

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:

Williams Ohio Valley Midstream LLC
Fort Beeler Gas Processing Plant/Cameron, WV
R30-05100127-2021

A handwritten signature in blue ink, reading "Laura M. Crowder", is written over a horizontal line.

Laura M. Crowder

Director, Division of Air Quality

Issued: March 15, 2021 • Effective: March 29, 2021
Expiration: March 15, 2026 • Renewal Application Due: September 15, 2025

Permit Number: **R30-05100127-2021**
Permittee: **Williams Ohio Valley Midstream LLC**
Facility Name: **Fort Beeler Gas Processing Plant**
Permittee Mailing Address: **100 Teletech Drive, Suite 2, Moundsville, WV 26041**

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:	Cameron, Marshall County, West Virginia
Facility Mailing Address:	12681 Waynesburg Pike Road, Cameron, WV 26033
Telephone Number:	(304) 843-3103
Type of Business Entity:	LLC
Facility Description:	Natural gas processing to extract natural gas liquids from field gas at Fort Beeler and natural gas dehydration unit located at Groves Station.
SIC Codes:	Primary 1321 Fort Beeler; 1389 Groves; Secondary NA; Tertiary NA
UTM Coordinates:	535.00 km Easting • 4,414.33 km Northing • Zone 17

Permit Writer: Frederick Tipane

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

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

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

1.1 Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Plant Affiliation ¹	Year Installed	Design Capacity	Control Device
CE-02	2E	Caterpillar G398TA Compressor Engine	All Plants	2011	625 HP	02-NSCR
CE-03	3E	Caterpillar G3612 LE Compressor Engine	Plant 1	2010	3,550 HP	01-OxCat
CE-04	4E	Caterpillar G3612 LE Compressor Engine	Plant 1	2010	3,550 HP	02-OxCat
CE-05	5E	Caterpillar G3612 LE Compressor Engine	Plant 1	2010	3,550 HP	03-OxCat
CE-06	25E	Caterpillar G399TA Compressor Engine	All Plants	2020	800 HP	03-NSCR
GE-01	8E	Olympian G70LG Emergency Generator Engine	All Plants	2014	118 HP	None
SSM	6E	Startup/Shutdown/Maintenance (including blowdown) from units CE-02 through CE-06 and compressors CM-01 through CM-07	All Plants	2010/2020	N/A	FL-02 (partial) ³
RPC	7E	Compressor Rod Packing and Engine Crankcase fugitive VOC emissions from compressors CM-01 through CM-07	All Plants	2010/2020	N/A	None
H-01	9E	TXP1 Hot Oil Heater	Plant 1	2010	10.00 MMBtu/hr	None
H-02	10E	TXP1 Regen Gas Heater	Plant 1	2010	4.74 MMBtu/hr	None
H-03	11E	TXP2 Regen Gas Heater	Plant 2	2011	6.60 MMBtu/hr	None
H-04	12E	TXP3 Regen Gas Heater	Plant 3	2012	6.60 MMBtu/hr	None
H-05	13E	TXP2 Heat Medium Heater	Plant 2	2011	21.22 MMBtu/hr	None
H-06	14E	TXP3 Heat Medium Heater	Plant 3	2012	21.22 MMBtu/hr	None
FL-02	18E	New Process Flare	All Plants	2014/2017	90.00 MMscf/yr	NA
TLO	20E	Truck Loadout (Produced Water/Condensate)	All Plants	2010	600,000 bbl/yr	None
TLO2	24E	Truck Loadout (NGLs)	All Plants	2019	200 gpm 16,425,000 gal/yr	None
FUG	21E	Process Piping Fugitives	All Plants	2010/2020	25,309 Units	None
T-03	22E	Produced Water Storage Tank (9913 Tank)	All Plants	2011	16,800 gal	None
T-04	23E	Produced Water Storage Tank (9914 Tank)	All Plants	2011	16,800 gal	None
T-05	T-05	Diesel Storage Tank	All Plants	2010	500 gal	None
T-06	T-06	Gasoline Storage Tank	All Plants	2010	300 gal	None
T-07	T-07	Methanol Storage Tank	Plant 1	2010	3,000 gal	None
T-08	T-08	Lube Oil (4401) Storage Tank	All Plants	2010	4,200 gal	None
T-09	T-09	Glycol (TK-2902) Slop Storage Tank	All Plants	2010	3,460 gal	None
T-10	T-10	Glycol (TK-2902A) Slop Storage Tank	All Plants	2010	4,200 gal	None
T-13	T-13	Oil (ATM Slop) Storage Tank	Plant 1	2010	8,820 gal	None
T-14	T-14	Lube Oil Storage Tank	Plant 1	2010	2,000 gal	None
T-15	T-15	Lube Oil Storage Tank	All Plants	2010	300 gal	None
T-16	T-16	Lube Oil Storage Tank	All Plants	2010	300 gal	None
T-17	T-17	Lube Oil Storage Tank	All Plants	2010	300 gal	None
T-18	T-18	Oil Storage Tank	All Plants	2010	2,000 gal	None
T-19	T-19	Oil Storage Tank	Plants 2&3	2010	300 gal	None

Emission Unit ID	Emission Point ID	Emission Unit Description	Plant Affiliation ¹	Year Installed	Design Capacity	Control Device
T-20	T-20	Heat Medium (Oil) Storage Tank	All Plants	2010	750 gal	None
T-21	T-21	Heat Medium (Oil) Storage Tank	All Plants	2010	750 gal	None
T-22	T-22	Heat Medium (Oil) Storage Tank	All Plants	2010	750 gal	None
T-23	T-23	Lube Oil Storage Tank	All Plants	2010	300 gal	None
T-24	T-24	Used Oil Storage Tank	All Plants	2014	100 gal	None
T-25	T-25	Used Oil Storage Tank	All Plants	2014	100 gal	None
Pressure Vessels ²	Pressure Vessels ²	2 - 30,000 gallon Condensate Tanks 3 - 30,000 gallon NGL Tanks 2 - 45,000 gallon NGL Tanks 6 - 60,000 gallon NGL Tanks	All Plants	2010	See Emission Unit Description	Pressure Vessels
Equipment Permitted under R13-3212						
DH-01	15E	Groves Dehydrator – Flash Tank/Still Vent	NA	2011	5.00 MMscf/day	None
BLR-01	16E	Groves Dehydrator – Reboiler	NA	2011	0.20 MMBtu/hr	None

¹ Plant 1 is the 120 MMscfd cryogenic plant; and Plants 2 and 3 are the two (2) 200 MMscfd cryogenic plants.

² The Pressure Vessels are not considered emission units and are included for reference purposes only- (these pressure vessels must operate with a minimum pressure of 204.9kPa to not be considered emission units).

³ Only emissions from CM-02 through CM-07 are controlled by the process flare FL-02 (18E).

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
R13-2826N	October 7, 2020
R13-3212A	June 7, 2017

2.0 General Conditions

2.1. Definitions

- 2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.
- 2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.
- 2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.12.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.
- 2.1.4. Unless otherwise specified in a permit condition or underlying rule or regulation, all references to a "rolling yearly total" shall mean the sum of the monthly data, values or parameters being measured, monitored, or recorded, at any given time for the previous twelve (12) consecutive calendar months.

2.2. Acronyms

CAAA	Clean Air Act Amendments	NSPS	New Source Performance
CBI	Confidential Business Information		Standards
CEM	Continuous Emission Monitor	PM	Particulate Matter
CES	Certified Emission Statement	PM₁₀	Particulate Matter less than 10µm in diameter
C.F.R. or CFR	Code of Federal Regulations		
CO	Carbon Monoxide	pph	Pounds per Hour
C.S.R. or CSR	Codes of State Rules	ppm	Parts per Million
DAQ	Division of Air Quality	PSD	Prevention of Significant Deterioration
DEP	Department of Environmental Protection	psi	Pounds per Square Inch
FOIA	Freedom of Information Act	SIC	Standard Industrial Classification
HAP	Hazardous Air Pollutant		
HON	Hazardous Organic NESHAP	SIP	State Implementation Plan
HP	Horsepower	SO₂	Sulfur Dioxide
lbs/hr or lb/hr	Pounds per Hour	TAP	Toxic Air Pollutant
LDAR	Leak Detection and Repair	TPY	Tons per Year
m	Thousand	TRS	Total Reduced Sulfur
MACT	Maximum Achievable Control Technology	TSP	Total Suspended Particulate
mm	Million	USEPA	United States Environmental Protection Agency
mmBtu/hr	Million British Thermal Units per Hour	UTM	Universal Transverse Mercator
mmft³/hr or mmcf/hr	Million Cubic Feet Burned per Hour	VEE	Visual Emissions Evaluation
NA or N/A	Not Applicable		
NAAQS	National Ambient Air Quality Standards	VOC	Volatile Organic Compounds
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§30-2.39]

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. 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)(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. **Minor Source of Hazardous Air Pollutants (HAP).** HAP emissions from the facility shall not exceed 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; R13-2826, 4.1.2., R13-3212, 4.1.2]

- 3.1.10. **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 1.1 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; R13-2826, 4.1.3.; R13-3212, 4.1.3.;45CSR§13-5.10.]

- 3.1.11. The permittee shall install, maintain, and operate all above-ground piping, valves, pumps, etc. that service lines in the transport of potential sources of regulated air pollutants to prevent any substantive fugitive escape of regulated air pollutants. Any above-ground piping, valves, pumps, etc. that shows signs of excess wear and that have a reasonable potential for substantive fugitive emissions of regulated air pollutants shall be replaced.

[45CSR13; R13-3212, 4.1.5.] (Groves Dehydration Station)

3.2. Monitoring Requirements

- 3.2.1. Reserved.

3.3. Testing Requirements

- 3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

- a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61,

and 63, if applicable, in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable.

- b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit.
- c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.
- d. The permittee shall submit a report of the results of the stack test within 60 days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:
 1. The permit or rule evaluated, with the citation number and language.
 2. The result of the test for each permit or rule condition.
 3. A statement of compliance or non-compliance with each permit or rule condition.

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

3.4. Recordkeeping Requirements

- 3.4.1. **Monitoring information.** The permittee shall keep records of monitoring information that include the following:
 - a. The date, place as defined in this permit and time of sampling or measurements;
 - b. The date(s) analyses were performed;
 - c. The company or entity that performed the analyses;
 - d. The analytical techniques or methods used;
 - e. The results of the analyses; and

- f. The operating conditions existing at the time of sampling or measurement.

[45CSR§30-5.1.c.2.A.; 45CSR13; R13-2826, 4.1.1.; R13-3212, 4.1.1.]

- 3.4.2. **Retention of records.** The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of monitoring sample, measurement, report, application, or record creation date. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Where appropriate, records may be maintained in computerized form in lieu of the above records.

[45CSR§30-5.1.c.2.B.]

- 3.4.3. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.

[45CSR§30-5.1.c. State-Enforceable only.]

- 3.4.4. **Record of Malfunctions of Air Pollution Control Equipment.** For 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; R13-2826, 4.1.4.; R13-3212, 4.1.4.]

3.5. Reporting Requirements

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

[45CSR§§30-4.4. and 5.1.c.3.D.]

- 3.5.2. A permittee may request confidential treatment for the submission of reporting required under 45CSR§30-5.1.c.3. pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.
[45CSR§30-5.1.c.3.E.]
- 3.5.3. Except for the electronic submittal of the annual compliance certification and semi-annual monitoring reports to the DAQ and USEPA as required in 3.5.5 and 3.5.6 below, all notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class or by private carrier with postage prepaid to the address(es), or submitted in electronic format by e-mail as set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

DAQ:

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

US EPA:

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

DAQ Compliance and 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. **Certified emissions statement.** The permittee shall submit a certified emissions statement and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality.
[45CSR§30-8.]
- 3.5.5. **Compliance certification.** The permittee shall certify compliance with the conditions of this permit on the forms provided by the DAQ. In addition to the annual compliance certification, the permittee may be required to submit certifications more frequently under an applicable requirement of this permit. The annual certification shall be submitted to the DAQ and USEPA on or before March 15 of each year, and shall certify compliance for the period ending December 31. The permittee shall maintain a copy of the certification on site for five (5) years from submittal of the certification. The annual certification shall be submitted in electronic format by e-mail to the following addresses:

DAQ:

DEPAirQualityReports@wv.gov

US EPA:

R3_APD_Permits@epa.gov

[45CSR§30-5.3.e.]

