonstrating compliance with the requirements of the closed vent system in Condition 5.1.1, the permittee shall conduct the following:

- a. Conduct an initial visual, olfactory, and auditory inspection for defects that could result in air emissions within 180 days of start-up. Defects include, but are not limited to, visible cracks, holes, or gaps in piping; loose connections; liquid leaks; or broken or missing caps or other closure devices.
- b. After the initial inspection, subsequent annual visual, olfactory, and auditory inspections shall be conducted for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in piping; loose connections; liquid leaks; or broken or missing caps or other closure devices.
- c. Detected leaks shall be repaired in accordance with the timing stated in Condition 5.1.1.f.iii.
- d. Records of such inspections shall be maintained in accordance with 3.4.2.
- e. The use of the procedures listed as Alternative Methods to Method 21 (i.e. soapy water) to identify a leak or determine whether a leak has been repaired is acceptable.

[45CSR13, R13-3249, 4.2.4]

5.2.5. The permittee shall monitor the dehydration unit for equipment leaks in accordance with the following requirements:

- a. Conduct an initial visual, olfactory, and auditory inspection for defects that could result in air emissions within 180 days of start-up of the dehydration unit.
- b. After the completion of the initial inspection, subsequent inspections shall be conducted in accordance with the following:

- i. Visual inspection of the glycol circulating pumps for visual indicators of leaking seals once per month.
 - ii. Visual determination of the visual indicator of the pressure relief device to determine if a release has occurred on a daily basis.
 - iii. Conduct a visual, olfactory, and auditory inspection for defects that could result in air emissions within 12 months of the previous inspection of the dehydration unit.
- c. Detected leaks shall be repaired in accordance with the timing stated in Condition 5.1.4.
 - d. Records of such inspections and any repairs made shall be maintained in accordance with 3.4.2.
 - e. The use of the procedures listed as Alternative Methods to Method 21 (i.e. soapy water) to identify a leak or determine whether a leak has been repaired is acceptable.

[45CSR13, R13-3249, 4.2.5]

5.3. Testing Requirements

- 5.3.1. Pursuant to 40 CFR 63 Subpart HH *National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities*, Dehydration unit at the facility is subject to the following limitations and standards given below:

§ 63.772 Test methods, compliance procedures, and compliance demonstrations.

(b) *Determination of glycol dehydration unit flowrate or benzene emissions.* The procedures of this paragraph shall be used by an owner or operator to determine glycol dehydration unit natural gas flowrate or benzene emissions to meet the criteria for an exemption from control requirements under §63.764(e)(1) (requirement 5.1.6).

(2) The determination of actual average benzene emissions from a glycol dehydration unit shall be made using the procedures of paragraph (b)(2)(i) of this requirement. Emissions shall be determined either uncontrolled, or with federally enforceable controls in place.

(i) 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™ Version 3.0 Technical Reference Manual. Inputs to the model shall be representative of actual operating conditions of the glycol dehydration unit.

[45CSR34; 40 C.F.R. 63 Subpart HH §63.772 (b)(2)(i) and 45CSR13, R13-3249, 4.2.1(d)] [DEHY01]

- 5.3.2. For the purposes of demonstrating proper operation of the flare, the permittee shall conduct an initial performance test within 180 days after initial startup of the flare. Permittee shall conduct a Method 22 of Appendix A to Part 60 to determine if the flare is operating within compliance of Condition 5.1.2.f.i. The observation period for this demonstration is 2 hours. During the observation, the dehydration unit shall be operated at 90 percent of the unit's design capacity or the maximum anticipated rate. Such demonstration shall be conducted in accordance with the applicable portions of Condition 3.3.1. Records of such demonstration shall be maintained in accordance with Condition 3.4.2.

[45CSR13, R13-3249, 4.3.1]

5.4. Recordkeeping Requirements

- 5.4.1. Pursuant to 40 CFR 63 Subpart HH *National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities*, Dehydration unit at the facility is subject to the following limitations and standards given below:

§ 63.774 Recordkeeping requirements

(d) (1) An owner or operator of a glycol dehydration unit that meets the exemption criteria in §63.764(e)(1)(i) or §63.764(e)(1)(ii) (requirement 5.1.6) shall maintain the records specified in paragraph (d)(1)(ii) of this requirement, as appropriate, for that glycol dehydration unit.

(ii) The actual average benzene emissions (in terms of benzene emissions per year) as determined in accordance with §63.772(b)(2) (requirement 5.3.1).

[45CSR34; 40 C.F.R. 63 Subpart HH §63.774 (d)(1)(ii)] [DEHY01]

- 5.4.2. The permittee shall maintain records of the analysis that is used to indicate compliance is in accordance with items a, b and f.iii of Condition 5.1.2. Such records shall include the source of data used in the analysis and be maintained in accordance with Condition 3.4.2.

[45CSR13, R13-3249, 4.4.4]

- 5.4.3. **Record of Monitoring.** The permittee shall keep records of monitoring information that include the following:

- a. The date, place as defined in this permit, and time of sampling or measurements;
- b. The date(s) analyses were performed;
- c. The company or entity that performed the analyses;
- d. The analytical techniques or methods used;
- e. The results of the analyses; and
- f. The operating conditions existing at the time of sampling or measurement, if applicable.

[45CSR13, R13-3249, 4.4.1]

5.5. Reporting Requirements

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

[45CSR§30-5.1.c]

- 5.5.2. The permittee shall report to the Director any leaks of the closed vent system that were not repaired in accordance with Condition 5.1.1. Such report shall be included with the facility's semiannual or annual compliance report as required in 45 CSR 30.
[45CSR§13-5.11 and 45CSR13, R13-3249, 4.5.1]

5.6. Compliance Plan

- 5.6.1. None.

6.0. Source-Specific Requirements for Hastings Station Engines [EN01, EN02, EN06, AUX06]

6.1. Limitations and Standards

- 6.1.1. Pursuant to 40 CFR 63 Subpart ZZZZ *National Emission Standards for Hazardous Air Pollutants For Stationary Reciprocating Internal Combustion Engines*, the facility is subject to the following limitations and standards given below:

§ 63.6603 *What emission limitations and operating limitations must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?*

(a) If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart. [40 C.F.R. 63 Subpart ZZZZ §63.6603(a); 45CSR34]

Table 2d to Subpart ZZZZ of Part 63— Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of start-up you must...
6. Non-emergency, non-black start 2SLB stationary RICE [EN01, EN02]	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first; ¹	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
	b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first; and replace as necessary;	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.	

¹Sources have the option to utilize an oil analysis program as described in §63.6625(j) in order to extend the specified oil change requirement in Table 2d of this subpart.

§ 63.6605 *What are my general requirements for complying with this subpart?*

(a) You must be in compliance with the emission limitations, operating limitations, and other requirements in this subpart that apply to you at all times.

(b) 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. [40 C.F.R. 63 Subpart ZZZZ §63.6605; 45CSR34] [EN01, EN02]

§ 63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?

e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:

(5) An existing non-emergency, non-black start 2SLB stationary RICE located at an area source

(h) If you operate a new, reconstructed, or existing stationary engine, 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 2d to this subpart apply. [EN01, EN02]

(j) If you own or operate a stationary SI engine that is subject to the work, operation or management practices in item 6 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Table 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [EN01, EN02]

[40 C.F.R. 63 Subpart ZZZZ §63.6625; 45CSR34]

§ 63.6640 How do I demonstrate continuous compliance with the emission limitations and operating limitations?

(a) You must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart. [EN01, EN02]

Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, and other requirements

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
9...existing non-emergency 2SLB stationary RICE located at an area source of HAP [EN01, EN02]	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. [EN01, EN02]

[40 C.F.R. 63 Subpart ZZZZ §63.6640; 45CSR34]

§63.6665 What parts of the General Provisions apply to me?

Table 8 to subpart ZZZZ shows which parts of the General Provisions in §§63.1 through 63.15 apply to you. [40 C.F.R. 63 Subpart ZZZZ §63.6665 and §63.6645(a)(5); 45CSR34] [EN01, EN02]

6.1.2. The emergency generator, identified as AUX06, is subject to the following requirements:

- a. The engine AUX06 shall only be fired with pipeline quality natural gas.
- b. The maximum emissions from the Auxiliary Generator AUX06 shall not exceed the limits given in the following table:

Pollutant	PPH
CO	20.57
NO _x	1.14
VOC	0.39

[45CSR13, R13-3249, 6.1.1 (a), (f)] [AUX06]

6.1.3. Pursuant to 40 C.F.R. 63 Subpart ZZZZ, *National Emission Standards for Hazardous Air Pollutants For Stationary Reciprocating Internal Combustion Engines*, the facility is subject to the following provision given below:

§ 63.6590 What parts of my plant does this subpart cover?

(c) *Stationary RICE subject to Regulations under 40 CFR Part 60.* An affected source that meets the criteria in paragraph (c)(1) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

- (1) a new or reconstructed stationary RICE located at an area source;

[40 C.F.R. 63 Subpart ZZZZ, §63.6590(c); 45CSR34] [AUX06, EN06]

6.1.4. Pursuant to 40 CFR 60 Subpart JJJJ, *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*, the facility is subject to the following limitations and standards given below:

§ 60.4233 What emission standards must I meet if I am an owner or operator of a stationary SI internal combustion engine?

(e) 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 C.F.R. 60 Subpart JJJJ for their stationary SI ICE. [45CSR16; 40 C.F.R. 60 Subpart JJJJ §60.4233(e)] [AUX06, EN06]

Engine type and fuel	Maximum engine power	Manufacture date	Emission standards ^a					
			g/HP-hr			ppmvd at 15% O ₂		
			NO _x	CO	VOC ^d	NO _x	CO	VOC ^d
Emergency [AUX06]	25<HP<130	1/1/2009	≤10	387	N/A	N/A	N/A	N/A
Non-Emergency SI Lean Burn Natural Gas [EN06]	500≤HP<1,350	On or after 7/1/2010	1.0*	2.0*	0.7*	82*	270*	60*

^aOwners 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 O₂.

^cThe emission standards applicable to emergency engines between 25 HP and 130 HP are in terms of NO_x+ HC.

^dFor purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

*Compliance with R13-3249 “g/HP-hr” and “ppmvd at 15% O₂” emission limits for the engine EN06 (condition 6.1.5) will assure compliance with these emission limits of 40 CFR 60 Subpart JJJJ, Table 1.

[45CSR16; 40 C.F.R. 60 Subpart JJJJ, Table 1] [AUX06, EN06]

§ 60.4234 How long must I meet the emission standards if I am an owner or operator of a stationary SI internal combustion engine?

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.

[45CSR16; 40 C.F.R. 60 Subpart JJJJ, §60.4234][AUX06, EN06]

§ 60.4236 What is the deadline for importing or installing stationary SI ICE produced in the previous model year?

(b) After July 1, 2009, owners and operators may not install stationary SI ICE with a maximum engine power of greater than or equal to 500 HP that do not meet the applicable requirements in 40 CFR §60.4233, except that lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP that do not meet the applicable requirements in 40 CFR §60.4233 may not be installed after January 1, 2010. [EN06]

(c) For emergency stationary SI ICE with a maximum engine power of greater than 19 KW (25 HP),

owners and operators may not install engines that do not meet the applicable requirements in §60.4233 after January 1, 2011. [AUX06]

[45CSR16; 40 C.F.R. 60 Subpart JJJJ, §60.4236(b) and (c)]

§ 60.4237 What are the monitoring requirements if I am an owner or operator of an emergency stationary SI internal combustion engine?

(c) If you are an owner or operator of an emergency stationary SI internal combustion engine that is less than 130 HP, was built on or after July 1, 2008, and does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter upon startup of your emergency engine. [45CSR16; 40 C.F.R. 60 Subpart JJJJ, §60.4237(c) and 45CSR13, R13-3249, 6.1.1.e] [AUX06]

§ 60.4243 What are my compliance requirements if I am an owner or operator of a stationary SI internal combustion engine?

