

West Virginia Department of Environmental Protection

Austin Caperton

Cabinet Secretary

# Permit to Operate



Pursuant to

**Title V**

of the Clean Air Act

*Issued to:*

**Blue Racer Midstream, LLC**

**Natrium Extraction and Fractionation Processing Plant (NPP)**

**R30-05100142-2020**

A handwritten signature in blue ink that reads "Laura M. Crowder".

*Laura M. Crowder*

*Director, Division of Air Quality*

*Issued: April 14, 2020 • Effective: April 28, 2020*  
*Expiration: April 14, 2025 • Renewal Application Due: October 14, 2024*

Permit Number: **R30-05100142-2020**  
Permittee: **Blue Racer Midstream, LLC**  
Facility Name: **Natrium Extraction and Fractionation Processing Plant (NPP)**  
Permittee Mailing Address: **5949 Sherry Lane, Suite 1300; Dallas, TX 75225**

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*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.*

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Facility Location:	Proctor, Marshall County, West Virginia
Facility Mailing Address:	5949 Sherry Lane, Suite 1300, Dallas, TX 75225
Telephone Number:	(304) 455-4220
Type of Business Entity:	LLC
Facility Description:	Natural Gas Extraction/Fractionation Facility
SIC Codes:	1321
UTM Coordinates:	512.1 km Easting • 4,400.8 km Northing • Zone 17

Permit Writer: Rex Compston, P.E.

*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.*

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

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

### 1.1 Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
<b>Heaters</b>					
S001	P001	Hot Oil Heater	2014	216.7 MMBtu/hr	None
S012	P012	Regeneration Gas Heater	2013	9.7 MMBTU/hr	None
S013	P013	Cryogenic Hot Medium Oil (HMO) Heater	2013	26.3 MMBtu/hr	None
S016	P016	Hot Oil Heater	2014	61.58 MMBtu/hr	None
S017	P017	Hot Oil Heater	2014	61.58 MMBtu/hr	None
S018	P018	Hot Oil Heater	2014	61.58 MMBtu/hr	None
S019	P019	Hot Oil Heater	2014	61.58 MMBtu/hr	None
S024	P024	Regeneration Gas Heater	2018	9.7 MMBtu/hr	None
S026	P026	Cryogenic HMO Heater	2018	26.3 MMBtu/hr	None
S036	P036	Regeneration Gas Heater	2019	9.7 MMBTU/hr	None
S037	P037	Cryogenic HMO Heater	2019	26.3 MMBtu/hr	None
S040	P040	Regeneration Gas Heater	2019	19.28 MMBTU/hr	None
S041	P041	Cryogenic HMO Heater	2019	54.67 MMBTU/hr	None
S044	P044	Regeneration Gas Heater	2019	9.7 MMBTU/hr	None
S045	P045	Cryogenic HMO Heater	2019	26.3 MMBtu/hr	None
S048	P048	Regeneration Gas Heater	2019	9.7 MMBTU/hr	None
S049	P049	Cryogenic HMO Heater	2019	26.3 MMBtu/hr	None
S052	P052	Hot Oil Heater	2019	61.58 MMBtu/hr	None
S053	P053	Hot Oil Heater	2019	61.58 MMBtu/hr	None
S056	P056	Stabilizer Heater	2019	10.09 MMBtu/hr	None
<b>Glycol Dehydration Units</b>					
S006	P001 <sup>(1)</sup>	Glycol Dehydration System	2011	460 MMscfd	C001 <sup>(1)</sup>
		Glycol Dehydration Flash Tank			
S032	V003 P001 <sup>(1)</sup>	Glycol Dehydration System	2018	230 MMscfd	C009 <sup>(1)</sup>
		Glycol Dehydration Flash Tank			
S029	P029	Glycol Reboiler	2018	3.0 MMBtu/hr	None
<b>Storage Tanks<sup>(2)</sup></b>					
TK-802	P001	Natural Gasoline Storage Tank	2011	714,000 gal	Natural Gas Blanket <sup>(3)</sup>
TK-2802	P001	Natural Gasoline Storage Tank	2014	1,260,000 gal	Natural Gas Blanket <sup>(3)</sup>
TK-3802	P001	Natural Gasoline Storage Tank	2019	714,000 gal	Natural Gas Blanket <sup>(3)</sup>
TK-4802	P001	Natural Gasoline Storage Tank	2019	1,260,000 gal	Natural Gas Blanket <sup>(3)</sup>
TK-5802	P001	Natural Gasoline Storage Tank	2019	714,000 gal	Natural Gas Blanket <sup>(3)</sup>
TK-6802	P001	Natural Gasoline Storage Tank	2019	1,260,000 gal	Natural Gas Blanket <sup>(3)</sup>
TK-7802	TK-7802	Refrigerated Propane Storage Tank	2019	4,200,000 gal	VRU