- 3.5.6. **Semi-annual monitoring reports.** The permittee shall submit reports of any required monitoring on or before September 15 for the reporting period January 1 to June 30 and on or before March 15 for the reporting

period July 1 to December 31. All instances of deviation from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with 45CSR§30-4.4. The semi-annual monitoring reports shall be submitted in electronic format by e-mail to the following address:

DAQ:

DEPAirQualityReports@wv.gov

[45CSR§30-5.1.c.3.A.]

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

3.5.8. **Deviations.**

- a. In addition to monitoring reports required by this permit, the permittee shall promptly submit supplemental reports and notices in accordance with the following:
 1. Any deviation resulting from an emergency or upset condition, as defined in 45CSR§30-5.7., shall be reported by telephone or telefax within one (1) working day of the date on which the permittee becomes aware of the deviation, if the permittee desires to assert the affirmative defense in accordance with 45CSR§30-5.7. A written report of such deviation, which shall include the probable cause of such deviations, and any corrective actions or preventative measures taken, shall be submitted and certified by a responsible official within ten (10) days of the deviation.
 2. Any deviation that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to the Secretary immediately by telephone or telefax. A written report of such deviation, which shall include the probable cause of such deviation, and any corrective actions or preventative measures taken, shall be submitted by the responsible official within ten (10) days of the deviation.
 3. Deviations for which more frequent reporting is required under this permit shall be reported on the more frequent basis.
 4. All reports of deviations shall identify the probable cause of the deviation and any corrective actions or preventative measures taken.

[45CSR§30-5.1.c.3.C.]

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

[45CSR§30-5.1.c.3.B.]

3.5.9. **New applicable requirements.** If any applicable requirement is promulgated during the term of this permit, the permittee will meet such requirements on a timely basis, or in accordance with a more detailed schedule if required by the applicable requirement.

[45CSR§30-4.3.h.1.B.]

3.6. Compliance Plan

3.6.1. Reserved.

3.7. Permit Shield

- 3.7.1. The permittee is hereby granted a permit shield in accordance with 45CSR§30-5.6. The permit shield applies provided the permittee operates in accordance with the information contained within this permit.
- 3.7.2. The following requirements specifically identified are not applicable to the source based on the determinations set forth below. The permit shield shall apply to the following requirements provided the conditions of the determinations are met.
- a. **45CSR14 – Permits for Construction and Major Modification of Major Stationary Sources for the Prevention of Significant Deterioration of Air Quality.** The Fort Beeler facility is not a “Major stationary source” as defined in 45CSR§14-2.43 and the latest modification (Permit R13-2826N) did not trigger the major source threshold. Therefore, the Fort Beeler Facility is not subject to 45CSR14.
 - b. **45CSR19 – Permits for Construction and Major Modification of Major Stationary Sources which Cause or Contribute to Nonattainment Areas.** On September 30, 2013, EPA approved a redesignation request and State Implementation Plan (SIP) revision submitted by the State of West Virginia. The West Virginia Department of Environmental Protection (WVDEP) requested that the West Virginia portion of the Wheeling, WV–OH fine particulate matter (PM_{2.5}) nonattainment area (“Wheeling Area” or “Area”) be redesignated as attainment for the 1997 annual PM_{2.5} national ambient air quality standard (NAAQS). The Fort Beeler facility is located in Marshall County, which is located in this metropolitan statistical area and is an attainment county for all pollutants. Therefore the Fort Beeler Facility is not subject to 45CSR19.
 - c. **45CSR21 – Control of VOC Emissions.** The facility is not located in Putnam, Kanawha, Cabell, Wayne, or Wood counties (45CSR§21-1.1.); therefore, this rule is not applicable.
 - d. **45CSR27 – Control of TAP Emissions.** This rule applies to chemical processing units (45CSR§27-3.1.). The definition of “Chemical Processing Unit” excludes equipment used in the production and distribution of petroleum products providing that such equipment does not produce or contact materials containing more than 5% benzene by weight (45CSR§27-2.4.). The renewal application (Supplement 02 - Regulatory Discussion) indicates that the product produced by the equipment does not contain more than 5% benzene by weight. This is supported in the “Supplement 05 – Lab Analysis” portion of the application which gives the benzene weight percentages at various areas and processes at the facility. Of all the data provided in this supplement, the highest “worst case” weight percentage is below 0.5%. Based upon the provided information, none of the weight percentages are greater than 5%. Therefore, none of the equipment contacts materials containing more than 5% benzene by weight. For these reasons, 45CSR27 is not applicable to the Fort Beeler Processing Plant.
 - e. **40 CFR 60 Subpart D – Standards of Performance for Fossil-Fuel-Fired Steam Generators.** There is no fossil-fuel-fired steam generating unit greater than 250 MMBtu/hr (40 CFR §60.40(a)(1)) at the site; therefore, this regulation is not applicable.

- f. **40 CFR 60 Subpart Da – Standards of Performance for Electric Utility Steam Generating Units.** There is no electric utility steam generating unit greater than 250 MMBtu/hr (40 CFR §60.40Da(a)(1)) at the site; therefore, this regulation is not applicable.
- g. **40 CFR 60 Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units.** There is no steam generating unit greater than 100 MMBtu/hr (40 CFR §60.40b(a)) at the site; therefore, this regulation is not applicable.
- h. **40 CFR 60 Subpart K – Standards of Performance for Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978.** There is no tank at the facility that was constructed before May 19, 1978 (40 CFR §60.110(c)); therefore, this regulation is not applicable.
- i. **40 CFR 60 Subpart Ka – Standards of Performance for Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984.** There is no tank at the facility that was constructed before July 23, 1984 (40 CFR §60.110a(a)); therefore, this regulation is not applicable.
- j. **40 CFR 60 Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984.** Except for fourteen (14) pressure vessels, all of the tanks at the facility are less than 75 cubic meters (m³) (19,813 gallons) capacity; therefore, this regulation is not applicable to those tanks (§60.110b(a)). The fourteen (14) pressure vessels are designed to operate in excess of 204.9 kPa and without emissions to the atmosphere; therefore, this regulation is not applicable to the pressure vessels (§60.110b(d)(2)).
- k. **40 CFR 60 Subpart GG – Standards of Performance for Stationary Gas Turbines.** There is no stationary gas turbine at the facility (40 CFR §60.330(a)); therefore, this regulation is not applicable.
- l. **40 CFR 60 Subpart VV and VVa – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced (for VV) After January 5, 1981, and on or Before November 7, 2006; (for VVa) After November 7, 2006.** The facility is not an affected facility in the synthetic organic chemicals manufacturing industry (40 CFR §60.480(a) and §60.480a(a)); therefore, these regulations are not applicable.
- m. **40 CFR 60 Subpart GGG and GGGa– Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced (for GGG) After January 4, 1983, and on or Before November 7, 2006; (for GGGa) After November 7, 2006.** The facility is not a petroleum refinery (40 CFR §60.590(a) and §60.590a(a)); therefore, these regulations are not applicable.
- n. **40 CFR 60 Subpart LLL – Standards of Performance for SO₂ Emissions From Onshore Natural Gas Processing for Which Construction, Reconstruction, or Modification Commenced After January 20, 1984, and on or Before August 23, 2011.** There is no sweetening unit at the facility (40 CFR §60.640(a)); therefore, this regulation is not applicable.
- o. **40 CFR 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.** There is no compression ignition engine at the facility (40 CFR §60.4200(a)); therefore, this regulation is not applicable.

- p. **40 CFR 60 Subpart KKKK – *Standards of Performance for Stationary Combustion Turbines***. There is no stationary combustion turbine at the facility (40 CFR §60.4305(a)); therefore, this regulation is not applicable.
- q. **40 CFR 63 Subpart HHH – *National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities***. There are no natural gas transmission and storage facilities that transport or store natural gas prior to entering the pipeline to a local distribution company or to a final end user. Further, the facility is an area source of HAP (40 CFR §63.1270(a)). Therefore, this regulation is not applicable.
- r. **40 CFR 63 Subpart YYYY – *National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines***. There is no stationary combustion turbine at the facility (40 CFR §§63.6080(a) and 63.6085); therefore, this regulation is not applicable.
- s. **40 CFR 63 Subpart DDDDD – *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters***. The facility is not a major source of HAP (40 CFR §63.7480); therefore, this regulation is not applicable.
- t. **40 CFR 63 Subpart JJJJJ – *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources***. There are only gas-fired boilers at the facility which are not subject to requirements of this regulation (40 CFR §63.11195(e)); therefore, this regulation is not applicable.
- u. **40 CFR Part 64 – *Compliance Assurance Monitoring***. Although there are potential pollutant specific emission units subject to an emissions limitation, and a control device (i.e., Process Flare FL-02) is used to achieve compliance, the potential pre-control emissions of each pollutant do not exceed the respective major source threshold. Therefore, CAM is not applicable since the applicability criterion in 40 CFR §64.2(a)(3) is not met.

4.0 Engines (CE-02, CE-03, CE-04, CE-05, CE-06, GE-01) and Compressors CM-01 through CM-07 Rod Packing and Crankcase emissions (RPC) and Startup/shutdown/malfunction emissions (SSM) [emission point ID(s): 2E, 3E, 4E, 5E, 25E, 8E, 6E, and 7E]

4.1. Limitations and Standards

4.1.1. To demonstrate compliance with Section 4.1.2., the quantity of natural gas that shall be consumed in the 800 hp natural gas fired reciprocating engine, Caterpillar G399TA (CE-06) shall not exceed 6,652 cubic feet per hour and 58.27×10^6 cubic feet per rolling 12 month period.
[45CSR13; R13-2826, 5.1.1.]

4.1.2. Maximum emissions from the 800 hp natural gas fired reciprocating engine, Caterpillar G399TA (CE-06) shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
CE-06	Nitrogen Oxides	0.88	3.85
	Carbon Monoxide	3.52	15.43
	Volatile Organic Compounds	1.30	5.71
	Formaldehyde	0.03	0.15

[45CSR13; R13-2826, 5.1.2.]

4.1.3. To demonstrate compliance with Section 4.1.4., the quantity of natural gas that shall be consumed in the 625 hp natural gas fired reciprocating engine, Caterpillar G398TA (CE-02) shall not exceed 5,698 cubic feet per hour and 49.91×10^6 cubic feet per rolling 12 month period.
[45CSR13; R13-2826, 5.1.3.]

4.1.4. Maximum emissions from the 625 hp natural gas fired reciprocating engine, Caterpillar G398TA (CE-02) shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
CE-02	Nitrogen Oxides	0.69	3.02
	Carbon Monoxide	0.69	3.04
	Volatile Organic Compounds	0.09	0.39
	Formaldehyde	0.03	0.14

[45CSR13; R13-2826, 5.1.4.]

4.1.5. To demonstrate compliance with Section 4.1.6., the quantity of natural gas that shall be consumed in each of the 3,550 hp natural gas fired reciprocating engines, Caterpillar G3612-LE (CE-03, CE-04, CE-05) shall not exceed 25,579 cubic feet per hour and 224.07×10^6 cubic feet per rolling 12 month period.
[45CSR13; R13-2826, 5.1.5.]

4.1.6. Maximum emissions from each of the 3,550 hp natural gas fired reciprocating engines, Caterpillar G3612-LE (CE-03, CE-04, CE-05) shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
CE-03 CE-04 CE-05	Nitrogen Oxides	3.91	17.14
	Carbon Monoxide	2.15	9.43
	Volatile Organic Compounds	2.85	12.48
	Formaldehyde	0.31	1.34

[45CSR13; R13-2826, 5.1.6.]

- 4.1.7. **Maximum Yearly Operation Limitation.** The maximum yearly hours of operation for the 118 hp emergency generator engine, Olympian G70LG (GE-01) shall not exceed 500 hours per year. Compliance with the Maximum Yearly Operation Limitation shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the hours of operation at any given time during the previous twelve consecutive calendar months.

[45CSR13; R13-2826, 5.1.7.]

- 4.1.8. Maximum emissions from the 118 hp emergency generator engine, Olympian G70LG (GE-01) shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
GE-01	Nitrogen Oxides	0.93	0.23
	Carbon Monoxide	29.10	7.28
	Volatile Organic Compounds	0.38	0.10

[45CSR13; R13-2826, 5.1.8.]

- 4.1.9. Requirements for Use of Catalytic Reduction Devices.