(a) (1) If you operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, you must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required if you are an owner or operator. You must also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply to you. If you adjust engine settings according to and consistent with the manufacturer's instructions, your stationary SI internal combustion engine will not be considered out of compliance.

(2) If you do not operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, your engine will be considered a non-certified engine, and you must demonstrate compliance according to (a)(2)(i) through (iii) of this section, as appropriate.

(ii) If you are an owner or operator of a stationary SI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test within 1 year of engine startup to demonstrate compliance.

[45CSR16; 40 C.F.R. 60 Subpart JJJJ, §§60.4243(a)(1) and (a)(2)(ii) and 45CSR13, R13-3249, 6.1.1(c)] [AUX06]

(b) If you are an owner or operator of a stationary SI internal combustion engine and must comply with the emission standards specified in 40 CFR §60.4233(d) or (e), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) and (2) of this section.

(1) Purchasing an engine certified according to procedures specified in this subpart, for the same model year and demonstrating compliance according to one of the methods specified in paragraph (a) of this section. [AUX06]

(2) Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in 40 CFR §60.4233(d) or (e) and according to the requirements specified in 40 CFR §60.4244, as applicable, and according to paragraph (i) and (ii) of this section.

(ii) 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 of the engine and

corresponding control device (oxidation catalyst), 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. [EN06]

[45CSR16; 40 C.F.R. 60 Subpart JJJJ, §§60.4243(b)(1), (b)(2)(ii) and 45CSR13, R13-3249, 6.1.1(b)] [AUX06, EN06]

- (d) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (d)(1) through (3) of this section. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (d)(1) through (3) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (d)(1) through (3) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary ICE in emergency situations.

(2) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (d)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (d)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (d)(2).

(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

(3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (d)(2) of this section. Except as provided in paragraph (d)(3)(i) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[45CSR16; 40 C.F.R. 60 Subpart JJJJ, §60.4243(d)(1), (d)(2)(i), (d)(3) & 45CSR13, R13-3249, 6.1.1(d)][AUX06]

(e) Owners and operators of stationary SI natural gas fired engines may operate their engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but must keep records of such use. If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, the owners and operators are required to conduct a performance test to demonstrate compliance with the emission standards of §60.4233.

[45CSR16; 40 C.F.R. 60 Subpart JJJJ, §60.4243(e) and 45CSR13, R13-3249, 5.1.2 and 5.4.5] [AUX06, EN06]

(g) It is expected that air-to-fuel ratio controllers will be used with the operation of non-selective catalytic reduction. The AFR controller must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times.

[45CSR16; 40 C.F.R. 60 Subpart JJJJ, §60.4243(g) and 45CSR13, R13-3249, 5.1.1.c] [EN06]

6.1.5. The following conditions and requirements are specific to the internal combustion engine EN06:

Emission limits									
g/HP-hr			ppmvd at 15% O ₂			TPY			lbs/hr
NO _x	CO	VOC ¹	NO _x	CO	VOC ¹	NO _x	CO	VOC ²	VOC ²
1.0	0.2	0.2	70	17	12	7.0	1.4	2.09	0.48

¹ Formaldehyde is excluded from this VOC limit.

² This VOC limit shall include formaldehyde emissions.

Formaldehyde emissions from engine EN06 shall not exceed 0.16 pounds per hour and 0.70 tpy.

[45CSR13, R13-3249, 5.1.1. a.i through a.iv] [EN06]

6.1.6. Reserved.

6.1.7. The engine shall be equipped with an oxidation catalyst air pollution control device. The oxidation catalyst shall be installed, maintained, and operated as outlined in condition 6.1.9.

[45CSR13, R13-3249, 5.1.1.b] [EN06]

- 6.1.8. (a) The permittee must replace the reciprocating compressor rod packing according to either paragraph (1) or (2) of this condition.
- (1) On or 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 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.

[45CSR16; 40 C.F.R. 60 Subpart OOOOa, §60.5385a(a)(1) and (2); 45CSR13, R13-3249, 5.1.1.e] [EN06]

6.1.9. Requirements of the Oxidization Catalysts for EN06.

- a. The permittee may operate the engine without the catalyst element for the first 200 operating hours of the engine (engine burn-in period). After completing the engine burn-in period or the first 200 operating hours (whichever occurs first), the permittee shall insert the catalyst element and maintain and operate in accordance with the following requirements.
- b. The temperature of the exhaust entering the catalyst must be at least 450⁰F and no greater than 900⁰F or within the operating range indicated by the manufacturer.
- c. The pressure drop across the catalyst shall be no greater than 2 inch above the measured pressure drop across at initial start-up with the engine operating at 100% load (+ 10%) or as otherwise specified by the catalyst manufacturer. Load calculations may be performed using engine manufacturer's software or other means acceptable to the Director.
- d. The permittee shall monitor the temperature to the inlet of the catalyst and in accordance with manufacturer's specifications; a high temperature alarm shall shut off the engine before thermal deactivation of the catalyst occurs. If the engine shuts off due to high temperature, the registrant shall also check for thermal deactivation of the catalyst before normal operations are resumed.
- e. With the exception of the initial burn-in period as stated in condition 6.1.9.a, the permittee shall not cause or allow engine exhaust gases to bypass any catalytic reduction device.

[45CSR13, R13-3249, 5.1.3] [EN06]

- 6.1.10. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate the air pollution control equipment 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, R13-3249, 5.1.4] [EN06]

6.2. Monitoring Requirements

- 6.2.1. Reserved.

- 6.2.2. The permittee shall install and maintain a non-resettable hour meter for the purpose of recording the operating hours of engine.
[45CSR13, R13-3249, 5.1.1.d] [EN06]
- 6.2.3. The permittee measure and record the catalyst inlet temperature and pressure drop across the catalyst for engine EN06 at least once per month. During such measurements, the permittee shall collect engine operating data to determine the operating load of the engine concurrently. Such records shall be maintained in accordance with condition 3.4.2. **[45CSR13, R13-3249, 5.2.1] [EN06]**
- 6.2.4. To achieve initial compliance with the standards for each reciprocating compressor affected facility you must comply with following:
- (1) If complying with §60.5385a(a)(1) or (2) (requirement 6.1.8(a)(1) or (2)), during the initial compliance period, you must continuously monitor the number of hours of operation or track the number of months since the last rod packing replacement. **[45CSR16; 40 C.F.R. 60 Subpart OOOOa, §60.5385a(b) and §60.5410a(c)(1)] [EN06]**

6.3. Testing Requirements

- 6.3.1. The permittee must conduct initial performance testing on engine EN06 within 180 days after initial start-up of the engine and thereafter every 8,760 hours of engine operation or once every three years, whichever comes first, to demonstrate compliance with the emission limits in condition 6.1.5. During such testing, the engine shall be operated within 10% of 100% peak or highest achievable load measure and record the catalyst inlet temperature, and pressure drop across the catalyst for each test run. Such testing shall be conducted in accordance with the applicable procedures in 40 CFR §60.4244 and condition 3.3.1. Records of such testing shall be maintained in accordance with condition 3.4.2.
[45CSR16; 40 C.F.R. 60 Subpart JJJJ, §60.4243(b)(2)(ii); 45CSR13, R13-3249, 5.3.1] [EN06]
- 6.3.2. Reserved.
- 6.3.3. If you are an owner or operator of a stationary SI internal combustion engine that is less than or equal to 500 HP and you purchase a non-certified engine or do not operate and maintain your certified stationary SI internal combustion engine and control device according to the manufacturer's written emission-related instructions, you are required to perform initial performance testing as indicated in this section, but you are not required to conduct subsequent performance testing unless the stationary engine is rebuilt or undergoes major repair or maintenance. A rebuilt stationary SI ICE means an engine that has been rebuilt as that term is defined in 40 CFR 94.11(a).
[45CSR16; 40 C.F.R. 60 Subpart JJJJ, §60.4243(f)] [AUX06]
- 6.3.4. 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 the 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 NO_x mass per unit output emission limitation, convert the concentration of NO_x in the engine exhaust using Equation 1 of this section:

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

Where:

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

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

1.912 × 10⁻³ = Conversion constant for ppm NO_x to grams per standard cubic meter at 20 degrees Celsius.

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

T = Time of test run, in hours.

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

- (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:

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

Where:

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

C_d = Measured CO concentration in ppmv.

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

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

T = Time of test run, in hours.

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

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

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

Where:

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

C_d = VOC concentration measured as propane in ppmv.

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

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

T = Time of test run, in hours.

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

- (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.

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

Where:

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

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

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

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

Where:

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

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

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

Where:

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

[45CSR16; 40 C.F.R. 60 Subpart JJJJ, §60.4244] [AUX06, EN06]

6.4. Recordkeeping Requirements

- 6.4.1. Pursuant to 40 CFR 63 Subpart ZZZZ *National Emission Standards for Hazardous Air Pollutants For Stationary Reciprocating Internal Combustion Engines*, the facility is subject to the following recordkeeping requirements given below:

§ 63.6655 What records must I keep?

- (a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(5), (b)(1) through (b)(3) and (c) of this section.

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

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

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

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with §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.

- (b) For each CEMS or CPMS, you must keep the records listed in paragraphs (b)(1) through (3) of this section.

(1) Records described in §63.10(b)(2)(vi) through (xi).

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

(3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in §63.8(f)(6)(i), if applicable.

- (d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.

(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE;

(3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.

[40 C.F.R. 63 Subpart ZZZZ §63.6655; 45CSR34] [EN01, EN02]

§ 63.6660 In what form and how long must I keep my records?

- (a) Your records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1).
- (b) As specified in §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.
- (c) 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).

[40 C.F.R. 63 Subpart ZZZZ §63.6660; 45CSR34] [EN01, EN02]

- 6.4.2. Pursuant to 40 CFR 60 Subpart JJJJ *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*, the facility is subject to the following recordkeeping provisions given below:

§ 60.4245 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary SI internal combustion engine?

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

- (a) Owners and operators of all stationary SI ICE must keep records of the information in paragraphs (a)(1) through (4) of this section.
 - (1) All notifications submitted to comply with this subpart and all documentation supporting any notification.
 - (2) Maintenance conducted on the engine.
 - (3) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 1048, 1054, and 1060, as applicable.
 - (4) If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to §60.4243(a)(2), documentation that the engine meets the emission standards.

[AUX06, EN06]

- (b) For all stationary SI emergency ICE greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. **[AUX06]**
- (d) 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. Performance test reports using EPA Method 18, EPA Method 320, or ASTM D6348-03 (incorporated by reference—see 40 CFR 60.17) to measure VOC require reporting of all QA/QC data.

For Method 18, report results from sections 8.4 and 11.1.1.4; for Method 320, report results from sections 8.6.2, 9.0, and 13.0; and for ASTM D6348-03 report results of all QA/QC procedures in Annexes 1-7.
[AUX06, EN06]

[45CSR16; 40 C.F.R. 60 Subpart JJJJ, §§60.4245(a), (b), (d) and 45CSR13, R13-3249, 6.2.1, 6.3.1, 6.3.2]

6.4.3. The permittee shall keep a maintenance plan and records of conducted maintenance for engine EN06 and corresponding control device (oxidation catalyst).

[45CSR16; 40 C.F.R. 60 Subpart JJJJ, §60.4243(b)(2)(ii) and 45CSR13, R13-3249, 5.4.4] [EN06]

6.4.4. The permittee shall keep records of engine operating hours for engine EN06 when using propane.

[45CSR16; 40 C.F.R. 60 Subpart JJJJ, §60.4243(e) and 45CSR13, R13-3249, 5.4.5] [EN06]

6.4.5. To achieve initial compliance with the standards for each reciprocating compressor affected facility you must maintain the records as specified in 40 CFR §60.5420a(c)(3) (condition 6.4.6) for each reciprocating compressor affected facility.