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
US-800	Flare <sup>(4)</sup>	Spherical NGL Storage Tank	2011	2,142,000 gal	Pressure Tank
US-801	Flare <sup>(4)</sup>	Spherical NGL Storage Tank	2011	865,200 gal	Pressure Tank
US-804	Flare <sup>(4)</sup>	Spherical NGL Storage Tank	2011	865,200 gal	Pressure Tank
US-805	Flare <sup>(4)</sup>	Spherical NGL Storage Tank	2011	865,200 gal	Pressure Tank
US-2800	Flare <sup>(4)</sup>	Spherical NGL Storage Tank	2019	2,142,000 gal	Pressure Tank
US-2801	Flare <sup>(4)</sup>	Spherical NGL Storage Tank	2019	865,200 gal	Pressure Tank
US-2804	Flare <sup>(4)</sup>	Spherical NGL Storage Tank	2019	865,200 gal	Pressure Tank
US-2805	Flare <sup>(4)</sup>	Spherical NGL Storage Tank	2019	865,200 gal	Pressure Tank
N/A	N/A	Four (4) Pressurized NGL Bullet Tanks (V-1905, V-1915, V-1925, V-1935)	2014	90,000 gal (each)	Pressure Tank
N/A	N/A	Four (4) Pressurized NGL Bullet Tanks (V-2905, V-2915, V-2925, V-2935)	2019	90,000 gal (each)	Pressure Tank
TK-906	TK-906	Slop Tank	2011	21,000 gal	None
TK-2906	TK-2906	Slop Tank	2019	21,000 gal	None
TK-907	TK-907	Produced Water Tank	2012	63,000 gal	None
TK-2907	TK-2907	Produced Water Tank	2019	63,000 gal	None

**Other Emission Units**

S011	P005	Ethane Amine Regenerator	2012	129 mmscfd	None
S054	P054	Ethane Amine Regenerator	2019	129 mmscfd	VRU
S008	P008	Product Loading (Truck, Rail, Propane Barge)	2011	3,600 gpm (truck) 4,000 gpm (rail) 4,000 gpm (barge)	VRU
S015	S015	Slop Water Truck Loading	2011	150 gpm	None
S033	P033	Natural Gasoline Loading (Barge)	2017	4,000 gpm	None
S055	P055	Pressurized NGL/Condensate Unloading	2012	3,600 gpm	None
L-1	L-1	Gasoline Dispenser Loading	2017	20 gal/hr	None
S002	P002	Caterpillar Model C18 Fire Pump #1 Diesel (Manufactured 2011)	2012	700 HP	None
S003	P003	Caterpillar Model C18 Fire Pump #2 Diesel (Manufactured 2011)	2012	700 HP	None
S057	P057	Natural Gas, 4-Stroke Lean Burn Emergency Generators <sup>(5)</sup> (Manufactured after June 12, 2006)	2019	16,000 HP <sup>(5)</sup>	None
S034	P034	Propane Pigging (including Flare)	2017	N/A	Flare (C034)
S035	P035	Pigging Operations	2017	N/A	None

**Fugitive Emissions Sources**

FUG AREA 1	N/A	Fugitive Area 1	2011	N/A	None
FUG AREA 2	N/A	Fugitive Area 2	2011	N/A	None

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
FUG AREA 3	N/A	Fugitive Area 3	2018	N/A	None
FUG AREA 4	N/A	Fugitive Area 4	2019	N/A	None
FUG AREA 5	N/A	Fugitive Area 5	2019	N/A	None
FUG AREA 6	N/A	Fugitive Area 6	2019	N/A	None
FUG AREA 7	N/A	Fugitive Area 7	2019	N/A	None
S010	N/A	Unpaved Roads	2011	N/A	None

**Control Devices**

S004A	P004A	Callidus CAL-MP Staged, Multi-Point Ground Flare System (C004A)	2015	19,800,000 scf/hr	N/A
V003	V003	Vapor Combustor (C009)	2015	3,380 scf/hr	N/A
S034	P034	Propane Pig Trap Flare (C034)	2017	72,000 scf/hr	N/A