- a. Natural gas compressor engines (CE-02, CE-06) equipped with non-selective catalytic reduction (NSCR) air pollution control devices shall be fitted with a closed-loop, automatic air/fuel ratio controller to ensure emissions of regulated pollutants do not exceed the potential to emit for any engine/NSCR combination under varying load. The closed-loop, automatic air/fuel ratio controller shall control a fuel metering valve to deliver additional fuel when required to ensure a fuel-rich mixture and a resultant exhaust oxygen content of less than or equal to 0.5%. The automatic air/fuel ratio controller shall also incorporate dual-point exhaust gas temperature and oxygen sensors which provide temperature and exhaust oxygen content differential feedback. Such controls shall ensure proper and efficient operation of the engine and NSCR air pollution control device;
- b. Lean-burn natural gas compressor engines (CE-03, CE-04, CE-05) equipped with oxidation catalyst (OxCat) 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/OxCat combination under varying load;
- c. The automatic air/fuel ratio controller or closed-loop automatic feedback controller shall provide a warning or indication to the operator and/or be interlocked with the engine ignition system to cease

engine operation in case of a masking, poisoning or overrich air/fuel ratio situation which results in performance degradation or failure of the catalyst element; and

d. No person shall knowingly:

1. Remove or render inoperative any air pollution or auxiliary air pollution control device installed subject to the requirements of this permit;
2. Install any part or component when the principal effect of the part or component is to bypass, defeat or render inoperative any air pollution control device or auxiliary air pollution control device installed subject to the requirements of this permit; or
3. Cause or allow engine exhaust gases to bypass any catalytic reduction device.

[45CSR13; R13-2826, 5.1.9.]

4.1.10. 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.

[45CSR13; R13-2826, 5.1.10.; 45CSR16; 40 CFR §60.4237(c); 40 CFR §§63.6590(c) and (c)(1); 45CSR34] (GE-01)

4.1.11. Owners and operators of stationary SI ICE must operate and maintain stationary SI ICE that achieve the emission standards as required in §60.4233 (table below) over the entire life of the engine.

Emission Unit ID	Combusting Natural Gas (non-certified)		Combusting LPG (certified)
	Pollutant	g/HP-hr	
GE-01	NO _x + HC	10	Stationary SI internal combustion engine manufacturers must certify their emergency stationary SI ICE greater than 25 HP and less than 130 HP that are rich burn engines that use LPG and that are manufactured on or after the applicable date in §60.4230(a)(4)(iv) (January 1, 2009) to the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, and other requirements for new nonroad SI engines in 40 CFR part 90.
	CO	387	

[45CSR13; R13-2826, 5.1.11.; 45CSR16; 40 CFR §60.4234, §60.4233(c), §60.4233(e) – Table 1 to Subpart JJJJ, Emergency Engines 25<HP<130; 40 CFR §§63.6590(c) and (c)(1); 45CSR34] (GE-01)

4.1.12. If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (1) through (3) of this condition. 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 (1) through (3) of this condition, is prohibited. If you do not operate the engine according to the requirements in paragraphs (1) through (3) of this condition, the engine will not be considered an emergency engine under 40 CFR 60 Subpart JJJJ 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 (2)(i) of this condition for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (3) of this condition counts as part of the 100 hours per calendar year allowed by this paragraph (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 (2) of this condition.

[45CSR13; R13-2826, 5.1.12.; 45CSR16; 40 CFR §§60.4243(d), (d)(1), (d)(2), (d)(2)(i), and (d)(3); 40 CFR §§63.6590(c) and (c)(1); 45CSR34] (GE-01)

- 4.1.13. 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 40 CFR 63 Subpart ZZZZ that apply to you (permit conditions 4.1.21. and 4.1.22.).

[45CSR13; R13-2826, 5.1.13.; 45CSR34; 40 CFR §63.6603(a)] (CE-02 – CE-06)

- 4.1.14. An existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP must meet the definition of remote stationary RICE in §63.6675 on the initial compliance date for the engine, October 19, 2013, in order to be considered a remote stationary RICE under 40 CFR 63 Subpart ZZZZ. Owners and operators of existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that meet the definition of remote stationary RICE in §63.6675 of 40 CFR 63 Subpart ZZZZ as of October 19, 2013 must evaluate the status of their stationary RICE every 12 months. Owners and operators must keep records of the initial and annual evaluation of the status of the engine. If the evaluation indicates that the stationary RICE no longer meets the definition of remote stationary RICE in §63.6675 of 40 CFR 63 Subpart ZZZZ, the owner or operator must comply with all of the requirements for existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that are not remote stationary RICE within 1 year of the evaluation.

[45CSR13; R13-2826, 5.1.14.; 45CSR34; 40 CFR §63.6603(f)] (CE-02 – CE-06)

- 4.1.15. You must be in compliance with the emission limitations, operating limitations, and other requirements in 40 CFR 63 Subpart ZZZZ that apply to you at all times.

[45CSR13; R13-2826, 5.1.15.; 45CSR34; 40 CFR §63.6605(a)] (CE-02 – CE-06)

4.1.16. At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.
[45CSR13; R13-2826, 5.1.16.; 45CSR34; 40 CFR §63.6605(b)] (CE-02 – CE- 06)

4.1.17. You must demonstrate continuous compliance with each of the requirements in Table 2d to 40 CFR 63 Subpart ZZZZ that apply to you (permit conditions 4.1.21. and 4.1.22.) according to methods specified in Item 9 of Table 6 to 40 CFR 63 Subpart ZZZZ.
[45CSR13; R13-2826, 5.1.17.; 45CSR34; 40 CFR §63.6640(a)] (CE-02 – CE- 06)

4.1.18. **Reciprocating Compressors.** You must comply with the standards in paragraphs (a) through (d) of this condition for each reciprocating compressor affected facility.

- a. You must replace the reciprocating compressor rod packing according to either paragraph a.1. or 2. of this condition.
 1. Before the compressor has operated for 26,000 hours. The number of hours of operation must be continuously monitored beginning upon initial startup of your reciprocating compressor affected facility, or October 15, 2012, or the date of the most recent reciprocating compressor rod packing replacement, whichever is later.
 2. Prior to 36 months from the date of the most recent rod packing replacement, or 36 months from the date of startup for a new reciprocating compressor for which the rod packing has not yet been replaced.
- b. You must demonstrate initial compliance with standards that apply to reciprocating compressor affected facilities as required by §60.5410 (condition 4.2.4.).
- c. You must demonstrate continuous compliance with standards that apply to reciprocating compressor affected facilities as required by §60.5415 (condition 4.2.5.).
- d. You must perform the required notification, recordkeeping, and reporting as required by §60.5420.

[40 CFR §§60.5385 and 60.5370(a); 45CSR16] (RPC)

4.1.19. If you are an owner or operator of a stationary SI internal combustion engine that is manufactured after July 1, 2008, and must comply with the emission standards specified in §60.4233(a) through (c), you must comply by purchasing an engine certified to the emission standards in §60.4231(a) through (c), as applicable, for the same engine class and maximum engine power. In addition, you must meet one of the requirements specified in (1) and (2) of this condition.

(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 (2)(ii) of this condition.

(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 CFR §§ 60.4243(a), (a)(1), (a)(2), and (a)(2)(ii); 40 CFR §§63.6590(c) and (c)(1); 45CSR34] (GE-01 combusting LPG)

4.1.20. 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.

[45CSR16; 40 CFR §60.4243(e); 40 CFR §§63.6590(c) and (c)(1); 45CSR34] (GE-01)

4.1.21. For each non-emergency, non-black start 4SLB remote stationary RICE >500 HP, you must meet the following requirement:

- a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;¹
- b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and
- c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.

¹ Sources have the option to utilize an oil analysis program as described in §63.6625 (j) (permit condition 4.2.3.) in order to extend the specified oil change requirement in Table 2d of 40 CFR 63 Subpart ZZZZ.

[45CSR13; R13-2826, 5.1.13.; 45CSR34; 40 CFR §63.6603(a), Table 2d, Item 8] (CE-03 – CE-05)

4.1.22. For each non-emergency, non-black start 4SRB remote stationary RICE >500 HP, you must meet the following requirement:

- a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;¹
- b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and
- c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.

¹ Sources have the option to utilize an oil analysis program as described in §63.6625(j) (permit condition 4.2.3.) in order to extend the specified oil change requirement in Table 2d of 40 CFR 63 Subpart ZZZZ.

[45CSR13; R13-2826, 5.1.13.; 45CSR34; 40 CFR §63.6603(a), Table 2d, Item 11] (CE-02, CE-06)

- 4.1.23. 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 §60.4243.
- (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 paragraph (b)(2)(i) of §60.4243.
- (i) If you are an owner or operator of a stationary SI internal combustion engine greater than 25 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance.

[45CSR16; 40 CFR §60.4243(b)(2) and (b)(2)(i); 40 CFR §§63.6590(c) and (c)(1); 45CSR34] (GE-01 when operated in a non-certified manner combusting Natural Gas)

4.2. Monitoring Requirements

4.2.1. Catalytic Oxidizer Control Devices (03-NSCR, 02-NSCR, 01-OxCat, 02-OxCat, 03-OxCat).

- 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 registrant shall ensure proper operation, maintenance and performance of catalytic reduction devices and auxiliary air pollution control devices by:
1. Maintaining proper operation of the automatic air/fuel ratio controller or automatic feedback controller.
 2. Following operating and maintenance recommendations of the catalyst element manufacturer.

[45CSR13; R13-2826, 5.2.1.]

- 4.2.2. 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 40 CFR 63 Subpart ZZZZ apply (permit conditions 4.1.21. and 4.1.22.).

[45CSR13; R13-2826, 5.2.3.; 45CSR34; 40 CFR §63.6625(h)] (CE-02 – CE-06)

- 4.2.3. If you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of Table 2c to 40 CFR 63 Subpart ZZZZ or in items 5, 6, 7, 9, or 11 of Table 2d to 40 CFR 63 Subpart ZZZZ, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to 40 CFR 63 Subpart ZZZZ. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to 40 CFR 63 Subpart ZZZZ. 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.

[45CSR13; R13-2826, 5.2.4.; 45CSR34; 40 CFR §63.6625(j)] (CE-02 – CE-06)

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

(c) To achieve initial compliance with the standards for each reciprocating compressor affected facility you must comply with paragraphs (c)(1) through (3) of this condition.

- (1) If complying with §60.5385(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.
- (2) You must submit the initial annual report for your reciprocating compressor as required in §60.5420(b).
- (3) You must maintain the records as specified in §60.5420(c)(3) for each reciprocating compressor affected facility.

[40 CFR §§ 60.5410 and 60.5410(c); 45CSR16] (RPC)

4.2.5. **Continuous Compliance Demonstration.** For each reciprocating compressor affected facility complying with §60.5385(a)(1) or (2), you must demonstrate continuous compliance according to paragraphs (1) through (3) of this condition.

- (1) You must continuously monitor the number of hours of operation for each reciprocating compressor affected facility or track the number of months since initial startup, or October 15, 2012, or the date of the most recent reciprocating compressor rod packing replacement, whichever is later.
- (2) You must submit the annual report as required in §60.5420(b) and maintain records as required in §60.5420(c)(3).

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

[40 CFR §§ 60.5415 and 60.5415(c); 45CSR16] (RPC)

4.3. Testing Requirements

- 4.3.1. The following applies if GE-01 is not operated in a certified manner:

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

- a. Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in §60.8 and under the specific conditions that are specified by Table 2 to 40 CFR 60 Subpart JJJJ. **[40 CFR §60.4244(a)] (GE-01)**
- 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. **[40 CFR §60.4244(b)] (GE-01)**
- 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. **[40 CFR §60.4244(c)] (GE-01)**
- 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).

[40 CFR §60.4244(d)] (GE-01)

- 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.

[40 CFR §60.4244(e)] (GE-01)

- f. For purposes of 40 CFR 60 Subpart JJJJ, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of this section:

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

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.

[40 CFR §60.4244(f)] (GE-01)

- 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.

[40 CFR §60.4244(g)] (GE-01)

[45CSR13; R13-2826, 5.3.1.; 45CSR16; 40 CFR §§63.6590(c) and (c)(1); 45CSR34] (GE-01 when operated in a non-certified manner)

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

[45CSR16; 40 CFR §60.4243(f); 40 CFR §§63.6590(c) and (c)(1); 45CSR34] (GE-01 when operated in a non-certified manner)

4.4. Recordkeeping Requirements

- 4.4.1. To demonstrate compliance with sections 4.1.1. - 4.1.8. the permittee shall maintain records of the amount and type of fuel consumed in each engine and the hours of operation of each engine. Said records shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly

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

[45CSR13; R13-2826, 5.4.1.]

- 4.4.2. To demonstrate compliance with section 4.1.9, the permittee shall maintain records of all catalytic reduction device maintenance. 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; R13-2826, 5.4.2.]