[45CSR16; 40 C.F.R. 60 Subpart OOOOa, §60.5385a(b) and §60.5410a(c)(4)] [EN06]

6.4.6. For demonstrating compliance with condition 6.1.8 the permittee must maintain the records identified as specified in 40 CFR §60.7(f) and in items (i) through (iii) of this condition (40 CFR §60.5420a(c)(3)). All records required by 40 CFR 60 Subpart OOOOa must be maintained either onsite or at the nearest local field office for at least 5 years. Any records required to be maintained by 40 CFR 60 Subpart OOOOa that are submitted electronically via the EPA's CDX may be maintained in electronic format.

(i) Records of the cumulative number of hours of operation or number of months since initial startup or the previous replacement of the reciprocating compressor rod packing, whichever is later.

(ii) Records of the date and time of each reciprocating compressor rod packing replacement.

(iii) Records of deviations in cases where the reciprocating compressor was not operated in compliance with the requirements specified in condition 6.1.8 (40 CFR §60.5385a).

[45CSR16; 40 C.F.R. 60 Subpart OOOOa, §60.5385a(d) and §60.5420a(c)(3); 45CSR13, R13-3249, 5.4.6] [EN06]

6.4.7. **Record of Monitoring.** The permittee shall keep records of monitoring information that include the following:

- a. The date, place as defined in this permit, and time of sampling or measurements;
- b. The date(s) analyses were performed;
- c. The company or entity that performed the analyses;
- d. The analytical techniques or methods used;
- e. The results of the analyses; and

- f. The operating conditions, as specified in Condition 6.2.3, existing at the time of sampling or measurement.

[45CSR13, R13-3249, 5.4.1] [EN06]

6.5. Reporting Requirements

- 6.5.1. The permittee shall submit an initial notification to the Director and Administrator within 15 days after initial start-up of engine EN06 in accordance with condition 3.4.2 and 40 CFR §60.7(c). Such notification shall contain the following information:
- Name and address of the owner or operator;
 - The address of the affected source;
 - Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;
 - Emission control equipment; and
 - Fuel used.

[45CSR16; 40 C.F.R. 60 Subpart JJJJ, §60.4245(c) and 45CSR13, R13-3249, 5.5.1] [EN06]

- 6.5.2. To achieve initial compliance with the standards for each reciprocating compressor affected facility you must submit the initial annual report for your reciprocating compressor as required in 40 CFR §60.5420a (b)(1) and (4) (requirement 6.5.3(2)).
- [45CSR16; 40 C.F.R. 60 Subpart OOOOa, §60.5385a(b) and §60.5410a(c)(3)] [EN06]**
- 6.5.3. (1) For each reciprocating compressor affected facility complying with condition 6.1.8 (40 CFR §60.5385a(a)(1) or (2)), the permittee must demonstrate continuous compliance according to paragraphs (a) through (c) of this section.
- The permittee 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 the date of the most recent reciprocating compressor rod packing replacement, whichever is later.
 - The permittee must submit the annual reports as required in item (2) if this condition (40 CFR §60.5420a(b)(1) and (4)) and maintain records as required in condition 6.4.6 (40 CFR §60.5420a(c)(3)).
 - The permittee must replace the reciprocating compressor rod packing on or 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.
- (2) The permittee must submit annual reports containing the information specified in items (a) through (f) of this section (40 CFR §§60.5420a(b)(1) and (4)). The permittee must submit annual reports following the procedure specified item (3) of this condition (40 CFR §60.5420a(b)(11)). The initial annual report is due no later than 90 days after the end of the initial compliance period as determined according to 40 CFR §60.5410a. Subsequent 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 items (a) through (f) of this section. Annual reports may coincide with title V reports as long as all the required elements of the annual report are included. The permittee may arrange with the Administrator a common schedule on which reports required by this part may be submitted as long as the schedule does not extend the reporting period. Such reports shall be submitted in accordance with condition 3.5.1 and records of such submittal shall be maintained in accordance with condition 3.4.2. At the minimum, these reports shall contain the following information:

- a. Permittee Name, Facility Name, addresses of the Facility;
- b. An identification of each affected facility being included in the report;
- c. Beginning and ending dates of the reporting period.
- d. 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.
- e. The cumulative number of hours of operation or the number of months since initial startup or since the previous reciprocating compressor rod packing replacement, whichever is later.
- f. Records of deviations specified in condition 6.4.6 (iii) (40 CFR §60.5420a(c)(3)(iii)) that occurred during the reporting period.

(3) The permittee must submit reports to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX (<https://cdx.epa.gov/>.) The permittee must use the appropriate electronic report in CEDRI for this subpart or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the CEDRI Web site (<https://www3.epa.gov/ttn/chief/cedri/>). If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the permittee must submit the report to the Administrator at the appropriate address listed in §60.4. Once the form has been available in CEDRI for at least 90 calendar days, the permittee must begin submitting all subsequent reports via CEDRI. The reports must be submitted by the deadlines specified in this subpart, regardless of the method in which the reports are submitted.

[45CSR16; 40 C.F.R. 60 Subpart OOOOa, §60.5385a(c) and (d), §§60.5415a(c)(1) through (3); §§60.5420a(b)(1) and (4), (11); 45CSR13, R13-3249, 5.5.2] [EN06]

6.5.4. If you own or operate an emergency stationary SI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 C.F.R. § 60.4243(d)(2)(ii) and (iii) or that operates for the purposes specified in 40 C.F.R. §60.4243(d)(3)(i), you must submit an annual report according to the requirements in paragraphs 40 C.F.R. §§ 60.4243 (e)(1) through (3).

- (1) The report must contain the following information:
 - (i) Company name and address where the engine is located.
 - (ii) Date of the report and beginning and ending dates of the reporting period.
 - (iii) Engine site rating and model year.
 - (iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(v) Hours operated for the purposes specified in 40 C.F.R. § 60.4243(d)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in § 60.4243(d)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in 40 C.F.R. § 60.4243(d)(2)(ii) and (iii).

(vii) Hours spent for operation for the purposes specified in 40 C.F.R. § 60.4243(d)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in 40 C.F.R. § 60.4243(d)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

- (2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.
- (3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in 40 C.F.R. § 60.4.

[45CSR16, 40 CFR §60.4245(e)] [AUX06]

6.6. Compliance Plan

- 6.6.1. None.

7.0. Source-Specific Requirements for Mockingbird Hill Station [AUX02, AUX03, AUX04, BLR02, TUR02, WH-1, CT-01, CT-02, EG-01, TK4]

7.1. Limitations and Standards

7.1.1. Except during startup and shut down, emissions from the (following units at the) facility shall not exceed the following:

ID No.	NO _x		CO		VOC		PM ₁₀		SO ₂		HAPs	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Turbine 006-02	5.12	22.43	6.24	27.33	1.79	7.84	2.69	11.79	0.22	0.96	0.07	0.28
Aux Gen. 02	0.03	0.13	0.08	0.35	0.01	0.03	0.03	0.01	0.01	0.01	0.01	0.01
Aux Gen. 03	0.03	0.13	0.08	0.35	0.01	0.03	0.03	0.01	0.01	0.01	0.01	0.01
Aux Gen. 04	0.03	0.13	0.08	0.35	0.01	0.01	0.03	0.15	0	0	0.01	0.02
Boiler 02	0.46	2.02	0.18	0.81	0.08	0.36	0.04	0.17	0.01	0.01	0	0

[45CSR13, R13-2555, 4.1.1] [TUR02, AUX02, AUX03, AUX04, BLR02]

7.1.2. The turbine 006-02 shall not combust more than 598.99 MMCF/yr of fuel (natural gas) cumulatively on a rolling 12 month basis.

[45CSR13, R13-2555, 4.1.2] [TUR02]

7.1.3. The three auxiliary generators 002-02, 002-03 and 002-04 combined shall not combust more than 21.9 x 10⁶ ft³/yr of fuel (natural gas) cumulatively on a rolling 12 month basis.

[45CSR13, R13-2555, 4.1.3] [AUX02, AUX03, AUX04]

7.1.4. The boiler identified in permit application R13-2555 as 005-04 shall not combust more than 44.9 x 10⁶ ft³/ yr of fuel (natural gas) cumulatively on a rolling 12 month basis.

[45CSR13, R13-2555, 4.1.4] [BLR02]

7.1.5. The sulfur content of the gas being fired at the facility shall not exceed 0.2 grains/100 scf.

[45CSR13, R13-2555, 4.1.5]

7.1.6. Turbine 006-02, Emission Point ID No. TUR02, shall not exceed 25 ppm NO_x at 15% Oxygen.

[45CSR16; 45CSR13, R13-2555, 4.1.7 and 40 C.F.R. 60 Subpart KKKK §60.4320] [TUR02]

7.1.7. The facility must operate and maintain Turbine 006-02 and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.

[45CSR16; 45CSR13, R13-2555, 4.1.8 and 40 C.F.R. 60 Subpart KKKK §60.4333(a)] [TUR02]

7.1.8. The facility shall maintain the fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifying that the maximum total sulfur content for natural gas use in continental areas is 20 grains of sulfur or less per 100 standard cubic feet, has potential sulfur emissions of less than 26 ng SO₂/J (0.060 lbSO₂/MMBtu) heat input for continental areas. By satisfying this requirement the permittee is exempt from the total sulfur monitoring requirement of 40 C.F.R. §60.4360 for TUR02.

[45CSR16; 45CSR13, R13-2555, 4.1.9 and 40 C.F.R. 60 Subpart KKKK, 40CFR§60.4365(a)] [TUR02]

- 7.1.9. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six minute block average. **[45CSR§2-3.1, 45CSR13, R13-2555, 4.1.6] [BLR02]**
- 7.1.10. The following conditions and requirements are specific to Combustion Turbines (ID CT-01 & CT-02):
- a. Emissions from each combustion turbine shall not exceed the following:
- i. Emissions of nitrogen oxides (NO_x) shall be controlled with combustion controls. Each turbine shall not discharge nitrogen oxides (NO_x) emissions in excess of 9 ppmvd at 15 percent oxygen (O₂) when operating at load conditions at or above 75 percent of peak load and/or when operating temperatures are at or above 0°F. When the operating loads of the turbine are less than 75% of peak load and/or operating temperatures are less than 0°F, NO_x emissions from the turbine shall not exceed 150 ppm at 15 percent O₂. Annual NO_x emissions from each turbine shall not exceed 27.04 tpy on a 12-month rolling total. This limit applies at all times, including periods of startup, shutdown, or malfunction. **[45CSR16; 40 C.F.R. 60 Subpart KKKK, §60.4320(a), Table 1 to Subpart KKKK of Part 60 – Nitrogen Oxides Emission Limits for New Stationary Combustion Turbines]**
- ii. Emissions of CO shall not exceed 5 ppmvd at 15% O₂ during normal operating conditions. Normal operating conditions shall be when ambient temperature is at or above 0°F and compressor load on the turbine is at or above 75% of peak load. During non-normal temperature (low temperature) conditions, CO emissions shall not exceed 30 ppmvd at 15% O₂. Annual CO emissions from each turbine shall not exceed 27.8 tpy on a 12-month rolling total. The above short-term limits apply at all times, including periods of shutdowns or malfunctions.
- iii. Emissions of SO₂ from each turbine shall not exceed 0.060 lb of SO₂/MMBtu heat input. For purposes of demonstrating compliance with this limit, the permittee shall maintain the Federal Energy Regulatory Commission (FERC) tariff limit on total sulfur content of 20 grains of sulfur per 100 standard cubic feet of natural gas combusted in the turbines. *By satisfying this requirement the permittee is exempt from the total sulfur monitoring requirement of 40 C.F.R. §60.4360.* **[45CSR16; 40 C.F.R. 60 Subpart KKKK, §§60.4330(a)(2) & 60.4365(a)]**
- iv. Emissions of PM, PM₁₀, and PM_{2.5} from each turbine shall not exceed 3.46 pounds per hour, which includes filterable and condensable portions of particulate matter. Annual PM, PM₁₀, and PM_{2.5} emissions from each turbine shall not exceed 15.16 tpy on a 12-month rolling total. This limit applies at all times, including periods of startup, shutdown, or malfunction. **[45CSR§14-8.3]**
- v. Emissions of VOC from each turbine shall not exceed 1.25 ppmvd (expressed as propane) at 15% O₂ during normal operating conditions. Normal operating conditions shall be when ambient temperature is at or above 0°F and at compressor load on the turbine at or above 75% of peak load. During non-normal temperature (low temperature) conditions, VOC emissions shall not exceed 2.50 ppmvd (expressed as propane) at 15% O₂. Annual VOC emissions from each turbine shall not exceed 3.57 tpy on a 12-month rolling total. The above short-term limits apply at all times, including periods of shutdowns, or malfunctions.
- vi. Emissions of greenhouse gases (GHG), in terms of carbon dioxide equivalent (CO₂e) emissions, from each turbine shall not exceed 1.01 lbs of CO₂e per hp – hr on a 12-month rolling average and 90,916 tpy on 12-month rolling total. **[45CSR§14-8.3]**
- b. In order to comply with PM and GHG limits in this condition, each turbine shall only be fired with pipeline-quality natural gas. **[45CSR§14-8.3]**