Control Device ID	Emission Unit	Pollutant	Control Device	Control Efficiency
C004A	Maintenance, Blowdowns, Pressure Relief Valves	VOCs	Flare (S004A)	98.0 %
		Total HAPs		98.0 %
C034	Pigging Flare (S034)	VOCs	Pigging Flare (S034)	98.0%
C009	Glycol Dehydration Flash Tank/Still Vents (S032)	VOCs	Vapor Combustor (V003)	98.0 %
		Total HAPs		98.0 %

- (1) Still Vent and flash tank vapors from S006 will be routed to the Hot Oil Heater (S001: C001) and used as fuel. Still Vent and flash tank vapors from S032 shall be routed either to the Hot Oil Heater (S001: C001) and used as fuel or sent to the associated Vapor Combustor (V003: C009) for control.
- (2) Other storage tanks that are not listed here (see Table N-3 in permit application R13-2896F) but meet the *de minimis* requirements under 45CSR13 (*Storage vessels having less than 10,567 gallons capacity containing petroleum or organic liquids with a vapor pressure of 1.5 psia or less at storage temperature, provided that the emissions from all such organic liquid storage tanks, in the aggregate, are less than 2 tons per year for hazardous air pollutants or VOCs*) are authorized at the facility.
- (3) Tank uses a natural gas blanket to prevent emissions of natural gasoline. Working/breathing losses of natural gas blanket are collected and sent to Hot Oil Heater (S001) as a supplemental fuel.
- (4) This tank shall be pressurized in excess of 204.9 kPa (which exempts the tank from applicability to 40 CFR 60, Subpart Kb) and normally has no emissions. In the case of emergency, emissions from the tank can be flared in C004A.
- (5) The permittee has the option of constructing one or more emergency generators of the type listed with an aggregate horsepower not to exceed 16,000.

Note: Other storage tanks and pressure vessels not listed within the Title V Equipment Table are authorized at this facility according to insignificant activities listed under the Title V General Form Section 24, Item 19.

**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
R13-2896G	February 18, 2020

## 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

<b>CAAA</b>	Clean Air Act Amendments	<b>NSPS</b>	New Source Performance Standards
<b>CBI</b>	Confidential Business Information	<b>PM</b>	Particulate Matter
<b>CEM</b>	Continuous Emission Monitor	<b>PM<sub>10</sub></b>	Particulate Matter less than 10µm in diameter
<b>CES</b>	Certified Emission Statement	<b>pph</b>	Pounds per Hour
<b>C.F.R. or CFR</b>	Code of Federal Regulations	<b>ppm</b>	Parts per Million
<b>CO</b>	Carbon Monoxide	<b>PSD</b>	Prevention of Significant Deterioration
<b>C.S.R. or CSR</b>	Codes of State Rules	<b>psi</b>	Pounds per Square Inch
<b>DAQ</b>	Division of Air Quality	<b>SIC</b>	Standard Industrial Classification
<b>DEP</b>	Department of Environmental Protection	<b>SIP</b>	State Implementation Plan
<b>FOIA</b>	Freedom of Information Act	<b>SO<sub>2</sub></b>	Sulfur Dioxide
<b>HAP</b>	Hazardous Air Pollutant	<b>TAP</b>	Toxic Air Pollutant
<b>HON</b>	Hazardous Organic NESHAP	<b>TPY</b>	Tons per Year
<b>HP</b>	Horsepower	<b>TRS</b>	Total Reduced Sulfur
<b>lbs/hr or lb/hr</b>	Pounds per Hour	<b>TSP</b>	Total Suspended Particulate
<b>LDAR</b>	Leak Detection and Repair	<b>USEPA</b>	United States Environmental Protection Agency
<b>m</b>	Thousand	<b>UTM</b>	Universal Transverse Mercator
<b>MACT</b>	Maximum Achievable Control Technology	<b>VEE</b>	Visual Emissions Evaluation
<b>mm</b>	Million	<b>VOC</b>	Volatile Organic Compounds
<b>mmBtu/hr</b>	Million British Thermal Units per Hour		
<b>mmft<sup>3</sup>/hr or mmcf/hr</b>	Million Cubic Feet Burned per Hour		
<b>NA or N/A</b>	Not Applicable		
<b>NAAQS</b>	National Ambient Air Quality Standards		
<b>NESHAPS</b>	National Emissions Standards for Hazardous Air Pollutants		
<b>NO<sub>x</sub></b>	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]