- 4.4.3. If you must comply with the emission and operating limitations, you must keep the records described below.

- (1) A copy of each notification and report that you submitted to comply with 40 CFR 63 Subpart ZZZZ, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in §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) (condition 4.1.16.), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

[45CSR13; R13-2826, 5.4.3.; 45CSR34; 40 CFR §63.6655(a)] (CE-02 – CE-06)

- 4.4.4. You must keep the records required of Item 9 of Table 6 of 40 CFR 63 Subpart ZZZZ to show continuous compliance with each emission or operating limitation that applies to you.

[45CSR13; R13-2826, 5.4.4.; 45CSR34; 40 CFR §63.6655(d)] (CE-02 – CE-06)

- 4.4.5. 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.

[45CSR13; R13-2826, 5.4.5.; 45CSR34; 40 CFR §63.6655(e)] (CE-02 – CE-06)

- 4.4.6. 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 40 CFR 60 Subpart JJJJ and all documentation supporting any notification.

2. Maintenance conducted on the engine.
3. If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90 and 1048.
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.

[45CSR13; R13-2826, 5.4.6.; 45CSR16; 40 CFR §60.4245(a); 40 CFR §§63.6590(c) and (c)(1); 45CSR34] (GE-01)

- 4.4.7. You must maintain the records identified as specified in §60.7(f) and in paragraph (c)(3) of §60.5420. All records required by 40 CFR 60 Subpart OOOO must be maintained either onsite or at the nearest local field office for at least 5 years.

- (3) For each reciprocating compressor affected facility, you must maintain the records in paragraphs (3)(i) through (iii) of this condition.
 - (i) Records of the cumulative number of hours of operation or number of months since initial startup or October 15, 2012, or the previous replacement of the reciprocating compressor rod packing, whichever is later.
 - (ii) Records of the date and time of each reciprocating compressor rod packing replacement, or date of installation of a rod packing emissions collection system and closed vent system as specified in §60.5385(a)(3).
 - (iii) Records of deviations in cases where the reciprocating compressor was not operated in compliance with the requirements specified in §60.5385.

[40 CFR §§60.5420(c) and (c)(3); 45CSR16] (RPC)

- 4.4.8. 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.

[45CSR16; 40 CFR §60.4245(b); 40 CFR §§63.6590(c) and (c)(1); 45CSR34] (GE-01)

- 4.4.9. **Form and Retention of Records for 40 CFR 63 Subpart ZZZZ.**

(a) Your records must be in a form suitable and readily available for expeditious review according to 40 CFR §63.10(b)(1).

(b) As specified in 40 CFR §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(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 40 CFR §63.10(b)(1).

[45CSR34; 40 CFR §§63.6660(a), (b), and (c)] (CE-02 – CE-06)

4.5. Reporting Requirements

4.5.1. You must also report each instance in which you did not meet the requirements in Table 8 to 40 CFR 63 Subpart ZZZZ that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to 40 CFR 63 Subpart ZZZZ: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to 40 CFR 63 Subpart ZZZZ, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

[45CSR13; R13-2826, 5.1.18.; 45CSR34; 40 CFR §63.6640(e)] (CE-02 – CE-06)

4.5.2. You must report each instance in which you did not meet each work practice in Table 2d to 40 CFR 63 Subpart ZZZZ that apply to you (permit conditions 4.1.21. and 4.1.22.). These instances are deviations from the emission and operating limitations in 40 CFR 63 Subpart ZZZZ. These deviations must be reported according to the requirements in §63.6650 (condition 4.5.6.). If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

[45CSR13; R13-2826, 5.1.19.; 45CSR34; 40 CFR §63.6640(b)] (CE-02 – CE-06)

4.5.3. You must submit the notifications according to paragraphs (a)(1) and (2) of 40 CFR §60.5420 if you own or operate one or more of the affected facilities specified in §60.5365 that was constructed, modified, or reconstructed during the reporting period.

[40 CFR §60.5420(a); 45CSR16]

4.5.4. You must submit annual reports containing the information specified in paragraphs (1), (4), and (7) of this condition to the Administrator and performance test reports as specified in paragraph (b)(7) or (8) of §60.5420(b). The initial annual report is due no later than 90 days after the end of the initial compliance period as determined according to §60.5410. 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 paragraphs (b)(1) through (6) of §60.5420. Annual reports may coincide with title V reports as long as all the required elements of the annual report are included. You may arrange with the Administrator a common schedule on which reports required by this part may be submitted as long as the schedule does not extend the reporting period.

- (1) The general information specified in paragraphs (1)(i) through (iv) of this condition.
 - (i) The company name and address of the affected facility.
 - (ii) An identification of each affected facility being included in the annual report.
 - (iii) Beginning and ending dates of the reporting period.
 - (iv) A certification by a 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.
- (4) For each reciprocating compressor affected facility, the information specified in paragraphs (4)(i) through (ii) of this condition.
 - (i) The cumulative number of hours of operation or the number of months since initial startup, since October 15, 2012, or since the previous reciprocating compressor rod packing replacement, whichever is later.
 - (ii) Records of deviations specified in paragraph (c)(3)(iii) of §60.5420 that occurred during the reporting period.
- (7)(ii) All reports, except as specified in paragraph (b)(8) of §60.5420, required by 40 CFR 60 Subpart OOOO not subject to the requirements in paragraph (a)(2)(i) of §60.5420 must be sent to the Administrator at the appropriate address listed in 40 CFR §60.4. The Administrator or the delegated authority may request a report in any form suitable for the specific case (e.g., by commonly used electronic media such as Excel spreadsheet, on CD or hard copy).

[40 CFR §§ 60.5420(b), (b)(1), (b)(4), and (b)(7)(ii); 45CSR16] (RPC)

- 4.5.5. Owners and operators of stationary SI ICE that are subject to performance testing (conditions 4.3.1. and 4.3.2.) must submit a copy of each performance test as conducted in §60.4244 within 60 days after the test has been completed.
[45CSR16; 40 CFR §60.4245(d); 40 CFR §§63.6590(c) and (c)(1); 45CSR34] (GE-01 when operated in a non-certified manner)
- 4.5.6. The permittee must report all deviations as defined in 40 CFR 63 Subpart ZZZZ in the semiannual monitoring report required by permit condition 3.5.6.
[45CSR34; 40 CFR §63.6650(f)] (CE-02 – CE-06)
- 4.5.7. If you own or operate an emergency stationary SI ICE with a maximum engine power more than 100 that operates for the purposes specified in §60.4243(d)(3)(i), you must submit an annual report according to the requirements in paragraphs (e)(1) through (3) of 40 CFR §60.4245(e).

- (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.
 - (viii) Hours spent for operation for the purposes specified in §60.4243(d)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in §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) 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 40 CFR 60 Subpart JJJJ 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 §60.4.

[45CSR16; 40 CFR §60.4245(e); 40 CFR §§63.6590(c) and (c)(1); 45CSR34] (GE-01)

4.6. Compliance Plan

- 4.6.1. Reserved.

5.0 Heaters H-01, H-02, H-03, H-04, H-05, H-06 [emission point ID(s) 9E, 10E, 11E, 12E, 13E, 14E:]

5.1 Limitations and Standards

- 5.1.1. Maximum Design Heat Input. The maximum design heat input for the Hot Oil Heater (H-01) shall not exceed 10.00 MMBtu/hr.

[45CSR13; R13-2826, 6.1.1.]

- 5.1.2. Maximum emissions from the 10.00 MMBtu/hr Hot Oil Heater (H-01) shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
H-01	Nitrogen Oxides	1.09	4.76
	Carbon Monoxide	0.91	4.00
	Volatile Organic Compounds	0.06	0.26

[45CSR13; R13-2826, 6.1.2.]

- 5.1.3. To demonstrate compliance with Section 5.1.2., the quantity of natural gas that shall be consumed in the 10.00 MMBtu/hr Hot Oil Heater (H-01) shall not exceed 260,870 cubic feet per day and 95.22×10^6 cubic feet per year.

[45CSR13; R13-2826, 6.1.3.]

- 5.1.4. Maximum Design Heat Input. The maximum design heat input for the Regenerator Heater (H-02) shall not exceed 4.74 MMBtu/hr.

[45CSR13; R13-2826, 6.1.4.]

- 5.1.5. Maximum emissions from the 4.74 MMBtu/hr Regenerator Heater (H-02) shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
H-02	Nitrogen Oxides	0.52	2.26
	Carbon Monoxide	0.43	1.90
	Volatile Organic Compounds	0.03	0.12

[45CSR13; R13-2826, 6.1.5.]

- 5.1.6. To demonstrate compliance with Section 5.1.5., the quantity of natural gas that shall be consumed in the 4.74 MMBtu/hr Regenerator Heater (H-02) shall not exceed 123,650 cubic feet per day and 45.13×10^6 cubic feet per year.

[45CSR13; R13-2826, 6.1.6.]

- 5.1.7. Maximum Design Heat Input. The maximum design heat input for each of the Regenerator Heaters (H-03, H-04) shall not exceed 6.60 MMBtu/hr.

[45CSR13; R13-2826, 6.1.7.]

- 5.1.8. Maximum emissions from each of the 6.60 MMBtu/hr Regenerator Heaters (H-03, H-04) shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
H-03 H-04	Nitrogen Oxides	0.72	3.14
	Carbon Monoxide	0.60	2.64
	Volatile Organic Compounds	0.04	0.17

[45CSR13; R13-2826, 6.1.8.]

- 5.1.9. To demonstrate compliance with Section 5.1.8., the quantity of natural gas that shall be consumed in each of the 6.60 MMBtu/hr Regenerator Heaters (H-03, H-04) shall not exceed 172,170 cubic feet per day and 62.84×10^6 cubic feet per year.

[45CSR13; R13-2826, 6.1.9.]

- 5.1.10. Maximum Design Heat Input. The maximum design heat input for each of the Medium Heaters (H-05, H-06) shall not exceed 21.22 MMBtu/hr.

[45CSR13; R13-2826, 6.1.10.]

- 5.1.11. Maximum emissions from each of the 21.22 MMBtu/hr Medium Heaters (H-05, H-06) shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
H-05 H-06	Nitrogen Oxides	2.31	10.10
	Carbon Monoxide	1.94	8.49
	Particulate Matter-10	0.18	0.77
	Volatile Organic Compounds	0.13	0.56

Compliance with the PM_{10} limit above ensures compliance with the less stringent 45CSR§2-4.1.b. limit of 1.91 lb/hr applicable to each of the heaters H-05 and H-06.

[45CSR13; R13-2826, 6.1.11.; 45CSR§2-4.1.b.]

- 5.1.12. To demonstrate compliance with Section 5.1.11., the quantity of natural gas that shall be consumed in each of the 21.22 MMBtu/hr Medium Heaters (H-05, H-06) shall not exceed 553,570 cubic feet per day and 202.05×10^6 cubic feet per year.

[45CSR13; R13-2826, 6.1.12.]

- 5.1.13. **Hot Oil Heater (H-01), Regenerator Heaters (H-02, H-03, H-04), Medium Heaters (H-05, H-06).** No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six minute block average.

[45CSR13; R13-2826, 6.1.13. and 6.1.15.; 45CSR§2-3.1.]

- 5.1.14. **Hot Oil Heater (H-01), Medium Heaters (H-05, H-06).** Except as provided in paragraphs (d), (e), (f), and (g) of 40 CFR §60.40c, the affected facility to which 40 CFR 60 Subpart Dc applies is each steam generating

unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)) or less, but greater than or equal to 2.9 MW (10 MMBtu/hr).

[45CSR13; R13-2826, 6.1.14.; 40 CFR §60.40c(a); 45CSR16]

- 5.1.15. No person shall cause, suffer, allow or permit the discharge of particulate matter into the open air from all fuel burning units located at one plant, measured in terms of pounds per hour in excess of the amount determined as follows:

For Type 'b' fuel burning units, the product of 0.09 and the total design heat inputs for such units in million B.T.U.'s per hour, provided however that no more than six hundred (600) pounds per hour of particulate matter shall be discharged into the open air from all such units.

$$\text{PM limit for H-01 (9E)} = (0.09) \times (10.00 \text{ MMBtu/hr}) = 0.90 \text{ lb/hr}$$

[45CSR§2-4.1.b.] (H-01)

- 5.1.16. Total Allowable Emission Rates for Similar Units in Priority I and Priority II Regions -- No person shall cause, suffer, allow or permit the discharge of sulfur dioxide into the open air from all stacks located at one plant, measured in terms of pounds per hour, in excess of the amount determined as follows:

For Type 'b' and Type 'c' fuel burning units, the product of 3.1 and the total design heat inputs for such units discharging through those stacks in million BTU's per hour.

$$\text{Total Allowable Emission Rate for H-01 (9E), H-05 (13E), and H-06 (14E)} =$$

$$(3.1) \times (10.00 \text{ MMBtu/hr} + 21.22 \text{ MMBtu/hr} + 21.22 \text{ MMBtu/hr}) = 162.6 \text{ lb/hr}$$

[45CSR§10-3.1.e.] (H-01, H-05, H-06)

5.2. Monitoring Requirements

- 5.2.1. Compliance with the visible emission requirements of section 5.1.13. shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9 or by using measurements from continuous opacity monitoring systems approved by the Director. The Director may require the installation, calibration, maintenance and operation of continuous opacity monitoring systems and may establish policies for the evaluation of continuous opacity monitoring results and the determination of compliance with the visible emission requirements of section 5.1.13. Continuous opacity monitors shall not be required on fuel burning units which employ wet scrubbing systems for emission control.