c. In order to comply with PM, PM₁₀, and PM_{2.5} limits in this condition, each turbine shall be equipped and properly maintained with a high-efficiency combustion air filtration system to remove particulates from the combustion air for each turbine. The intake of the combustion air system shall be designed to minimize the entrainment of ground level particulate matter and sized correctly to allow for the use of good combustion practices to optimize the turbine. [45CSR§14-8.3]

d. The permittee must operate and maintain each turbine, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction. [45CSR16; 40 C.F.R. 60 Subpart KKKK, §60.4333(a)]

e. The permittee must minimize the combustion turbine's time spent during startup, not to exceed 15 minutes, after which time or once the exhaust temperature reaches the operating range for the control device, whichever occurs first, the emission standards applies to all times other than startup in items (a)(ii) and (a)(v) of condition 7.1.10.

f. Each combustion turbine shall be equipped with an oxidation catalyst air pollution control device. The oxidation catalyst shall be installed, maintained, and operated as outlined in condition 7.1.11.

[45CSR14, R14-0033, 4.1.1] [CT-01, CT-02]

7.1.11. Requirements of the Oxidization Catalysts for CT-01 and CT-02.

a. If recommended by the catalyst manufacturer, the permittee may operate the turbine without the catalyst element for the first 200 operating hours of each turbine (burn-in period). After completing the burn-in period or the first 200 operating hours (whichever occurs first), the permittee shall install the catalyst element.

b. The temperature of the exhaust entering the catalyst must be at least 450°F and no greater than 900°F or within the operating range indicated by the manufacturer.

c. The pressure drop across the catalyst shall be no greater than 2 inches above the measured pressure drop at initial start-up with the turbine operating at 100% load (+ 10%) or as otherwise specified by the catalyst manufacturer. Load calculations may be performed using turbine manufacturers software or other means acceptable to the Director.

d. The permittee shall monitor the temperature to the inlet of the catalyst and in accordance with the manufacturer's specifications; a high temperature alarm shall shut off the engine before thermal deactivation of the catalyst occurs. If the engine shuts off due to high temperature, the permittee shall also check for thermal deactivation of the catalyst before normal operations are resumed. Except for the initial burn-in period, as stated in condition 7.1.11.a, the permittee shall not cause or allow engine exhaust gases to bypass any catalytic reduction device.

e. The permittee shall wash or replace the catalyst in accordance with the manufacturer's guidance/recommendation intervals or develop and implement a means to determine when the catalyst is no longer capable of achieving the CO short-term limit in condition 7.1.10.a.ii.

[45CSR14, R14-0033, 4.1.2] [CT-01, CT-02]

7.1.12. Within 180 days after the initial start-up of both combustion turbines (CT-01 and CT-02), the permittee shall permanently shut down compressor engines identified as 001-01 and 001-02, which are located at the Hastings Compressor Station surface site, which is adjacent and contiguous to the surface site covered by this permit.

[45CSR14, R14-0033, 4.1.3 and 45CSR§14-2.46.h] [CT-01, CT-02]

7.1.13. The following conditions and requirements are specific to the internal combustion engine for the Emergency Generator (ID EG-01):

a. Emissions shall not exceed the following:

- i. NO_x emissions from the engine shall not exceed 2.0 grams of NO_x per horsepower-hour (g/hp-hr) or 160 ppmvd at 15 percent O₂.
- ii. CO emissions from the engine shall not exceed 4.0 g/hp-hr or 540 ppmvd at 15 percent O₂.
- iii. VOC emissions from the engine shall not exceed 1.0 g/hp-hr or 86 ppmvd at 15 percent O₂. Formaldehyde is excluded from this VOC limit.

[45CSR16, 40 C.F.R. 60 Subpart JJJJ, §60.4233(e), Table 1 to Subpart JJJJ of Part 60 - NO_x, CO, and VOC Emission Standards for Stationary Non-Emergency SI Engines > 100 HP, Stationary SI Landfill/Digester Gas Engines, and Stationary Emergency Engines > 25 HP and 45CSR§14-8.3]

b. There is no time limit on the use of the engine in emergency situations. The engine can operate for combined non-emergency purposes, which include maintenance and testing, and other non-emergency use for a maximum of 100 hours per year on a calendar year basis. For the non-emergency situations, this engine cannot be operated for peak shaving or non-emergency demand response, or to generate income for the facility through the sale of electricity to an electric grid or otherwise provide power as part of a financial arrangement with another entity.

[45CSR16, 40 C.F.R. 60 Subpart JJJJ, §§60.4243(d), (d)(1), (d)(2)(i) and (d)(3)]

c. The engine shall be equipped with a non-resettable hour-meter prior to start-up.

[45CSR16, 40 C.F.R. 60 Subpart JJJJ, §60.4237(a)]

d. The permittee shall 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.

[45CSR16, 40 C.F.R. 60 Subpart JJJJ, §60.4243(b)(2)(ii)]

e. In accordance with 45CSR§14-8.3, the permittee shall implement and maintain the following measures in applying the Best Available Control Technology for PM, PM₁₀, PM_{2.5} and Greenhouse Gas emissions to the engine by:

- i. Limiting the fuel for the engine to only pipeline quality natural gas.
- ii. Tune-up the engine once every five years in accordance with the manufacturer's specifications.

[45CSR§14-8.3]

[45CSR14, R14-0033, 5.1.1] [EG-01]

7.1.14. The following conditions and requirements are specific to the boiler (WH-1):

a. NO_x emissions emitted to the atmosphere from the boiler shall not exceed 1.87 tons per year on a rolling 12-month basis.

b. CO emissions emitted to the atmosphere from the boiler shall not exceed 3.15 tons per year on a rolling 12-month basis.

c. PM, PM₁₀, and PM_{2.5} emissions to the atmosphere from the boiler shall not exceed 0.28 tons per year on a rolling yearly total basis, which includes filterable and condensable forms of particulate matter.

d. The heater shall not be designed or constructed with a maximum design heat input in excess of 8.72 MMBtu/hr. This condition satisfies compliance with the limitation of 45CSR§2-3.1. [45CSR§2A-3.1.a]

e. In accordance with 45CSR§14-8.3, the permittee shall implement and maintain the following measures in applying the Best Available Control Technology for PM, PM₁₀, PM_{2.5} and Greenhouse Gases emissions generated from the boiler by:

i. Limiting the fuel for the boiler to only pipeline quality natural gas.

ii. Tune-up the boiler once every five years in accordance with the manufacturer's specifications.

[45CSR§14-8.3]

[45CSR14, R14-0033, 6.1.1] [WH-1]

7.1.15. The venting (blowdown) of the compressors, pig receivers and launchers, station shutdown events, and filter maintenance to atmosphere shall be conducted in accordance with the following limitations:

a. The GHG emissions release as a result of blowdown events from the compressors shall not exceed 6,936.3 tons of CO_{2e} during any twelve consecutive months. [45CSR§14-8.3]

b. The VOC emissions released as a result of blowdown events from the compressors shall not exceed 7.91 tons during any twelve consecutive months.

c. The number of complete station-wide blowdown events due to planned station shutdowns shall not exceed 1 event during any twelve consecutive months. [45CSR§14-8.3]

[45CSR14, R14-0033, 6.1.2]

7.1.16. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate the air pollution control equipment 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.

[45CSR14, R14-0033, 4.1.4]

7.2. Monitoring Requirements

7.2.1. For the purpose of determining compliance with the annual limits for each combustion turbine (CT-01 and CT-02), the permittee shall monitor and record the following for each calendar month:

a. Hours the turbine operated at normal conditions, which is when the turbine is at or above 50% load, and the ambient temperature is above 0°F.

b. Hours the turbine operated at low-load conditions, which is when the turbine load is less than 50% load.

c. Hours the turbine operated at low temperature conditions, which is when the ambient temperature is less than 0°F.

d. The number of startup and shutdown cycles that occurred during the month.

Such records shall be maintained in accordance with condition 3.4.2 of this permit.

[45CSR14, R14-0033, 4.2.1] [CT-01, CT-02]

- 7.2.2. For the purposes of demonstrating compliance with the work practice requirement of condition 7.1.10.e, the permittee shall monitor and record the length of time of every startup for each combustion turbine (CT-01 and CT-02) as defined in condition 7.1.10.e.

[45CSR14, R14-0033, 4.2.2] [CT-01, CT-02]

- 7.2.3. Once per year, the permittee shall sample the fuel gas consumed by the turbines and analyze the sample for total sulfur or total sulfur compounds using ASTM Method 7493 or 5504-12 or other method approved by the Director.

Should the result of annual total sulfur or total sulfur compounds exceed eighty percent (80%) of the margin of compliance determined in Condition 7.3.5, the permittee shall within 60 days of taking the sample of the annual fuel gas analysis commence conducting quarterly sampling for the next four calendar quarters to determine the total sulfur or total sulfur compounds in the fuel gas for each quarter. Such samples must be taken with at least 60 days between samples. Within 15 days after determining the total sulfur or total sulfur compounds of the fuel gas, the permittee shall determine the average loading of the sulfur in the fuel gas and determine average using the results of quarterly analysis is at or above eighty percent (80%) of the margin of compliance.

If the average sulfur loading from quarterly analysis is at or above eighty percent (80%) of the margin of compliance, the permittee shall conduct a compliance demonstration for the short-term limits in 7.1.10.a.iii in accordance with the methods and procedures outlined in Condition 7.3.5 within 90 days after the sampling date of fourth quarter. After taking the last quarterly sample, the permittee shall resume back to annual fuel sampling in accordance with this condition.

Results of such analysis shall be maintained in accordance with condition 3.4.2.

[45CSR14, R14-0033, 4.2.3] [CT-01, CT-02]

- 7.2.4. The permittee shall continuously monitor the temperature of the exhaust from each turbine and record all instances when the temperature was outside of the acceptable range as stated in condition 7.1.11.b and record what mode the turbine was operating in at the time of the instance. Such records shall be maintained in accordance with condition 3.4.2.

[45CSR14, R14-0033, 4.2.4] [CT-01, CT-02]

- 7.2.5. Once per month, the permittee shall record the pressure drop across the oxidation catalyst, or any other means the permittee may elect to use to satisfy the catalyst monitoring requirements in condition 7.1.11.c for each turbine and determine if the catalyst is operating correctly or if corrective action needs to be taken to restore the catalyst. Such records shall be maintained in accordance with condition 3.4.2.

[45CSR14, R14-0033, 4.2.5] [CT-01, CT-02]

- 7.2.6. The permittee shall keep records of the hours of operation for the engine identified as EG-01. The records must document how many hours are spent for emergency operation, including what classified the operation as an emergency, and how many hours are spent for non-emergency operation with corresponding reason for the non-emergency operation. Such records shall be maintained in accordance with condition 3.4.2 and must be in a manner to demonstrate compliance with the operating limits of condition 7.1.13.b.

[45CSR14, R14-0033, 5.2.1 and 45CSR16, 40 C.F.R. 60 Subpart JJJJ, §60.4245(b)] [EG-01]

- 7.2.7. The permittee shall record the actual amount of fuel consumed or actual operating hours for the boiler (WH-1) for each calendar month and determine actual emissions emitted during the corresponding month. Using

the previous 12-months of actual emissions, the permittee shall demonstrate compliance with the annual limits of items a through c of condition 7.1.14. Such records shall be maintained in accordance with condition 3.4.2.

[45CSR14, R14-0033, 6.2.1] [WH-1]

7.2.8. The permittee shall determine the amount of GHG, in terms of CO₂e and VOC emissions released during every compressor blowdown. At the end of each calendar month, the permittee shall determine the total GHG and VOCs emission from the previous 12 months to demonstrate compliance with the limits in condition 7.1.15.a and b. Such records shall be maintained in accordance with condition 3.4.2.

[45CSR14, R14-0033, 6.2.2]

7.2.9. For each pig chamber depressurization event, the permittee shall determine the amount of GHG emissions in terms of CO₂e, and VOC emissions released during the event. Such records shall be maintained in accordance with condition 3.4.2.

[45CSR14, R14-0033, 6.2.3]

7.2.10. The permittee shall collect production data of condensate collected from the pipeline segment that the permitted facility supported for the first 30 days that TK4 was placed into service. The permittee must calculate the potential VOC emissions from TK4, which includes flash emissions, breathing losses, and working losses from the vessel, using a generally accepted model or calculation methodology, based on the maximum average daily throughput determined for a 30-day period of production. If the potential VOC emissions from TK4 are at or greater than 6 tpy, TK4 is an affected source subject to Subpart OOOOa of 40 C.F.R. 60 and the permittee shall comply with the following:

- a. Determine the potential VOC emission rate as specified in 40 C.F.R. §60.5365a(e).
- b. Reduce the VOC emissions in accordance with 40 C.F.R. §60.5395a(d).
- c. Submit the information required for TK4 as specified in 40 C.F.R. §60.5420a(b) to the Director within 60 days from placing TK4 in service.
- d. Maintain records in accordance with condition 3.4.2.

[45CSR14, R14-0033, 6.2.4 and 45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5365a(e) and §60.5410a(h)][TK4]

7.3. Testing Requirements

7.3.1. The facility must perform annual performance test in accordance with §60.4400 to demonstrate continuous compliance for the emission limitation set forth in 40CFR60.4320 listed in Table 1 of 40 C.F.R. 60 Subpart KKKK. If the NO_x emission result from the performance test is less than or equal to 75 percent of the 25 ppm NO_x emission limit for the turbine, the facility may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test). If the results of any subsequent performance test exceed 75 percent of the NO_x emission limit for the turbine, the facility must resume annual performance tests. Such testing shall be conducted in accordance with Condition 3.3.1, 40 CFR §60.4400, and 40 CFR §60.4375(b). Records of such testing shall be maintained in accordance with Condition 3.4.2.

[45CSR16; 45CSR13, R13-2555, 4.3.1 and 40 C.F.R. 60 Subpart KKKK, §60.4340(a)] [TUR02]

7.3.2. (a) You must conduct an initial performance test, as required in §60.8. Subsequent NO_x performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test).

(1) There are two general methodologies that you may use to conduct the performance tests. For each test run:

(i) Measure the NO_x concentration (in parts per million (ppm)), using EPA Method 7E or EPA Method 20 in appendix A of this part. For units complying with the output based standard, concurrently measure the stack gas flow rate, using EPA Methods 1 and 2 in appendix A of 40 C.F.R. 60, and measure and record the electrical and thermal output from the unit. Then, use the following equation to calculate the NO_x emission rate:

$$E = \frac{1.194 \times 10^{-7} * (NO_x)_c * Q_{std}}{P}$$

Where:

E = NO_x emission rate, in lb/MWh

1.194×10^{-7} = conversion constant, in lb/dscf-ppm

(NO_x)_c = average NO_x concentration for the run, in ppm

Q_{std} = stack gas volumetric flow rate, in dscf/hr

P = gross electrical and mechanical energy output of the combustion turbine, in MW (for simple-cycle operation), for combined-cycle operation, the sum of all electrical and mechanical output from the combustion and steam turbines, or, for combined heat and power operation, the sum of all electrical and mechanical output from the combustion and steam turbines plus all useful recovered thermal output not used for additional electric or mechanical generation, in MW, calculated according to §60.4350(f)(2); or

(ii) Measure the NO_x and diluent gas concentrations, using either EPA Methods 7E and 3A, or EPA Method 20 in appendix A of this part. Concurrently measure the heat input to the unit, using a fuel flowmeter (or flowmeters), and measure the electrical and thermal output of the unit. Use EPA Method 19 in appendix A of 40 C.F.R. 60 to calculate the NO_x emission rate in lb/MMBtu. Then, use Equations 1 and, if necessary, 2 and 3 in §60.4350(f) to calculate the NO_x emission rate in lb/MWh.

(2) Sampling traverse points for NO_x and (if applicable) diluent gas are to be selected following EPA Method 20 or EPA Method 1 (non-particulate procedures), and sampled for equal time intervals. The sampling must be performed with a traversing single-hole probe, or, if feasible, with a stationary multi-hole probe that samples each of the points sequentially. Alternatively, a multi-hole probe designed and documented to sample equal volumes from each hole may be used to sample simultaneously at the required points.

(3) Notwithstanding paragraph (a)(2) of this section, you may test at fewer points than are specified in EPA Method 1 or EPA Method 20 in appendix A of 40 C.F.R. 60 if the following conditions are met:

(i) You may perform a stratification test for NO_x and diluent pursuant to

(A) [Reserved], or

(B) The procedures specified in section 6.5.6.1(a) through (e) of appendix A of 40 C.F.R. Part 75.

- (ii) Once the stratification sampling is completed, you may use the following alternative sample point selection criteria for the performance test:
 - (A) If each of the individual traverse point NO_x concentrations is within ±10 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ±5ppm or ±0.5 percent CO₂ (or O₂) from the mean for all traverse points, then you may use three points (located either 16.7, 50.0 and 83.3 percent of the way across the stack or duct, or, for circular stacks or ducts greater than 2.4 meters (7.8 feet) in diameter, at 0.4, 1.2, and 2.0 meters from the wall). The three points must be located along the measurement line that exhibited the highest average NO_x concentration during the stratification test; or
 - (B) For turbines with a NO_x standard greater than 15 ppm @ 15% O₂, you may sample at a single point, located at least 1 meter from the stack wall or at the stack centroid if each of the individual traverse point NO_x concentrations is within ±5 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ±3ppm or ±0.3 percent CO₂ (or O₂) from the mean for all traverse points; or
 - (C) For turbines with a NO_x standard less than or equal to 15 ppm @ 15% O₂, you may sample at a single point, located at least 1 meter from the stack wall or at the stack centroid if each of the individual traverse point NO_x concentrations is within ±2.5 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ±1ppm or ±0.15 percent CO₂ (or O₂) from the mean for all traverse points.
- (b) The performance test must be done at any load condition within plus or minus 25 percent of 100 percent of peak load. You may perform testing at the highest achievable load point, if at least 75 percent of peak load cannot be achieved in practice. You must conduct three separate test runs for each performance test. The minimum time per run is 20 minutes.
 - (1) If the stationary combustion turbine combusts both oil and gas as primary or backup fuels, separate performance testing is required for each fuel.
 - (2) For a combined cycle and CHP turbine systems with supplemental heat (duct burner), you must measure the total NO_x emissions after the duct burner rather than directly after the turbine. The duct burner must be in operation during the performance test.
 - (3) If water or steam injection is used to control NO_x with no additional post-combustion NO_x control and you choose to monitor the steam or water to fuel ratio in accordance with §60.4335, then that monitoring system must be operated concurrently with each EPA Method 20 or EPA Method 7E run and must be used to determine the fuel consumption and the steam or water to fuel ratio necessary to comply with the applicable §60.4320 NO_x emission limit.
 - (4) Compliance with the applicable emission limit in §60.4320 must be demonstrated at each tested load level. Compliance is achieved if the three-run arithmetic average NO_x emission rate at each tested level meets the applicable emission limit in §60.4320.
 - (5) If you elect to install a CEMS, the performance evaluation of the CEMS may either be conducted separately or (as described in §60.4405) as part of the initial performance test of the affected unit.

- (6) The ambient temperature must be greater than 0°F during the performance test.

[45CSR16; 45CSR13, R13-2555, 4.3.2 and 45CSR14, R14-0033, 4.3.1; 40 C.F.R. 60 Subpart KKKK, 40CFR§60.4400][TUR02, CT-01, CT-02]

- 7.3.3. For the purposes of demonstrating compliance with the NO_x emission standards in condition 7.1.10.a.i and 40 C.F.R. §60.4320(a), the permittee shall conduct an initial performance test within 60 days after achieving maximum output of each turbine, but no later than 180 days after initial startup. After the initial test, subsequent performance testing shall be conducted biannually (no more than 26 months following the previous test) as allowed under 40 C.F.R. §60.4340(a) (condition 7.3.1). Such testing shall be conducted in accordance with condition 3.3.1 and 40 C.F.R. §60.4400 (condition 7.3.2). Records of such testing shall be maintained in accordance with condition 3.4.2.

[45CSR14, R14-0033, 4.3.1 and 45CSR16, 40 C.F.R. 60 Subpart KKKK, 40CFR§60.4340(a), 40CFR§60.8(a)][CT-01, CT-02]

- 7.3.4. For the purposes of demonstrating compliance with the CO emission standards in condition 7.1.10.a.ii, the permittee shall conduct an initial performance test within 60 days after achieving maximum output of each turbine, but no later than 180 days after initial startup. Such testing shall be conducted concurrently with the testing as required in condition 7.3.3. After the initial test, subsequent performance testing shall be conducted biannually (no more than 26 months following the previous test). Such testing shall be conducted in accordance with condition 3.3.1 and U.S. EPA Test Method 10. Records of such testing shall be maintained in accordance with condition 3.4.2.

[45CSR14, R14-0033, 4.3.2] [CT-01, CT-02]

- 7.3.5. For the purposes of demonstrating compliance with the PM, PM₁₀, and PM_{2.5} limits in condition 7.1.10.a.iv for each turbine, the permittee shall conduct an initial performance test within 120 days once the turbine has operated for 300 hours after initial start-up of the turbine and once every five years thereafter except as specified otherwise in this condition. Such testing shall be conducted in accordance with condition 3.3.1 and U.S. EPA Test Method 201/201A to be used to measure the “front half” and Method 202 to be used to measure the “back-half” of the particulate matter. During each test, the permittee shall determine either the hydrogen sulfide or the total sulfur in the fuel consumed by the turbine. This testing shall consist of three runs of four hours for each run. Records of such testing shall be maintained in accordance with condition 3.4.2.