[45CSR13; R13-2826, 6.2.1.; 45CSR§2-3.2.]

5.3. Testing Requirements

- 5.3.1. At such reasonable times as the Director may designate, the owner or operator of any fuel burning unit(s) may be required to conduct or have conducted tests to determine the compliance of such unit(s) with the emission limitations of section 4 (45CSR2 PM limits in conditions 5.1.11. and 5.1.15.). Such tests shall be conducted in accordance with the appropriate method set forth in the Appendix to this rule or other equivalent EPA approved method approved by the Director. The Director, or his duly authorized representative, may at his option witness or conduct such tests. Should the Director exercise his option to conduct such tests, the

operator will provide all necessary sampling connections and sampling ports located in such manner as the Director may require, power for test equipment, and the required safety equipment such as scaffolding, railings and ladders to comply with generally accepted good safety practices.

The Director, or his duly authorized representative, may conduct such other tests as he may deem necessary to evaluate air pollution emissions other than those noted in 45CSR§2-4.1. (45CSR2 PM limits in conditions 5.1.11. and 5.1.15.).

[45CSR§2-8.1.b. and 8.1.c.] (H-01, H-05, H-06)

5.4. Recordkeeping Requirements

- 5.4.1. To demonstrate compliance with sections 5.1.1. - 5.1.3., the permittee shall maintain records of the amount of natural gas consumed in the 10.00 MMBtu/hr Hot Oil Heater (H-01) on a monthly basis. The permittee shall maintain records of the date and time of fuel burning unit start-up and shutdown. 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; R13-2826, 6.3.1.; 45CSR§2-8.3.c.; 45CSR§2A-7.1.a.1.]

- 5.4.2. To demonstrate compliance with sections 5.1.4. - 5.1.6., the permittee shall maintain records of the amount of natural gas consumed in the 4.74 MMBtu/hr Regenerator Heater (H-02). 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; R13-2826, 6.3.2.]

- 5.4.3. To demonstrate compliance with sections 5.1.7. - 5.1.9., the permittee shall maintain records of the amount of natural gas consumed in each of the 6.60 MMBtu/hr Regenerator Heaters (H-03, H-04). 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; R13-2826, 6.3.3.]

- 5.4.4. To demonstrate compliance with sections 5.1.10. - 5.1.12., the permittee shall maintain records of the amount of natural gas consumed in each of the 21.22 MMBtu/hr Medium Heaters (H-05, H-06) on a monthly basis. The permittee shall maintain records of the date and time of fuel burning units' start-up and shutdown. 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; R13-2826, 6.3.4.; 45CSR§2-8.3.c.; 45CSR§2A-7.1.a.1.]

- 5.4.5. **Hot Oil Heater (H-01), Medium Heaters (H-05, H-06).** Except as provided under permit conditions 5.4.6. and 5.4.7., the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.
[45CSR13; R13-2826, 6.3.5.; 45CSR16; 40 CFR §60.48c(g)(1)]
- 5.4.6. **Hot Oil Heater (H-01), Medium Heaters (H-05, H-06).** As an alternative to meeting the requirements of permit condition 5.4.5., the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in 40 CFR §60.48c(f) to demonstrate compliance with the SO₂ standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.
[45CSR13; R13-2826, 6.3.6.; 45CSR16; 40 CFR §60.48c(g)(2)]
- 5.4.7. **Hot Oil Heater (H-01), Medium Heaters (H-05, H-06).** As an alternative to meeting the requirements of permit condition 5.4.5., the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to 40 CFR 60 Subpart Dc) at that property are natural gas, wood, distillate oil meeting the most current requirements in §60.42c to use fuel certification to demonstrate compliance with the SO₂ standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.
[45CSR13; R13-2826, 6.3.7.; 45CSR16; 40 CFR §60.48c(g)(3)]
- 5.4.8. All records required under 40 CFR §60.48c (conditions 5.4.5., 5.4.6., and 5.4.7.) shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.
[40 CFR §60.48c(i); 45CSR16]
- 5.4.9. The owner or operator of a fuel burning unit(s) shall maintain records of the operating schedule, and the quality and quantity of fuel burned in each fuel burning unit as specified in paragraphs 7.1.a.1 through 7.1.a.6 of 45CSR2A, as applicable.
- 7.1.a.1 For fuel burning unit(s) which burn only pipeline quality natural gas, such records shall include, but not be limited to, the date and time of start-up and shutdown, and the quantity of fuel consumed on a monthly basis.

[45CSR§2A-7.1.a.1.] (H-01, H-05, H-06)

5.5. Reporting Requirements

- 5.5.1. Any violation(s) of the allowable visible emission requirement for any emission source discovered during observations using 40 CFR Part 60, Appendix A, Method 9 must be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.
[45CSR13; R13-2826, 6.4.1.]
- 5.5.2. The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by §60.7 of this part. This notification shall include:

1. The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.
2. If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under 40 CFR §60.42c, or §60.43c.
3. The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.
4. Notification if an emerging technology will be used for controlling SO₂ emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of 40 CFR §§60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.

[40 CFR §60.48c(a); 45CSR16] (H-01, H-05, H-06)

5.6. Compliance Plan

- 5.6.1. Reserved.

6.0 Flare Control Device FL-02 [emission point ID(s): 18E]

6.1. Limitations and Standards

- 6.1.1. In accordance with information in permit application R13-2826K, the permittee shall operate a Process Flare (FL-02) designed to achieve, at a minimum, a 98.0% destruction and removal efficiency (DRE) of VOCs and organic HAPS from natural gas and NGL released during routine operation as well as upset conditions. The maximum aggregate amount of waste gases sent to the Process Flare from these sources shall not exceed 90.0 MMscf/yr based on a rolling 12 month total.

[45CSR13; R13-2826, 8.1.1.]

- 6.1.2. Maximum emissions from the FL-02 shall not exceed the following limits:

- a. The maximum aggregate emissions generated at the Process Flare (17E) from the combustion of waste gases shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	45.10	5.69
Carbon Monoxide	142.61	17.99

- b. The maximum emissions of VOCs and HAPs at the Process Flare (representing un-combusted pass-through organic vapors) shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
VOCs	88.11	11.12
<i>Benzene</i>	<i>0.01</i>	<i>0.01</i>
<i>n-Hexane</i>	<i>0.92</i>	<i>0.12</i>
<i>Toluene</i>	<i>0.02</i>	<i>0.01</i>
<i>Xylenes</i>	<i>0.01</i>	<i>0.01</i>
Total HAPs	0.99	0.13

[45CSR13; R13-2826, 8.1.2.]

- 6.1.3. The installed Process Flare (8S) shall be a Zeeco Model Number AFTA-20/56, shall have a maximum waste-gas capacity of 383,000 lb/hr, shall have an MDHI of 541.2 mmBtu/hr, and shall be designed and operated in accordance with the following:

- a. Flare FL-02 shall be air-assisted.
- b. Flare FL-02 shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

Note: Compliance with the no visible emissions requirement in condition 6.1.3.b. ensures compliance with the applicable opacity and visible emissions requirements in 45CSR§§6-4.3., 4.4., and 4.5. (Conditions 6.1.5. and 6.1.6.).

- c. Flare FL-02 shall be operated, with a flame present at all times whenever emissions may be vented to them, except during SSM (Startup, Shutdown, Malfunctions) events.
- d. A flare shall be used only where the net heating value of the gas being combusted is 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or where the net heating value of the gas being combusted is 7.45 MJ/scm (200 Btu/scf) or greater if the flares are non-assisted. The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K \sum_{i=1}^n C_i H_i$$

Where:

H_T = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of off gas is based on combustion at 25°C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C.

K = Constant =

$$1.740 \times 10^{-7} \left(\frac{1}{ppmv} \right) \left(\frac{\text{g-mole}}{\text{scm}} \right) \left(\frac{\text{MJ}}{\text{kcal}} \right)$$

where the standard temperature for (g-mole/scm) is 20°C.

C_i = Concentration of sample component i in ppmv on a wet basis, which may be measured for organics by Test Method 18, but is not required to be measured using Method 18 (unless designated by the Director).

H_i = Net heat of combustion of sample component i, kcal/g-mole at 25 °C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76 or 88 or D4809-95 if published values are not available or cannot be calculated.

n = Number of sample components.

- e. Air-assisted flares shall be designed and operated with an exit velocity less than the velocity $V_{\max}$. The maximum permitted velocity, $V_{\max}$, for air-assisted flares shall be determined by the following equation:

$$V_{\max} = 8.71 + 0.708(H_T)$$

Where:

$V_{\max}$ = Maximum permitted velocity, m/sec.

8.71 = Constant.

0.708 = Constant.

H_T = The net heating value as determined in 6.1.3.d. of this section.

[45CSR13; R13-2826, 8.1.3.; 45CSR§§6-4.3., 4.4., and 4.5.]

- 6.1.4. The permittee is not required to conduct a flare compliance assessment for concentration of sample (i.e. Method 18) and tip velocity (i.e. Method 2) until such time as the Director requests a flare compliance

assessment to be conducted in accordance with section 6.3.2., but the permittee is required to conduct a flare design evaluation in accordance with section 6.4.2. Alternatively, the permittee may elect to demonstrate compliance with the flare design criteria requirements of section 6.1.3. by complying with the compliance assessment testing requirements of section 6.3.2.

[45CSR13; R13-2826, 8.1.4.]

- 6.1.5. Visible particulate matter emissions from the flare (FL-02) shall not exceed twenty (20%) percent opacity. *Compliance with condition 6.1.3.b. ensures compliance with this limit.*

[45CSR13; R13-2826, 8.1.5.; 45CSR§6-4.3.]

- 6.1.6. The provisions of permit condition 6.1.5. shall not apply to smoke which is less than forty (40%) percent opacity, for a period or periods aggregating no more than eight (8) minutes per start-up. *Compliance with condition 6.1.3.b. ensures compliance with this limit.*

[45CSR13; R13-2826, 8.1.6.; 45CSR§6-4.4.]

- 6.1.7. The flare (FL-02) including all associated equipment and grounds, shall be designed, operated and maintained so as to prevent the emission of objectionable odors.

[45CSR13; R13-2826, 8.1.7.; 45CSR§6-4.6.]

- 6.1.8. The permittee will comply with the requirements of Section 2.17. of this permit during emergency operation of the flare (FL-02).

[45CSR13; R13-2826, 8.1.9.]

- 6.1.9. No person shall cause or allow particulate matter to be discharged from any incinerator into the open air in excess of the quantity determined by use of the following formula:

$$\text{Emissions (lb/hr)} = F \times \text{Incinerator Capacity (tons/hr)}$$

Where, the factor, F, is as indicated in Table I below:

Table I: Factor, F, for Determining Maximum Allowable Particulate Emissions.

	Incinerator Capacity	Factor F
A	Less than 15,000 lbs/hr	5.43
B	15,000 lbs/hr or greater	2.72

[45CSR13; R13-2826, 8.1.8.; 45CSR§6-4.1.]

6.2. Monitoring Requirements

- 6.2.1. In order to demonstrate compliance with the requirements of 6.1.3.c., the permittee shall monitor the presence or absence of a flare pilot flame using a thermocouple or any other equivalent device, except during SSM events.

[45CSR13; R13-2826, 8.2.1.]

- 6.2.2. In order to determine compliance with 6.1.1., the permittee shall monitor and record the monthly and rolling twelve (12) month total aggregate waste gases, pilot gas, and purge gas sent to the flare (in MMscf).

[45CSR13; R13-2826, 8.2.2.]

6.3. Testing Requirements

6.3.1. In order to demonstrate compliance with the flare opacity requirements the permittee shall conduct a Method 22 opacity test for at least two hours. This test shall demonstrate no visible emissions are observed for more than a total of 5 minutes during any 2 consecutive hour period using 40 CFR 60 Appendix A Method 22. The permittee shall conduct this test within one (1) year of permit issuance or initial startup whichever is later. The visible emission checks shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40 CFR part 60, appendix A, Method 22 or from the lecture portion of 40 CFR part 60, appendix A, Method 9 certification course.
[45CSR13; R13-2826, 8.3.1.]

6.3.2. The Director may require the permittee to conduct a flare compliance assessment. This compliance assessment testing shall be conducted in accordance with Test Method 18 for organics and Test Method 2, 2A, 2C, or 2D in appendix A to 40 CFR part 60, as appropriate, or other equivalent testing approved in writing by the Director. Also, Test Method 18 may require the permittee to conduct Test Method 4 in conjunction with Test Method 18.
[45CSR13; R13-2826, 8.3.2.]

6.3.3. At such reasonable times as the Secretary may designate, the operator of any incinerator shall be required to conduct or have conducted stack tests to determine the particulate matter loading (condition 6.1.2.), by using 40 CFR Part 60, Appendix A, Method 5 or other equivalent U.S. EPA approved method approved by the Secretary, in exhaust gases. Such tests shall be conducted in such manner as the Secretary may specify and be filed on forms and in a manner acceptable to the Secretary. The Secretary may, at the Secretary's option, witness or conduct such stack tests. Should the Secretary exercise his or her option to conduct such tests, the operator will provide all the necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment such as scaffolding, railings and ladders to comply with generally accepted good safety practices.

The Secretary may conduct such other tests as the Secretary may deem necessary to evaluate air pollution emissions other than those noted above.

[45CSR§§6-7.1. and 7.2.]

6.4. Recordkeeping Requirements

6.4.1. For the purpose of demonstrating compliance with section 6.1.3.c. and 6.2.1., the permittee shall maintain records of the times and duration of all periods which the pilot flame was absent.
[45CSR13; R13-2826, 8.4.1.]

6.4.2. For the purpose of demonstrating compliance with section 6.1.3. and 6.3.2., the permittee shall maintain a record of the flare design evaluation. The flare design evaluation shall include, net heat value calculations, exit (tip) velocity calculations, and all supporting concentration calculations and other related information requested by the Director.
[45CSR13; R13-2826, 8.4.2.]

- 6.4.3. For the purpose of demonstrating compliance with section 6.1.3.b., the permittee shall maintain records of the visible emission opacity tests conducted per Section 6.3.1.
[45CSR13; R13-2826, 8.4.3.]
- 6.4.4. All records required under Section 6.4. shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.
[45CSR13; R13-2826, 8.4.4.]
- 6.4.5. The permittee shall maintain a monthly record of the waste gas throughput for the flare control device (FL-02). Said records shall be maintained for a period of five (5) years on site or in a readily accessible off-site location maintained by the permittee. 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; R13-2826, 8.4.5.]

6.5. Reporting Requirements

- 6.5.1. If the permittee is required by the Director to demonstrate compliance with section 6.3.2., then the permittee shall submit a testing protocol at least thirty (30) days prior to testing and shall submit a notification of the testing date at least fifteen (15) days prior to testing. The permittee shall submit the testing results within sixty (60) days of testing and provide all supporting calculations and testing data.
[45CSR13; R13-2826, 8.5.1.]
- 6.5.2. Any deviation(s) from the allowable visible emission requirement for any emission source discovered during observations using 40 CFR Part 60, Appendix A, Method 9 or 22 shall be reported in writing to the Director of the Division of Air Quality as soon as practicable, but in any case within ten (10) calendar days of the occurrence and shall include at least the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.
[45CSR13; R13-2826, 8.5.2.]
- 6.5.3. Any deviation(s) from the flare design and operation criteria in Section 6.1.3. shall be reported in writing to the Director of the Division of Air Quality as soon as practicable, but in any case within ten (10) calendar days of discovery of such deviation.
[45CSR13; R13-2826, 8.5.3.]
- 6.5.4. The permittee shall report to the Director, the time, cause of event, estimate of emissions and corrective actions taken when the flare was used for an emergency at the facility.
[45CSR13; R13-2826, 8.5.4.]

6.6. Compliance Plan

- 6.6.1. Reserved.

7.0 Storage Tanks T-03, T-04, Produced Water Loading (TLO), and NGL Loading (TLO2) [emission point ID(s) 22E, 23E, 20E, 24E:]

7.1. Limitations and Standards

7.1.1. Maximum Throughput Limitation. The maximum volume of liquids throughput to the Produced Water Loading (TLO) shall not exceed 69,000 gal/day and 25,200,000 gal/yr. The maximum volume of liquids throughput to the NGL Loading (TLO2) shall not exceed 16,425,000 gal/yr. Compliance with the Maximum Throughput Limitations shall be determined using a twelve-month rolling total. A twelve-month rolling total shall mean the sum of the monthly throughput at any given time during the previous twelve consecutive calendar months.

[45CSR13; R13-2826, 9.1.1.]

7.1.2. The Produced Water Loading (TLO) shall be operated in accordance with the plans and specifications filed in Permit Application R13-2826K, and the NGL Loading (TLO2) shall be operated in accordance with the plans and specifications filed in Permit Application R13-2826L.

[45CSR13; R13-2826, 9.1.2.]

7.1.3. The maximum annual throughput of produced water to the 400 bbl (16,800 gal) storage tanks (T-03, T-04) shall not exceed the following:

Storage Tank ID	Product Stored	Maximum Annual Throughput (gal/yr)
T-03	Produced Water	8,400,000
T-04	Produced Water	8,400,000

[45CSR13; R13-2826, 9.1.3.]

7.1.4. The number of NGL loading events shall not exceed 2,190 per a twelve-month rolling year. All NGL loading operations shall take place under pressure and using a pressurized vapor return system. The volume of vapor released during each loading event shall not exceed 0.218 ft³.

[45CSR13; R13-2826, 9.1.4]

7.2. Monitoring Requirements

7.2.1. Reserved.

7.3. Testing Requirements

7.3.1. Reserved.

7.4. Recordkeeping Requirements

7.4.1. To demonstrate compliance with sections 7.1.1. and 7.1.4. the permittee shall maintain records of the amount of produced water and NGLs loaded and the number of NGL loading events. Said records required 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; R13-2826, 9.2.1.]

- 7.4.2. To demonstrate compliance with section 7.1.3. the permittee shall maintain records of the amount of produced water throughput to the storage tanks (T-03, T-04). Said records required 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; R13-2826, 9.2.2.]

7.5. Reporting Requirements

- 7.5.1. Reserved.

7.6. Compliance Plan

- 7.6.1. Reserved.

8.0 40 CFR 60 Subpart KKK Requirements for TXP1 and TXP2 Process Units

8.1. Limitations and Standards

8.1.1. Applicability and Designation of an Affected Facility.

- (a) (1) The provisions of 40 CFR 60 Subpart KKK apply to affected facilities in onshore natural gas processing plants.
- (2) A compressor in VOC service or in wet gas service is an affected facility.
- (3) The group of all equipment except compressors (defined in §60.631) within a process unit is an affected facility.
- (b) Any affected facility under paragraph (a) of this section that commences construction, reconstruction, or modification after January 20, 1984, and on or before August 23, 2011, is subject to the requirements of 40 CFR 60 Subpart KKK.
- (c) Addition or replacement of equipment (defined in §60.631) for the purpose of process improvement that is accomplished without a capital expenditure shall not by itself be considered a modification under 40 CFR 60 Subpart KKK.
- (d) Facilities covered by subpart VV or subpart GGG of 40 CFR part 60 are excluded from 40 CFR 60 Subpart KKK.
- (e) A compressor station, dehydration unit, sweetening unit, underground storage tank, field gas gathering system, or liquefied natural gas unit is covered by 40 CFR 60 Subpart KKK if it is located at an onshore natural gas processing plant. If the unit is not located at the plant site, then it is exempt from the provisions of 40 CFR 60 Subpart KKK.

[45CSR13; R13-2826, 10.1.1.; 45CSR16; 40 CFR §60.630]

8.1.2. Standards.

- (a) Each owner or operator subject to the provisions of 40 CFR 60 Subpart KKK shall comply with the requirements of §§60.482-1 (a), (b), and (d) and 60.482-2 through 60.482-10, except as provided in §60.633, as soon as practicable, but no later than 180 days after initial startup.
- (b) An owner or operator may elect to comply with the requirements of §§60.483-1 and 60.483-2.
- (c) An owner or operator may apply to the Administrator for permission to use an alternative means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to that achieved by the controls required in 40 CFR 60 Subpart KKK. In doing so, the owner or operator shall comply with requirements of §60.634 of 40 CFR 60 Subpart KKK.
- (d) Each owner or operator subject to the provisions of 40 CFR 60 Subpart KKK shall comply with the provisions of §60.485 except as provided in §60.633(f) of 40 CFR 60 Subpart KKK.

- (e) Each owner or operator subject to the provisions of 40 CFR 60 Subpart KKK shall comply with the provisions of §§60.486 and 60.487 except as provided in §§60.633, 60.635, and 60.636 of 40 CFR 60 Subpart KKK.
- (f) An owner or operator shall use the following provision instead of §60.485(d)(1): Each piece of equipment is presumed to be in VOC service or in wet gas service unless an owner or operator demonstrates that the piece of equipment is not in VOC service or in wet gas service. For a piece of equipment to be considered not in VOC service, it must be determined that the VOC content can be reasonably expected never to exceed 10.0 percent by weight. For a piece of equipment to be considered in wet gas service, it must be determined that it contains or contacts the field gas before the extraction step in the process. For purposes of determining the percent VOC content of the process fluid that is contained in or contacts a piece of equipment, procedures that conform to the methods described in ASTM E169-63, 77, or 93, E168-67, 77, or 92, or E260-73, 91, or 96 (incorporated by reference as specified in 40 CFR §60.17) shall be used.

[45CSR13; R13-2826, 10.1.1.; 45CSR16; 40 CFR §60.632]

8.1.3. Exceptions.

- (a) Each owner or operator subject to the provisions of 40 CFR 60 Subpart KKK may comply with the following exceptions to the provisions of subpart VV.
 - (b) (1) Each pressure relief device in gas/vapor service may be monitored quarterly and within 5 days after each pressure release to detect leaks by the methods specified in §60.485(b) except as provided in §60.632(c), paragraph (b)(4) of this section, and §60.482-4 (a) through (c) of subpart VV.
 - (2) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.
 - (3)
 - (i) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after it is detected, except as provided in §60.482-9.
 - (ii) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.
 - (4)
 - (i) Any pressure relief device that is located in a nonfractionating plant that is monitored only by nonplant personnel may be monitored after a pressure release the next time the monitoring personnel are on site, instead of within 5 days as specified in paragraph (b)(1) of this section and §60.482-4(b)(1) of subpart VV.
 - (ii) No pressure relief device described in paragraph (b)(4)(i) of this section shall be allowed to operate for more than 30 days after a pressure release without monitoring.
 - (c) Sampling connection systems are exempt from the requirements of §60.482-5.
 - (d) Pumps in light liquid service, valves in gas/vapor and light liquid service, and pressure relief devices in gas/vapor service that are located at a nonfractionating plant that does not have the design capacity to process 283,200 standard cubic meters per day (scmd) (10 million standard cubic feet per day) or more

of field gas are exempt from the routine monitoring requirements of §§60.482-2(a)(1) and 60.482-7(a), and paragraph (b)(1) of this section.

- (e) Pumps in light liquid service, valves in gas/vapor and light liquid service, and pressure relief devices in gas/vapor service within a process unit that is located in the Alaskan North Slope are exempt from the routine monitoring requirements of §§60.482-2(a)(1), 60.482-7(a), and paragraph (b)(1) of this section.
- (f) Reciprocating compressors in wet gas service are exempt from the compressor control requirements of §60.482-3.
- (g) Flares used to comply with 40 CFR 60 Subpart KKK shall comply with the requirements of §60.18.
- (h) An owner or operator may use the following provisions instead of §60.485(e):
 - (1) Equipment is in heavy liquid service if the weight percent evaporated is 10 percent or less at 150 °C (302 °F) as determined by ASTM Method D86-78, 82, 90, 95, or 96 (incorporated by reference as specified in §60.17).
 - (2) Equipment is in light liquid service if the weight percent evaporated is greater than 10 percent at 150 °C (302 °F) as determined by ASTM Method D86-78, 82, 90, 95, or 96 (incorporated by reference as specified in §60.17).