Using the test results after each demonstration for both turbines, the permittee shall determine the margin of compliance in terms of total sulfur or total sulfur compounds. The permittee shall use good engineering calculations and practices in determining the margin of compliance. The margin of compliance with supporting calculations shall be included with the applicable test report as required in condition 3.3.1.

[45CSR14, R14-0033, 4.3.3] [CT-01, CT-02]

- 7.3.6. During each test run conducted as required in conditions 7.3.3 through 7.3.5, the permittee shall measure the amount of fuel consumed, power output, and operating mode of the SoLoNO_x system. The measured values from each test run shall be included with the test report.

[45CSR14, R14-0033, 4.3.4] [CT-01, CT-02]

- 7.3.7. The permittee must conduct an initial performance test on engine EG-01 within one hundred and eighty days after initial start-up and every 8,760 hours or 3 years, whichever comes first, thereafter, to demonstrate compliance with the emission limits of items a.i through a.iii of condition 7.1.13. Such testing shall be conducted in accordance with the applicable procedures in 40 C.F.R. §60.4244 and condition 3.3.1. Records of such testing shall be maintained in accordance with condition 3.4.2.

[45CSR14, R14-0033, 5.3.1 and 45CSR16, 40 C.F.R. 60 Subpart JJJJ, §60.4243(b)(2)(ii)] [EG-01]

7.4. Recordkeeping Requirements

- 7.4.1. For the purposes of determining compliance with maximum fuel limit set forth in Sections 7.1.2, 7.1.3 and 7.1.4 the applicant shall maintain a monthly record of the quantity of natural gas burned by the turbine, the three auxiliary microturbines (combined) and the boiler maintained in accordance with condition 3.4.2. **[45CSR13, R13-2555, 4.4.4] [AUX02, AUX03, AUX04, TUR02, BLR02]**
- 7.4.2. For each combustion turbine, the permittee shall keep records of the average daily power output, in terms of hp-hr, and fuel consumed, in terms of either MMBtu or therms, by each turbine on a daily basis. Such records shall be maintained in accordance with condition 3.4.2. **[45CSR14, R14-0033, 4.4.4] [CT-01, CT-02]**
- 7.4.3. The permittee shall maintain records of maintenance performed on EG-01, which shall include tune-up performed as required in condition 7.1.13.e.ii. Such records shall be maintained in accordance with condition 3.4.2. **[45CSR14, R14-0033, 5.4.1 and 45CSR16, 40 C.F.R. 60 Subpart JJJJ, §60.4245(a)(2)] [EG-01]**

7.5. Reporting Requirements

- 7.5.1. The facility must submit a written report of the results of each performance test, conducted in accordance with §60.4340(a), before the close of business on the 60th day following the completion of the performance test. **[45CSR16; 40 C.F.R. 60 Subpart KKKK, 40CFR§60.4375(b)] [TUR02, CT-01, CT-02]**
- 7.5.2. Within 15 days of complying with condition 7.1.12, the permittee shall notify the Director in accordance with condition 3.5.1 of the date that each engine (001-01 and 001-02) permanently ceased to operate. **[45CSR14, R14-0033, 4.5.1 and 45CSR§14-7.7] [CT-01, CT-02]**
- 7.5.3. The permittee must submit a copy of each performance test as conducted in §60.4244 for stationary SI ICE subject to performance testing within 60 days after the test has been completed. Performance test reports using EPA Method 18, EPA Method 320, or ASTM D6348-03 (incorporated by reference - see 40 CFR 60.17) to measure VOC require reporting of all QA/QC data. For Method 18, report results from sections 8.4 and 11.1.1.4; for Method 320, report results from sections 8.6.2, 9.0, and 13.0; and for ASTM D6348-03 report results of all QA/QC procedures in Annexes 1-7. **[45CSR16; 40 C.F.R. 60 Subpart JJJJ, 40CFR§60.4245(d)] [EG-01]**
- 7.5.4. If you own or operate an emergency stationary SI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 C.F.R. § 60.4243(d)(2)(ii) and (iii) or that operates for the purposes specified in 40 C.F.R. §60.4243(d)(3)(i), you must submit an annual report according to the requirements in paragraphs 40 C.F.R. §§ 60.4243 (e)(1) through (3).
- (1) The report must contain the following information:
- (i) Company name and address where the engine is located.
 - (ii) Date of the report and beginning and ending dates of the reporting period.
 - (iii) Engine site rating and model year.

- (iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.
 - (v) Hours operated for the purposes specified in 40 C.F.R. § 60.4243(d)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in § 60.4243(d)(2)(ii) and (iii).
 - (vi) Number of hours the engine is contractually obligated to be available for the purposes specified in 40 C.F.R. § 60.4243(d)(2)(ii) and (iii).
 - (vii) Hours spent for operation for the purposes specified in 40 C.F.R. § 60.4243(d)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in 40 C.F.R. § 60.4243(d)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.
- (2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.
 - (3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in 40 C.F.R. § 60.4.

[45CSR16, 40 CFR §60.4245(e)] [EG-01]

7.6. Compliance Plan

- 7.6.1. None.

8.0. Source-Specific Requirements for Lewis Wetzel Station Engines [EN03, AUX05]

8.1. Limitations and Standards

- 8.1.1. The quantity of natural gas that shall be consumed in the 3,550 hp natural gas fired reciprocating engine, Caterpillar Model 3612 (001-03) shall not exceed 27,842 cubic feet per hour or 243.89 mmcf/yr respectively. [45CSR13, R13-2870, 5.1.1] [EN03]
- 8.1.2. The quantity of natural gas that shall be consumed in the 530 hp natural gas fired reciprocating engine, Cummins, Model KTA19G (002-05) shall not exceed 4,351 cubic feet per hour or 2.18 mmcf/yr respectively. [45CSR13, R13-2870, 5.1.2] [AUX05]
- 8.1.3. Maximum emissions from the 3,550 hp natural gas fired reciprocating engine, Caterpillar Model 3612 (001-03) shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
001-03	Nitrogen Oxides	3.92	17.14
	Carbon Monoxide	15.07	65.99
	Volatile Organic Compounds	3.01	13.17
	Formaldehyde	1.88	8.23

[45CSR13, R13-2870, 5.1.3] [EN03]

- 8.1.4. Maximum emissions from the 530 hp natural gas fired reciprocating engine, Cummins, Model KTA19G (002-05) shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
002-05	Nitrogen Oxides	1.70	0.43
	Carbon Monoxide	1.76	0.44
	Volatile Organic Compounds	0.22	0.06
	Formaldehyde	0.22	0.06

[45CSR13, R13-2870, 5.1.4] [AUX05]

- 8.1.5. Requirements for Use of Catalytic Reduction Devices
- a. Lean-burn natural gas compressor engines equipped with selective catalytic reduction (SCR) air pollution control devices shall be fitted with a closed-loop automatic feedback controller to ensure emissions of regulated pollutants do not exceed the potential to emit for any engine/SCR combination under varying load. The closed-loop automatic feedback controller shall provide proper and efficient operation of the engine, ammonia injection and SCR device, monitor emission levels downstream of the catalyst element and limit ammonia slip to less than 10 ppm;
 - b. The closed-loop automatic feedback controller shall provide a warning or indication to the operator and/or be interlocked with the engine ignition system to cease engine operation in case of a masking,

poisoning or overrich air/fuel ratio situation which results in performance degradation or failure of the catalyst element; and

- c. No person shall knowingly:
 - 1. Remove or render inoperative any air pollution or auxiliary air pollution control device installed subject to the requirements of R13-2870;
 - 2. Install any part or component when the principal effect of the part or component is to bypass, defeat or render inoperative any air pollution control device or auxiliary air pollution control device installed subject to the requirements of R13-2870; or
 - 3. Cause or allow engine exhaust gases to bypass any catalytic reduction device.

[45CSR13, R13-2870, 5.1.5] [EN03]

- 8.1.6. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate the air pollution control equipment 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, R13-2870, 4.1.3] [EN03]

- 8.1.7. Pursuant to 40 CFR 63 Subpart ZZZZ *National Emission Standards for Hazardous Air Pollutants For Stationary Reciprocating Internal Combustion Engines*, the facility is subject to the following provision given below:

§ 63.6590 What parts of my plant does this subpart cover?

(c) *Stationary RICE subject to Regulations under 40 CFR Part 60.* An affected source that meets the criteria in paragraph (c)(1) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

- (1) a new or reconstructed stationary RICE located at an area source;

[40 C.F.R. 63 Subpart ZZZZ §63.6590(c)] [EN03, AUX05]

- 8.1.8. Pursuant to 40 CFR 60 Subpart JJJJ *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*, the facility is subject to the following limitations and standards given below:

§ 60.4233 What emission standards must I meet if I am an owner or operator of a stationary SI internal combustion engine?

- (b) Owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards in Table 1 to this subpart for their stationary SI ICE.

[45CSR16; 40 C.F.R. 60 Subpart JJJJ §60.4233(e) and 45CSR13, R13-2870, 7.2.1]

Table 1 to Subpart JJJJ of Part 60—NO_x, CO, and VOC Emission Standards for Stationary Non-Emergency SI Engines ≥100 HP (Except Gasoline and Rich Burn LPG), Stationary SI Landfill/Digester Gas Engines, and Stationary Emergency Engines >25 HP

Engine type and fuel	Maximum engine power	Manufacture date	Emission standards ^a					
			g/HP-hr			ppmvd at 15% O ₂		
			NO _x	CO	VOC ^d	NO _x	CO	VOC ^d
Non-Emergency SI Natural Gas and Non-Emergency SI Lean Burn LPG (except lean burn 500≤HP<1,350) [EN03]	HP≥500	7/1/2010	1.0	2.0	0.7	82	270	60
Emergency [AUX05]	HP≥130	1/1/2009	2.0	4.0	1.0	160	540	86

^aOwners 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 O₂.

^dFor purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

[45CSR16; 40 C.F.R. 60 Subpart JJJJ, Table 1]

§ 60.4234 How long must I meet the emission standards if I am an owner or operator of a stationary SI internal combustion engine?

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.

[45CSR16; 40 C.F.R. 60 Subpart JJJJ §60.4234 and 45CSR13, R13-2870, 7.2.4][EN03, AUX05]

§ 60.4236 What is the deadline for importing or installing stationary SI ICE produced in the previous model year?

(b) After July 1, 2009, owners and operators may not install stationary SI ICE with a maximum engine power of greater than or equal to 500 HP that do not meet the applicable requirements in §60.4233, except that lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP that do not meet the applicable requirements in §60.4233 may not be installed after January 1, 2010. [45CSR16; 40 C.F.R. 60 Subpart JJJJ §60.4236(b) and 45CSR13, R13-2870, 7.3.1] [EN03]

(c) For emergency stationary SI ICE with a maximum engine power of greater than 19 KW (25 HP), owners and operators may not install engines that do not meet the applicable requirements in §60.4233 after January 1, 2011.

[45CSR16; 40 C.F.R. 60 Subpart JJJJ §60.4236(c) and 45CSR13, R13-2870, 7.3.2] [AUX05]

§ 60.4243 What are my compliance requirements if I am an owner or operator of a stationary SI internal combustion engine?

(a) (1) If you operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, you must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required if you are an owner or operator. You must also meet the requirements as specified in 40 CFR part 1068,

subparts A through D, as they apply to you. If you adjust engine settings according to and consistent with the manufacturer's instructions, your stationary SI internal combustion engine will not be considered out of compliance.

(2) If you do not operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, your engine will be considered a non-certified engine, and you must demonstrate compliance according to (a)(2)(i) through (iii) of this section, as appropriate.

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

[45CSR16; 40 C.F.R. 60 Subpart JJJJ §60.4243(a)] [AUX05]

(b) If you are an owner or operator of a stationary SI internal combustion engine and must comply with the emission standards specified in §60.4233(d) or (e), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) and (2) of this section.