[45CSR13; R13-2826, 10.1.1.; 45CSR16; 40 CFR §60.633]

8.1.4. Alternative Means of Emission Limitation.

- a. If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in VOC emissions at least equivalent to the reduction in VOC emissions achieved under any design, equipment, work practice or operational standard, the Administrator will publish, in the Federal Register a notice permitting the use of that alternative means for the purpose of compliance with that standard. The notice may condition permission on requirements related to the operation and maintenance of the alternative means.
- b. Any notice under paragraph (a) of this section shall be published only after notice and an opportunity for a public hearing.
- c. The Administrator will consider applications under this section from either owners or operators of affected facilities, or manufacturers of control equipment.
- d. The Administrator will treat applications under this section according to the following criteria, except in cases where he concludes that other criteria are appropriate:
 - i. The applicant must collect, verify and submit test data, covering a period of at least 12 months, necessary to support the finding in paragraph (a) of this section.
 - ii. If the applicant is an owner or operator of an affected facility, he must commit in writing to operate and maintain the alternative means so as to achieve a reduction in VOC emissions at least equivalent to the reduction in VOC emissions achieved under the design, equipment, work practice or operational standard **[45CSR13; R13-2826, 10.1.1.; 45CSR16; 40 CFR §60.634]**

- 8.1.5. The permittee shall maintain on-site and available upon request an updated and accurate count of plant components and the correct applicability of each associated group to 40 CFR 60, Subpart KKK and OOOO. If the component count of each shall exceed the specific counts given in Attachment N of Permit Application R13-2826M then the permittee shall recalculate (using the same calculation methodology) the fugitive emissions from equipment leaks and, if the associated emissions increase, shall notify the DAQ within fifteen (15) calendar days and submit an appropriate permit application to address the increase.

[45CSR13; R13-2826, 10.1.3]

8.2. Monitoring Requirements

- 8.2.1. Reserved.

8.3. Testing Requirements

- 8.3.1. Reserved.

8.4. Recordkeeping Requirements

- 8.4.1. Recordkeeping Requirements

- (a) Each owner or operator subject to the provisions of 40 CFR 60 Subpart KKK shall comply with the requirements of paragraphs (b) and (c) of this section in addition to the requirements of §60.486.
- (b) The following recordkeeping requirements shall apply to pressure relief devices subject to the requirements of §60.633(b)(1) of 40 CFR 60 Subpart KKK.
 - (1) When each leak is detected as specified in §60.633(b)(2), a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. The identification on the pressure relief device may be removed after it has been repaired.
 - (2) When each leak is detected as specified in §60.633(b)(2), the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location:
 - (i) The instrument and operator identification numbers and the equipment identification number.
 - (ii) The date the leak was detected and the dates of each attempt to repair the leak.
 - (iii) Repair methods applied in each attempt to repair the leak.
 - (iv) “Above 10,000 ppm” if the maximum instrument reading measured by the methods specified in paragraph (a) of this section after each repair attempt is 10,000 ppm or greater.
 - (v) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

- (vi) The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.
 - (vii) The expected date of successful repair of the leak if a leak is not repaired within 15 days.
 - (viii) Dates of process unit shutdowns that occur while the equipment is unrepaired.
 - (ix) The date of successful repair of the leak.
 - (x) A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of §60.482-4(a). The designation of equipment subject to the provisions of §60.482-4(a) shall be signed by the owner or operator.
- (c) An owner or operator shall comply with the following requirement in addition to the requirement of §60.486(j): Information and data used to demonstrate that a reciprocating compressor is in wet gas service to apply for the exemption in §60.633(f) shall be recorded in a log that is kept in a readily accessible location.

[45CSR13; R13-2826, 10.1.1.; 45CSR16; 40 CFR §60.635]

8.5. Reporting Requirements

8.5.1. Reporting Requirements.

- (a) Each owner or operator subject to the provisions of 40 CFR 60 Subpart KKK shall comply with the requirements of paragraphs (b) and (c) of this section in addition to the requirements of §60.487.
- (b) An owner or operator shall include the following information in the initial semiannual report in addition to the information required in §60.487(b) (1)-(4): Number of pressure relief devices subject to the requirements of §60.633(b) except for those pressure relief devices designated for no detectable emissions under the provisions of §60.482-4(a) and those pressure relief devices complying with §60.482-4(c).
- (c) An owner or operator shall include the following information in all semiannual reports in addition to the information required in §60.487(c)(2) (i) through (vi):
 - (1) Number of pressure relief devices for which leaks were detected as required in §60.633(b)(2); and
 - (2) Number of pressure relief devices for which leaks were not repaired as required in §60.633(b)(3).

[45CSR13; R13-2826, 10.1.1.; 45CSR16; 40 CFR §60.636]

8.6. Compliance Plan

8.6.1. Reserved.

9.0 40 CFR 60 Subpart OOOO Requirements for Inlet and TXP3 Process Units

9.1. Limitations and Standards

- 9.1.1. The permittee must be in compliance with the standards of this subpart no later than October 15, 2012 or upon startup, whichever is later.

[45CSR13; R13-2826, 10.1.2.; 45CSR16; 40 CFR §60.5370(a)]

- 9.1.2. The permittee is exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not otherwise required by law to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a). Notwithstanding the previous sentence, you must continue to comply with the provisions of 40 CFR 60 Subpart OOOO.

[45CSR13; R13-2826, 10.1.2.; 45CSR16; 40 CFR §60.5370(c)]

9.1.3. **Equipment Leak Standards.**

This section applies to the group of all equipment, except compressors, within a process unit.

- (a) You must comply with the requirements of §§60.482-1a(a), (b), and (d), 60.482-2a, and 60.482-4a through 60.482-11a, except as provided in §60.5401.
- (b) You may elect to comply with the requirements of §§60.483-1a and 60.483-2a, as an alternative.
- (c) You may apply to the Administrator for permission to use an alternative means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to that achieved by the controls required in this subpart according to the requirements of §60.5402 of 40 CFR 60 Subpart OOOO.
- (d) You must comply with the provisions of §60.485a of this part except as provided in paragraph (f) of this section.
- (e) You must comply with the provisions of §§60.486a and 60.487a of this part except as provided in §§60.5401, 60.5421, and 60.5422 of this part.
- (f) You must use the following provision instead of §60.485a(d)(1): Each piece of equipment is presumed to be in VOC service or in wet gas service unless an owner or operator demonstrates that the piece of equipment is not in VOC service or in wet gas service. For a piece of equipment to be considered not in VOC service, it must be determined that the VOC content can be reasonably expected never to exceed 10.0 percent by weight. For a piece of equipment to be considered in wet gas service, it must be determined that it contains or contacts the field gas before the extraction step in the process. For purposes of determining the percent VOC content of the process fluid that is contained in or contacts a piece of equipment, procedures that conform to the methods described in ASTM E169-93, E168-92, or E260-96 (incorporated by reference as specified in §60.17) must be used.

[45CSR13; R13-2826, 10.1.2.; 45CSR16; 40 CFR §60.5400]

9.1.4. **Exceptions to the Equipment Leak Standards.**

- (a) You may comply with the following exceptions to the provisions of §60.5400(a) and (b).

- (b)
 - (1) Each pressure relief device in gas/vapor service may be monitored quarterly and within 5 days after each pressure release to detect leaks by the methods specified in §60.485a(b) except as provided in §60.5400(c) and in paragraph (b)(4) of this section, and §60.482-4a(a) through (c) of subpart VVa.
 - (2) If an instrument reading of 500 ppm or greater is measured, a leak is detected.
 - (3)
 - (i) When a leak is detected, it must be repaired as soon as practicable, but no later than 15 calendar days after it is detected, except as provided in §60.482-9a.
 - (ii) A first attempt at repair must be made no later than 5 calendar days after each leak is detected.
 - (4)
 - (i) Any pressure relief device that is located in a nonfractionating plant that is monitored only by non-plant personnel may be monitored after a pressure release the next time the monitoring personnel are on-site, instead of within 5 days as specified in paragraph (b)(1) of this section and §60.482-4a(b)(1) of subpart VVa.
 - (ii) No pressure relief device described in paragraph (b)(4)(i) of this section must be allowed to operate for more than 30 days after a pressure release without monitoring.
- (c) Sampling connection systems are exempt from the requirements of §60.482-5a.
- (d) Pumps in light liquid service, valves in gas/vapor and light liquid service, and pressure relief devices in gas/vapor service that are located at a nonfractionating plant that does not have the design capacity to process 283,200 standard cubic meters per day (scmd) (10 million standard cubic feet per day) or more of field gas are exempt from the routine monitoring requirements of §§60.482-2a(a)(1) and 60.482-7a(a), and paragraph (b)(1) of this section.
- (e) Pumps in light liquid service, valves in gas/vapor and light liquid service, and pressure relief devices in gas/vapor service within a process unit that is located in the Alaskan North Slope are exempt from the routine monitoring requirements of §§60.482-2a(a)(1), 60.482-7a(a), and paragraph (b)(1) of this section.
- (f) An owner or operator may use the following provisions instead of §60.485a(e):
 - (1) Equipment is in heavy liquid service if the weight percent evaporated is 10 percent or less at 150 °C (302 °F) as determined by ASTM Method D86-96 (incorporated by reference as specified in §60.17).
 - (2) Equipment is in light liquid service if the weight percent evaporated is greater than 10 percent at 150 °C (302 °F) as determined by ASTM Method D86-96 (incorporated by reference as specified in §60.17).
- (g) An owner or operator may use the following provisions instead of §60.485a(b)(2): A calibration drift assessment shall be performed, at a minimum, at the end of each monitoring day. Check the instrument

using the same calibration gas(es) that were used to calibrate the instrument before use. Follow the procedures specified in Method 21 of appendix A-7 of this part, Section 10.1, except do not adjust the meter readout to correspond to the calibration gas value. Record the instrument reading for each scale used as specified in §60.486a(e)(8). Divide these readings by the initial calibration values for each scale and multiply by 100 to express the calibration drift as a percentage. If any calibration drift assessment shows a negative drift of more than 10 percent from the initial calibration value, then all equipment monitored since the last calibration with instrument readings below the appropriate leak definition and above the leak definition multiplied by (100 minus the percent of negative drift/divided by 100) must be re-monitored. If any calibration drift assessment shows a positive drift of more than 10 percent from the initial calibration value, then, at the owner/operator's discretion, all equipment since the last calibration with instrument readings above the appropriate leak definition and below the leak definition multiplied by (100 plus the percent of positive drift/divided by 100) may be re-monitored.

[45CSR13; R13-2826, 10.1.2.; 45CSR16; 40 CFR §60.5401]

9.1.5. **Alternative Emission Limitations for Equipment Leaks.**

- (a) If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in VOC emissions at least equivalent to the reduction in VOC emissions achieved under any design, equipment, work practice or operational standard, the Administrator will publish, in the Federal Register, a notice permitting the use of that alternative means for the purpose of compliance with that standard. The notice may condition permission on requirements related to the operation and maintenance of the alternative means.
- (b) Any notice under paragraph (a) of this section must be published only after notice and an opportunity for a public hearing.
- (c) The Administrator will consider applications under this section from either owners or operators of affected facilities, or manufacturers of control equipment.
- (d) The Administrator will treat applications under this section according to the following criteria, except in cases where the Administrator concludes that other criteria are appropriate:
 - (1) The applicant must collect, verify and submit test data, covering a period of at least 12 months, necessary to support the finding in paragraph (a) of this section.
 - (2) If the applicant is an owner or operator of an affected facility, the applicant must commit in writing to operate and maintain the alternative means so as to achieve a reduction in VOC emissions at least equivalent to the reduction in VOC emissions achieved under the design, equipment, work practice or operational standard.

[45CSR13; R13-2826, 10.1.2.; 45CSR16; 40 CFR §60.5402]

- 9.1.6. **Initial Compliance Demonstration.** You must determine initial compliance with the standards for each affected facility using the requirements in paragraph (f) of 40 CFR §60.5410. The initial compliance period begins on October 15, 2012 or upon initial startup, whichever is later, and ends no later than one year after the initial startup date for your affected facility or no later than one year after October 15, 2012. The initial compliance period may be less than one full year.

- (f) For affected facilities at onshore natural gas processing plants, initial compliance with the VOC requirements is demonstrated if you are in compliance with the requirements of 40 CFR §60.5400 (condition 9.1.3.).