- (1) Purchasing an engine certified according to procedures specified in this subpart, for the same model year and demonstrating compliance according to one of the methods specified in paragraph (a) of this section. [AUX05]
- (2) Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in §60.4233(d) or (e) and according to the requirements specified in §60.4244, as applicable, and according to paragraphs (b)(2)(i) and (ii) of this section.

- (i) 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. [EN03]

[45CSR16; 40 C.F.R. 60 Subpart JJJJ §60.4243(b) and 45CSR13, R13-2870, 7.4.1]

(d) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (d)(1) through (3) of this section. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (d)(1) through (3) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (d)(1) through (3) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary ICE in emergency situations.

(2) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (d)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year.

Any operation for non-emergency situations as allowed by paragraph (d)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (d)(2).

(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

(3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (d)(2) of this section. Except as provided in paragraph (d)(3)(i) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[45CSR16; 40 C.F.R. 60 Subpart JJJJ §60.4243(d)(1), (d)(2)(i), (d)(3) and 45CSR13, R13-2870, 7.4.3] [AUX05]

(e) Owners and operators of stationary SI natural gas fired engines may operate their engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but must keep records of such use. If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, the owners and operators are required to conduct a performance test to demonstrate compliance with the emission standards of §60.4233. **[45CSR16; 40 C.F.R. 60 Subpart JJJJ §60.4243(e) and 45CSR13, R13-2870, 7.4.4] [EN03, AUX05]**

- (g) It is expected that air-to-fuel ratio controllers will be used with the operation of three-way catalysts/non-selective catalytic reduction. The AFR controller must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times. [45CSR16; 40 C.F.R. 60 Subpart JJJJ §60.4243(g) and 45CSR13, R13-2870, 7.4.5] [EN03]

8.2. Monitoring Requirements

8.2.1. 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 automatic feedback controller.
 2. Following operating and maintenance recommendations of the catalyst element manufacturer.

[45CSR13, R13-2870, 5.2.1] [EN03]

- 8.2.2. Pursuant to 40 CFR 60 Subpart JJJJ *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*, the facility is subject to the following monitoring provision given below:

§ 60.4237 *What are the monitoring requirements if I am an owner or operator of an emergency stationary SI internal combustion engine?*

- (a) Starting on July 1, 2010, if the emergency stationary SI internal combustion engine that is greater than or equal to 500 HP that was built on or after July 1, 2010, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter.

[45CSR16; 40 C.F.R. 60 Subpart JJJJ §60.4237(a) and 45CSR13, R13-2870, 7.3.4] [AUX05]

8.3. Testing Requirements

- 8.3.1. See Facility-Wide Testing Requirements Section 3.3.
[45CSR13, R13-2870, 5.3.1]

- 8.3.2. Pursuant to 40 CFR 60 Subpart JJJJ *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*, the facility is subject to the following testing provisions given below:

§ 60.4244 *What test methods and other procedures must I use if I am an owner or operator of a stationary SI internal combustion engine?*

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

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

- (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 NO_x mass per unit output emission limitation, convert the concentration of NO_x in the engine exhaust using Equation 1 of this section:

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

Where:

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

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

1.912×10⁻³ = Conversion constant for ppm NO_x to grams per standard cubic meter at 20 degrees Celsius.

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

T = Time of test run, in hours.

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

- (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:

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

Where:

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

C_d= Measured CO concentration in ppmv.

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

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

T = Time of test run, in hours.

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

- (f) For purposes of this subpart, when calculating emissions of VOC, emissions of formaldehyde should not

be included. To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of this section:

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

Where:

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

C_d = VOC concentration measured as propane in ppmv.

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

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

T = Time of test run, in hours.

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

- (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.

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

Where:

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

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

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

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

Where:

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

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

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

Where:

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

[45CSR16; 40 C.F.R. 60 Subpart JJJJ §§60.4244(a) through (g) and 45CSR13, R13-2870, 7.5.1]
[EN03]

8.4. Recordkeeping Requirements

8.4.1. To demonstrate compliance with section 8.1.1 – 8.1.5, the permittee shall maintain records of the amount of natural gas consumed in each engine and the hours of operation of each engine. As per 8.1.5.b, the permittee shall keep records of all warnings or indications to the operator and/or all occasions when the engine operations were ceased. Said records shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.
[45CSR13, R13-2870, 5.4.1 and 45CSR§30-5.1.c]

8.4.2. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment 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, R13-2870, 4.1.4] [EN03]

8.4.3. Pursuant to 40 CFR 60 Subpart JJJJ *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*, the facility is subject to the following recordkeeping provisions given below:

§ 60.4245 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary SI internal combustion engine?

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

- (a) Owners and operators of all stationary SI ICE must keep records of the information in paragraphs (a)(1) through (4) of this section.
 - (1) All notifications submitted to comply with this subpart and all documentation supporting any notification.
 - (2) Maintenance conducted on the engine.

- (3) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 1048, 1054, and 1060, as applicable.
 - (4) If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to §60.4243(a)(2), documentation that the engine meets the emission standards.
- (b) For all stationary SI emergency ICE greater than or equal to 500 HP manufactured on or after July 1, 2010, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than or equal to 130 HP and less than 500 HP manufactured on or after July 1, 2011 that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. [AUX05]

[45CSR16; 40 C.F.R. 60 Subpart JJJJ §§60.4245(a), (b) and 45CSR13, R13-2870, 7.6.1]

8.5. Reporting Requirements

- 8.5.1. See Facility-Wide Reporting Requirements Section 3.5.
[45CSR13, R13-2870, 5.5.1]
- 8.5.2. Pursuant to 40 CFR 60 Subpart JJJJ *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*, the facility is subject to the following reporting provisions given below:

§ 60.4245 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary SI internal combustion engine?

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

[45CSR16; 40 C.F.R. 60 Subpart JJJJ §§60.4245(d) and 45CSR13, R13-2870, 7.6.1] [EN03]

- 8.5.3. If you own or operate an emergency stationary SI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 C.F.R. § 60.4243(d)(2)(ii) and (iii) or that operates for the purposes specified in 40 C.F.R. §60.4243(d)(3)(i), you must submit an annual report according to the requirements in paragraphs 40 C.F.R. §§60.4243 (e)(1) through (3).
 - (1) The report must contain the following information:
 - (i) Company name and address where the engine is located.
 - (ii) Date of the report and beginning and ending dates of the reporting period.

- (iii) Engine site rating and model year.
 - (iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.
 - (v) Hours operated for the purposes specified in 40 C.F.R. § 60.4243(d)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in § 60.4243(d)(2)(ii) and (iii).
 - (vi) Number of hours the engine is contractually obligated to be available for the purposes specified in 40 C.F.R. § 60.4243(d)(2)(ii) and (iii).
 - (vii) Hours spent for operation for the purposes specified in 40 C.F.R. § 60.4243(d)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in 40 C.F.R. § 60.4243(d)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.
- (2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.
 - (3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in 40 C.F.R. § 60.4.

[45CSR16, 40 CFR §60.4245(e)] [AUX05]

8.6. Compliance Plan

- 8.6.1. None.

9.0. Source-Specific Requirements for Lewis Wetzel Station Boiler [BLR05]

9.1. Limitations and Standards

9.1.1. Maximum Design Heat Input. The maximum design heat input for the Bryan Steam Corp. RV 450W-FDG Boiler (005-05) shall not exceed 4.5MMBtu/hr.
[45CSR13, R13-2870, 6.1.3]

9.1.2. Maximum emissions from the 4.5 MMBtu/hr Bryan Steam Corp. RV 450W-FDG Boiler BLR05 (005-05) shall not exceed the following limits:

Emission Point ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
BLR05	Nitrogen Oxides	0.47	2.06
	Carbon Monoxide	0.40	1.73

[45CSR13, R13-2870, 6.1.4]

9.1.3. Boiler BLR05 shall not combust more than 38.65×10^6 ft³/yr of fuel (natural gas) cumulatively on a rolling 12 month basis.

Compliance with this requirement will demonstrate compliance with the requirement 9.1.2.

[45CSR§30-12.7]

9.1.4. Compliance with the visible emission requirements of 45CSR§2-3.1 shall be determined in accordance with 40 C.F.R. 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 45CSR§2-3.1). Continuous opacity monitors shall not be required on fuel burning units which employ wet scrubbing systems for emission control.
[45CSR§2-3.2 and 45CSR13, R13-2870, 6.1.2]

9.1.5. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six minute block average.
[45CSR§2-3.1, 45CSR13, R13-2870, 6.1.1] [BLR05]

9.2. Monitoring Requirements

9.2.1. None.

9.3. Testing Requirements

9.3.1. None.

9.4. Recordkeeping Requirements

9.4.1. For the purposes of determining compliance with maximum fuel limit set forth in Section 9.1.3 the applicant shall maintain a monthly record of the quantity of natural gas burned by the boiler maintained in accordance

with condition 3.4.2.
[45CSR§30-5.1.c] [BLR05]

9.5. Reporting Requirements

9.5.1. None

9.6. Compliance Plan

9.6.1. None

10.0. Specific Requirements for Collection of Fugitive Emissions for Mockingbird Hill Station

10.1. Limitations and Standards

- 10.1.1. The permittee must reduce fugitive greenhouse gas and VOC emissions from the permitted facility by complying with the following requirements. **[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(a) and 45CSR§14-8.3]**
- a. The permittee shall develop and implement a monitoring plan in accordance with condition 10.1.2.
 - b. The permittee shall conduct the initial monitoring survey in accordance with the plan within 60 days after initial startup of compressor CT-01 or CT-02. **[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(f)(2) and §60.5420a(b)(13)]**
 - c. Subsequent monitoring surveys shall be conducted at least quarterly with at least 60 days between surveys. **[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(g)(2)]**
 - d. The fugitive emission components at compressor station shall include all components associated with the Mockingbird Hill Compressor Station Site, which is permitted under R13-2555C, and the Mockingbird Hill Compressor Station Expansion Site covered under permit R14-0033. **[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(g)(2)]**
 - e. Fugitive emissions are defined as: any visible emission from a fugitive emission component observed using optical gas imaging equipment or an instrument reading of 500 ppm or greater using Method 21. **[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(a)]**
 - f. The permittee shall repair all detected fugitive emissions in accordance with the following: **[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(h)]**
 - i. Within 30 calendar days after detection; or **[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(h)(1)]**
 - ii. If the repair or replacement is technically infeasible, would require a vent blowdown, a compressor station shutdown, or is unsafe to repair during operation of the unit, then the repair or replacement must be completed during the next scheduled compressor station shut-down, after a planned vent blowdown, or within 2 years, whichever is earlier. **[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(h)(2)]**
 - g. Once the repair or replacement is completed, the identified component shall be resurveyed as soon as practicable, but no later than 30 days after being repaired, to ensure that there are no fugitive emissions. **[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(h)(3)]**
 - h. For repairs completed after the monitoring survey, the permittee may resurvey the repaired component using either U.S. EPA Method 21, Alternative Screening Procedure of Method 21, or optical gas imaging. **[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §§60.5397a(h) and (h)(1)]**
 - i. When using Method 21 to resurvey a repair, the fugitive emissions component is repaired when the Method 21 instrument indicates a concentration of less than 500 ppm above the background or when no soap bubbles are observed when the Alternative Screening Procedure is used. The procedures outlined in 40 C.F.R. §60.5397a(c)(8)(ii) must be followed when using Method 21. Use of the Alternative Screening Procedure must be conducted in accordance with the following: **[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §§60.5397a(h)(3)(iii), (h)(3)(iii)(A), & (h)(3)(iii)(B)]**

- i. Components that do not have continuously moving parts, that do not have surface temperatures greater than the boiling point or less than the freezing point of the soap solution, that do not have open areas to the atmosphere that the soap solution cannot bridge, or that do not exhibit evidence of liquid leakage. Components that have these conditions present cannot be surveyed using the Alternative Screening Procedure.
- ii. Spray a soap solution over all potential leak sources. The soap solution may be a commercially available leak detection solution or may be prepared using concentrated detergent and water. A pressure sprayer or squeeze bottle may be used to dispense the solution. Observe the potential leak sites to determine if any bubbles are formed. If no bubbles are observed, the source is presumed to have no detectable emissions or leaks as applicable. If any bubbles are observed, Method 21 instructions shall be used to determine if a leak exists, or if the source has detectable emissions, as applicable.