[45CSR13; R13-2826, 10.1.2.; 45CSR16; 40 CFR §§ 60.5410 and 60.5410(f)]

- 9.1.7. **Continuous Compliance Demonstration.** For affected facilities at onshore natural gas processing plants, continuous compliance with VOC requirements is demonstrated if you are in compliance with the requirements of 40 CFR §60.5400 (condition 9.1.3.).

[45CSR13; R13-2826, 10.1.2.; 45CSR16; 40 CFR §60.5415(f)]

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

[45CSR16; 40 CFR §60.5370(b)]

- 9.1.9. See condition 8.1.5.

9.2. Monitoring Requirements

- 9.2.1. Reserved.

9.3. Testing Requirements

- 9.3.1. Reserved.

9.4. Recordkeeping Requirements

- 9.4.1. **Additional Recordkeeping Requirements.**

- (a) You must comply with the requirements of paragraph (b) of this section in addition to the requirements of §60.486a.
- (b) The following recordkeeping requirements apply to pressure relief devices subject to the requirements of §60.5401(b)(1) of this subpart.
 - (1) When each leak is detected as specified in §60.5401(b)(2), a weatherproof and readily visible identification, marked with the equipment identification number, must be attached to the leaking equipment. The identification on the pressure relief device may be removed after it has been repaired.
 - (2) When each leak is detected as specified in §60.5401(b)(2), the following information must be recorded in a log and shall be kept for 2 years in a readily accessible location:
 - (i) The instrument and operator identification numbers and the equipment identification number.

- (ii) The date the leak was detected and the dates of each attempt to repair the leak.
- (iii) Repair methods applied in each attempt to repair the leak.
- (iv) “Above 500 ppm” if the maximum instrument reading measured by the methods specified in paragraph (a) of this section after each repair attempt is 500 ppm or greater.
- (v) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.
- (vi) The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.
- (vii) The expected date of successful repair of the leak if a leak is not repaired within 15 days.
- (viii) Dates of process unit shutdowns that occur while the equipment is unrepaired.
- (ix) The date of successful repair of the leak.
- (x) A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of §60.482-4a(a). The designation of equipment subject to the provisions of §60.482-4a(a) must be signed by the owner or operator.

[45CSR13; R13-2826, 10.1.2.; 45CSR16; 40 CFR §60.5421]

9.5. Reporting Requirements

9.5.1. Additional Reporting Requirements.

- (a) You must comply with the requirements of paragraphs (b) and (c) of this section in addition to the requirements of §§60.487a(a), (b), (c)(2)(i) through (iv), and (c)(2)(vii) through (viii).
- (b) An owner or operator must include the following information in the initial semiannual report in addition to the information required in §60.487a(b)(1) through (4): Number of pressure relief devices subject to the requirements of §60.5401(b) except for those pressure relief devices designated for no detectable emissions under the provisions of §60.482-4a(a) and those pressure relief devices complying with §60.482-4a(c).
- (c) An owner or operator must include the following information in all semiannual reports in addition to the information required in §60.487a(c)(2)(i) through (vi):
 - (1) Number of pressure relief devices for which leaks were detected as required in §60.5401(b)(2); and
 - (2) Number of pressure relief devices for which leaks were not repaired as required in §60.5401(b)(3).

[45CSR13; R13-2826, 10.1.2.; 45CSR16; 40 CFR §60.5422]

- 9.5.2. You must submit the notifications according to paragraphs (a)(1) and (2) of 40 CFR §60.5420 if you own or operate one or more of the affected facilities specified in §60.5365 that was constructed, modified, or reconstructed during the reporting period.
[40 CFR §60.5420(a); 45CSR16]

9.6. Compliance Plan

- 9.6.1. Reserved.

10.0 Groves Dehydration Station Reboiler BLR-01 [emission point ID(s): 16E]

10.1 Limitations and Standards

- 10.1.1. Maximum Design Heat Input. The maximum design heat input for the Reboiler (BLR-01) shall not exceed 0.20 MMBTU/hr.
[45CSR13; R13-3212, 5.1.1.]
- 10.1.2. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six minute block average.
[45CSR13; R13-3212, 5.1.2.; 45CSR§2-3.1.]

10.2 Monitoring Requirements

- 10.2.1. At such reasonable times as the Secretary may designate, the permittee shall conduct Method 9 emission observations for the purpose of demonstrating compliance with condition 10.1.2. Method 9 shall be conducted in accordance with 40 CFR 60 Appendix A.
[45CSR13; R13-3212, 5.2.1.]

10.3 Testing Requirements

- 10.3.1. Compliance with the visible emission requirements of condition 10.1.2. shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9 or by using measurements from continuous opacity monitoring systems approved by the 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 condition 10.1.2. Continuous opacity monitors shall not be required on fuel burning units which employ wet scrubbing systems for emission control.
[45CSR13; R13-3212, 5.3.1.; 45CSR§2-3.2.]

10.4 Recordkeeping Requirements

- 10.4.1. The permittee shall maintain records of all monitoring data required by condition 10.2.1. documenting the date and time of each visible emission check, the emission point or equipment/source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80°F, 6 - 10 mph NE wind) during the visual emission check(s). Should a visible emission observation be required to be performed per the requirements specified in Method 9, the data records of each observation shall be maintained per the requirements of Method 9.
[45CSR13; R13-3212, 5.4.1.]

10.5. Reporting Requirements

- 10.5.1. Any deviation(s) from the allowable visible emission requirement for any emission source discovered during observations using 40CFR Part 60, Appendix A, Method 9 shall be reported in writing to the Director of the Division of Air Quality as soon as practicable, but in any case within ten (10) calendar days of the occurrence and shall include at least the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.
[45CSR13; R13-3212, 5.5.1.]

10.6. Compliance Plan

- 10.6.1. Reserved.

11.0 Groves Dehydration Station HAP Requirements for DH-01 [emission point ID(s): 15E]

11.1. Limitations and Standards

11.1.1. Maximum Throughput Limitation. The maximum dry natural gas throughput to the glycol dehydration unit/still column (DH-01) shall not exceed 5.0 mmscf/day. Compliance with the Maximum Throughput Limitation shall be determined using a twelve-month rolling total. A twelve-month rolling total shall mean the sum of the monthly throughput at any given time during the previous twelve consecutive calendar months. [45CSR13; R13-3212, 6.1.1.]

11.1.2. The glycol dehydration unit/still column (DH-01) shall be designed and operated in accordance with the following:

- a. At least 50% of the dehydrator flash tank will be routed to the reboiler and burned as fuel. Natural gas may be used as supplemental fuel.
- b. The vapors routed from the flash tank shall be introduced into the flame zone of the reboiler.

[45CSR13; R13-3212, 6.1.2.]

11.1.3. Maximum emissions from the glycol dehydration unit/still column (DH-01) shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Volatile Organic Compounds	3.88	17.00
Benzene	0.07	0.31
Toluene	0.31	1.34
Xylenes	0.98	4.27

[45CSR13; R13-3212, 6.1.3.]

11.1.4. For purposes of determining potential HAP emissions at production-related facilities, the methods specified in 40 CFR 63, Subpart HH (i.e. excluding compressor engines from HAP PTE) shall be used.

[45CSR13; R13-3212, 6.1.4.]

11.1.5. Any source that determines it is not a major source but has actual emissions of 5 tons per year or more of a single HAP, or 12.5 tons per year or more of a combination of HAP (i.e., 50 percent of the major source thresholds), shall update its major source determination within 1 year of the prior determination or October 15, 2012, whichever is later, and each year thereafter, using gas composition data measured during the preceding 12 months.

[45CSR13; R13-3212, 6.1.5.; 45CSR34; 40 CFR §63.760(c)]

11.1.6. The permittee is exempt from the requirements of 40 CFR §63.764(d) if the criteria below is met, except that the records of the determination of these criteria must be maintained as required in 40 CFR §63.774(d)(1).

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

[45CSR13; R13-3212, 6.1.6.; 45CSR34; 40 CFR §63.764(e)]

11.2. Monitoring Requirements

- 11.2.1. The permittee shall monitor the throughput of dry natural gas fed to the dehydration system on a monthly basis for the glycol dehydration unit (DH-01).

[45CSR13; R13-3212, 6.2.1.]

- 11.2.2. In order to demonstrate compliance with the area source status, claimed within conditions 11.1.3. and 11.1.4., as well as the benzene exemption provided under condition 11.1.6., the following parameters shall be measured at least once quarterly, with the exception of natural gas flowrate annual daily average, natural gas flowrate maximum design capacity, and wet gas composition, in order to define annual average values or, if monitoring is not practical, some parameters may be assigned default values as listed below.

- a. Natural Gas Flowrate
 - i. Operating hours per quarter
 - ii. Quarterly throughput (MMscf/quarter)
 - iii. Annual daily average (MMscf/day), and
 - iv. Maximum design capacity (MMscf/day)
- b. Absorber temperature and pressure
- c. Lean glycol circulation rate
- d. Glycol pump type and maximum design capacity (gpm)
- e. Flash tank temperature and pressure, if applicable
- f. Stripping Gas flow rate, if applicable
- g. Wet gas composition (upstream of the absorber – dehydration column) sampled in accordance with GPA method 2166 and analyzed consistent with GPA extended method 2286 as well as the procedures presented in the GRI-GLYCalc™ Technical Reference User Manual and Handbook V4
- h. Wet gas water content (lbs H₂O/MMscf)
- i. Dry gas water content (lbs H₂O/MMscf) at a point directly after exiting the dehydration column and before any additional separation points

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

- a. Dry gas water content can be assumed to be equivalent to pipeline quality at 7 lb H₂O / MMscf
- b. Wet gas water content can be assumed to be saturated
- c. Lean glycol water content if not directly measured may use the default value of 1.5 % water as established by GRI
- d. Lean glycol circulation rate may be estimated using the TEG recirculation ratio of 3 gal TEG / lb H₂O removed.

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

[45CSR13; R13-3212, 6.2.2.; 45CSR34; 40 CFR §63.772(b)(2)(i)]

11.3. Testing Requirements

- 11.3.1. The permittee shall determine the composition of the wet natural gas by sampling in accordance with GPA Method 2166 and analyzing according to extended GPA Method 2286 analysis as specified in the GRI-GLYCalc™ V4 Technical Reference User Manual and Handbook. As specified in the handbook, the permittee shall sample the wet gas stream at a location prior to the dehydration contactor column, but after any type of separation device, in accordance with GPA Method 2166. The permittee may utilize other equivalent methods provided they are approved in advance by DAQ as part of a testing protocol. If alternative methods are proposed, a test protocol shall be submitted for approval no later than 60 days before the scheduled test date. The initial compliance test must be conducted within 180 days of permit (R13-3212) issuance (i.e., no later than June 14, 2015) or within 180 days of startup of the glycol dehydration unit, whichever is later.

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

[45CSR13; R13-3212, 6.3.1.; 45CSR§13-5.10.]

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

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

- (b) Determination of glycol dehydration unit flowrate, benzene emissions, or BTEX emissions. The procedures of this paragraph shall be used by an owner or operator to determine glycol dehydration unit natural gas flowrate, benzene emissions, or BTEX emissions.
 - (2) The determination of actual average benzene emissions or BTEX 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™ Technical Reference Manual. Inputs to the model shall be representative of actual operating conditions of the glycol dehydration unit and be determined using the procedures documented in Gas Research Institute (GRI) report entitled “Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions” (GRI-95/0368.1).

[45CSR13; R13-3212, 6.3.2.; 45CSR34; 40 CFR §63.772(b)(2)(i)]

11.4. Recordkeeping Requirements

- 11.4.1. The permittee shall maintain a record of the dry natural gas throughput through the glycol dehydration unit/still column (DH-01) to demonstrate compliance with condition 11.1.1. of this permit. Said records shall be maintained for a period of five (5) years on site or in a readily accessible off-site location maintained by the permittee. 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; R13-3212, 6.4.1.]

- 11.4.2. For the purpose of documenting compliance with the emission limitations, HAP major source thresholds, as well as the benzene exemption, the permittee shall maintain records of all monitoring data, wet gas sampling, and annual GRI-GLYCalc™ emission estimates. Said records shall be maintained for a period of five (5) years on site or in a readily accessible off-site location maintained by the permittee. 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; R13-3212, 6.4.2.; 45CSR§13-5.10.]

- 11.4.3. 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) shall maintain the records specified in paragraph (d)(1)(i) or paragraph (d)(1)(ii) of §63.774, 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).

[45CSR34; 40 CFR §63.774(d)(1)(ii)]

11.5. Reporting Requirements

- 11.5.1. Reserved.

11.6. Compliance Plan

- 11.6.1. Reserved.