[45CSR16, 40 C.F.R. 60 Section 8.3.3 of Method 21, Appendix A to Part 60]

- j. When using optical gas imaging to resurvey a repair, the fugitive emissions component is repaired when the optical gas imaging equipment show no indication of visible emissions. The procedure outlined in condition 10.1.3 must be followed. **[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(h)(3)(iv)]**

[45CSR14, R14-0033, 7.1.1]

- 10.1.2. The permittee shall develop a plan to monitor all fugitive emission components at the permitted facility. At a minimum, this fugitive emissions monitoring plan must include the elements specified in the following: **[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(b) and (c)]**

- a. Technique for determining fugitive emissions (i.e., Method 21 at 40 C.F.R. Part 60, appendix A-7, or optical gas imaging). **[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(c)(2)]**
- b. Manufacturer and model number of fugitive emissions detection equipment to be used. **[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(c)(3)]**
- c. Procedures and timeframes for identifying and repairing fugitive emissions components from which fugitive emissions are detected, including timeframes for fugitive emission components that are unsafe to repair. The permittee's repair schedule must meet the requirements of condition 10.1.1.f. **[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(c)(4)]**
- d. Procedures and timeframes for verifying fugitive emission component repairs. **[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(c)(5)]**
- e. Records that will be kept and the length of time records will be kept. **[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(c)(6)]**

[45CSR14, R14-0033, 7.1.2]

- 10.1.3. If the permittee elects to use optical gas imaging techniques to conduct monitoring surveys, the plan must also include the following elements:

- a. Initial verification that the optical gas imaging equipment used in the survey meets the following: **[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(c)(7)(i)]**
 - i. The optical gas imaging equipment must be capable of imaging gases in the spectral range for the compound of highest concentration in the potential fugitive emissions. **[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(c)(7)(i)(A)]**

- ii. The optical gas imaging equipment must be capable of imaging a gas that is half methane, half propane at a concentration of 10,000 ppm at a flow rate of less than 60 grams per hour from a quarter inch diameter orifice. [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(c)(7)(i)(B)]
- b. Procedures to perform a daily verification check of the equipment. [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(c)(7)(ii)]
- c. Procedure for determining the operator's maximum viewing distance from the components and how the operator will ensure that this distance is maintained. [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(c)(7)(iii)]
- d. Procedure for determining maximum wind speed during which monitoring can be performed and how the operator will ensure monitoring occurs only at wind speeds below this threshold. [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(c)(7)(iv)]
- e. Procedures for conducting surveys, shall including the following: [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(c)(7)(v)]
 - i. How the operator will ensure an adequate thermal background is present in order to view potential fugitive emissions. [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(c)(7)(v)(A)]
 - ii. How the operator will deal with adverse monitoring conditions, such as wind. [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(c)(7)(v)(B)]
 - iii. How the operator will deal with interferences (e.g., steam). [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(c)(7)(v)(C)]
- f. Training and experience needed prior to performing surveys. [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(c)(7)(vi)]
- g. Procedures for calibration and maintenance. At a minimum, procedures must comply with those recommended by the manufacturer. [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(c)(7)(vii)]

[45CSR14, R14-0033, 7.1.3]

10.1.4. If the permittee elects to use Method 21 technique to conduct monitoring surveys, the plan must also include the following elements:

- a. Verification that the monitoring equipment meets the requirements specified in Section 6.0 of Method 21 at 40 C.F.R. Part 60, appendix A-7. For purposes of instrument capability, the fugitive emissions definition shall be 500 ppm or greater methane using a FID-based instrument. If the permittee wishes to use an analyzer other than a FID-based instrument, the permittee must develop a site-specific fugitive emission definition that would be equivalent to 500 ppm methane using a FID-based instrument (e.g., 10.6 eV PID with a specified isobutylene concentration as the fugitive emission definition would provide equivalent response to the permittee's compound of interest). [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(c)(8)(i)]
- b. Procedures for conducting surveys. At a minimum, the procedures shall ensure that the surveys comply with the relevant sections of Method 21 at 40 C.F.R. Part 60, appendix A-7, including Section 8.3.1. [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(c)(8)(ii)]

[45CSR14, R14-0033, 7.1.4]

10.1.5. The monitoring plan must include the following elements at the permitted facility:

- a. Sitemap. [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(d)(1)]
- b. A defined observation path that ensures that all fugitive emissions components are within sight of the path. The path must include distinguishable marking that indicates or identifies where the observation is being taken with relationship to specific collection of fugitive components. The observation path must account for interferences.
[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(d)(2)]
- c. If the permittee is using Method 21, the plan must also include a list of fugitive emissions components to be monitored and the method for determining location of fugitive emissions components to be monitored in the field (e.g. tagging, identification on a process and instrumentation diagram, etc.). [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5397a(d)(3)]

[45CSR14, R14-0033, 7.1.5]

- 10.1.6. Each monitoring survey shall observe each fugitive emission component, as defined in 40 C.F.R. §60.5430a, for fugitive emissions.
[45CSR16; 45CSR14, R14-0033, 7.1.6 and 40 C.F.R. 60 Subpart OOOOa, §60.5397a(e)]
- 10.1.7. The permittee may elect to switch between monitoring techniques in the monitoring plan. If such an election occurs, the permittee must update the monitoring plan as required in condition 10.1.2 for the site and notify the Director in accordance with condition 3.5.3 within 15 days prior to the next monitoring survey as required in condition 10.1.1.c.
[45CSR14, R14-0033, 7.1.7]

10.2 Recordkeeping Requirements

- 10.2.1. The permittee shall maintain records of each monitoring survey as required in condition 10.1.1. Such records shall contain the following information:
[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(c)(15)(ii)]
 - a. Date of the survey. [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(c)(15)(ii)(A)]
 - b. Beginning and end time of the survey.
[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(c)(15)(ii)(B)]
 - c. Name of operator(s) performing survey. You must note the training and experience of the operator.
[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(c)(15)(ii)(C)]
 - d. Monitoring instrument used.
[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(c)(15)(ii)(D)]
 - e. When optical gas imaging is used to perform the survey, one or more digital photographs or videos, captured from the optical gas imaging instrument used to conduct the monitoring, of each required monitoring survey being performed. The digital photograph must include the date the photograph was taken and the latitude and longitude of the collection of fugitive emissions components at the station imbedded within or stored with the digital file. As an alternative to imbedded latitude and longitude within the digital file, the digital photograph or video may consist of an image of the monitoring survey being performed with a separately operating GPS device within the same digital picture or video, provided the latitude and longitude output of the GPS unit can be clearly read in the digital image.
[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(c)(15)(ii)(E)]
 - f. Ambient temperature, sky conditions, and maximum wind speed at the time of the survey.
[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(c)(15)(ii)(G)]

- g. Any deviations from the monitoring plan or a statement that there were no deviations from the monitoring plan. [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(c)(15)(ii)(H)]
- h. Documentation of each fugitive emission, including the information specified as follows:
 - [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(c)(15)(ii)(I)]
 - i. Location. [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(c)(15)(ii)(I)(1)]
 - ii. Any deviations from the monitoring plan or a statement that there were no deviations from the monitoring plan. [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(c)(15)(ii)(I)(2)]
 - iii. Number and type of components for which fugitive emissions were detected. [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(c)(15)(ii)(I)(3)]
 - iv. Number and type of fugitive emissions components that were not repaired as required in condition 10.1.2.f. [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(c)(15)(ii)(I)(6)]
 - v. A digital photograph or video of each fugitive emissions component that could not be repaired during the monitoring survey when the fugitive emissions were initially found as required in 40 C.F.R. §60.5397a(h)(3)(ii). The digital photograph or video must clearly identify the location of the component that must be repaired. Any digital photograph or video required under this paragraph can also be used to meet the requirements under paragraph (c)(15)(ii)(E) of 40 C.F.R. §60.5420a, as long as the photograph or video is taken with the optical gas imaging instrument, includes the date, and the latitude and longitude are either imbedded or visible in the picture. [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(c)(15)(ii)(I)(8)]
 - vi. Repair methods applied in each attempt to repair the fugitive emissions components. [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(c)(15)(ii)(I)(9)]
 - vii. Number and type of fugitive emission components placed on delay of repair and explanation for each delay of repair. [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(c)(15)(ii)(I)(10)]
 - viii. The date of successful repair of the fugitive emissions component. [45CSR16, 40 C.F.R. 60 Subpart OOOOa §60.5420a(c)(15)(ii)(I)(11)]
 - ix. Instrumentation used to resurvey a repaired fugitive emissions component that could not be repaired during the initial fugitive emissions finding. [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(c)(15)(ii)(I)(12)]

Such records shall be maintained onsite or at the nearest local field office for at least 5 years. Any records submitted as required in condition 10.3.1 in an electronic format shall be maintained in the electric format as submitted.

[45CSR14, R14-0033, 7.2.1]

10.3. Reporting Requirements

- 10.3.1. The permittee shall submit to the Administrator an annual report with the reporting period beginning on August 2 and ending on August 1 with the report due to be submitted by October 31 via CEDIX (<https://cdx.epa.gov>). The permittee may include other facilities in this submission. This report shall contain the records of each monitoring survey of fugitive emission components. [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5385a(d), §§60.5397a(a) & (j) and §§60.5420a(b), (b)(1), (b)(4), (b)(7), & (b)(11)]

Records of submittal shall be maintained in accordance with condition 3.4.2. At minimum, these reports

shall contain the following information:

- a. Permittee Name, Facility Name, addresses of the Facility;
[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(b)(1)(i)]
- b. An identification of each affected facility being included in the report.
[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(b)(1)(ii)]
- c. Beginning and ending dates of the reporting period.
[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(b)(1)(iii)]
- d. A certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(b)(1)(iv)]
- e. Date of each monitoring survey. [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(b)(7)(i)]
- f. Beginning and end time of each survey.
[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(b)(7)(ii)]
- g. Name of operator(s) performing survey. If the survey is performed by optical gas imaging, the permittee must note the training and experience of the operator.
[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(b)(7)(iii)]
- h. Ambient temperature, sky conditions, and maximum wind speed at the time of the survey.
[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(b)(7)(iv)]
- i. Monitoring instrument used. [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(b)(7)(v)]
- j. Any deviations from the monitoring plan or a statement that there were no deviations from the monitoring plan. [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(b)(7)(vi)]
- k. Number and type of components for which fugitive emissions were detected.
[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(b)(7)(vii)]
- l. Number and type of fugitive emissions components that were not repaired as required in condition 10.1.1.f. (40 C.F.R. §60.5397a(h)). [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(b)(7)(viii)]
- m. The date of successful repair of the fugitive emissions component.
[45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(b)(7)(x)]
- n. Number and type of fugitive emission components placed on delay of repair and explanation for each delay of repair. [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(b)(7)(xi)]
- o. Type of instrument used to resurvey a repaired fugitive emissions component that could not be repaired during the initial fugitive emissions finding. [45CSR16, 40 C.F.R. 60 Subpart OOOOa, §60.5420a(b)(7)(xii)]

[45CSR14, R14-0033, 7.3.1]