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- 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 be less than 10 tons/year of any single HAP and 25 tons/year of any combination of HAPs. Compliance with this Section shall ensure that the facility is a minor HAP source.  
[45CSR13, R13-2896, Condition 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 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.  
[45CSR§13-5.10.; 45CSR13, R13-2896, Condition 4.1.3.]
- 3.1.11. **Maximum Throughput Limitation.** The total maximum combined wet natural gas throughput of the gas processing plant, as processed in a maximum of seven (7) Cryogenic Plants, shall not exceed 1,725 mmscf/day. To demonstrate compliance, the permittee shall maintain records of the amount of natural gas processed in the gas processing plant.  
[45CSR§13-5.10.; 45CSR13, R13-2896, Condition 4.1.5.]
- 3.1.12. No person shall cause, suffer, allow or permit fugitive particulate matter to be discharged beyond the boundary lines of the property on which the discharge originates or at any public or residential location, which causes or contributes to statutory air pollution.  
[45CSR§17-3.1]
- 3.1.13. When a person is found in violation of this 45CSR17, the Director may require the person to utilize a system to minimize fugitive particulate matter. This system to minimize fugitive particulate matter may include, but is not limited to, the following:
- a. Use, where practicable, of water or chemicals for control of particulate matter in demolition of existing buildings or structures, construction operations, grading of roads or the clearing of land;
  - b. Application of asphalt, water or suitable chemicals on unpaved roads, material stockpiles and other surfaces which can create airborne particulate matter;
  - c. Covering of material transport vehicles, or treatment of cargo, to prevent contents from dripping, sifting, leaking or otherwise escaping and becoming airborne, and prompt removal of tracked material from roads or streets; or
  - d. Installation and use of hoods, fans and fabric filters to enclose and vent the handling of materials, including adequate containment methods during sandblasting, abrasive cleaning or other similar operations.  
[45CSR§17-3.2]

## 3.2. Monitoring Requirements

- 3.2.1. N/A

### 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, R13-2896, Condition 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 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

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

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

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

**[45CSR13, R13-2896, Condition 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 57<sup>th</sup> Street SE  
Charleston, WV 25304

#### US EPA:

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

#### DAQ Compliance and Enforcement<sup>1</sup>:

DEPAirQualityReports@wv.gov

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

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

**DAQ:**  
DEPAirQualityReports@wv.gov

**US EPA:**  
R3\_APD\_Permits@epa.gov

**[45CSR§30-5.3.e.]**

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

**DAQ:**  
DEPAirQualityReports@wv.gov

**[45CSR§30-5.1.c.3.A.]**

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

3.5.8. **Deviations.**

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

**[45CSR§30-5.1.c.3.C.]**

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

[45CSR§30-5.1.c.3.B.]

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

[45CSR§30-4.3.h.1.B.]

### 3.6. Compliance Plan

- 3.6.1. None

### 3.7. Permit Shield

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

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

- a. 45CSR19 – *Requirements for Pre-Construction Review, Determination of Emission Offsets for Proposed New or Modified Stationary Sources of Air Pollutants and Emission Trading for Intrasource Pollutants:* The facility is in an SO<sub>2</sub> non-attainment area, but facility-wide SO<sub>2</sub> PTE of the plant is less than 100 TPY. Therefore, the facility is not defined as a “major stationary source” under 45CSR19.
- b. 45CSR27 – *To Prevent and Control the Emissions of Toxic Air Pollutants:* Natural gas is included as a petroleum product and contains less than 5% benzene by weight. 45CSR§27-2.4 exempts 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.”
- c. 40 C.F.R. 63 Subpart HH – *National Emission Standards for Hazardous Air Pollutants for Oil and Natural Gas Production Facilities:* The facility would not be subject to the equipment leak standards under 40CFR§63.769 because it is an area source of HAPs, which limits applicability under Subpart HH to only the (TEG) dehydration unit according to §63.760(b)(2).
- d. 40 C.F.R. 63 Subpart DDDDD – *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters:* This subpart does not apply to the facility since it is not a major source of HAPs as defined in 40CFR§63.7575.
- e. 40 C.F.R. 63 Subpart JJJJJ – *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources:* This subpart does not apply to the facility since the heaters are fueled by natural gas and gas-fired boilers are exempt per 40CFR§63.11195(e).

**4.0 Hot Oil Heaters [emission unit ID(s): S001, S016-S019, S052-S053]**

**4.1. Limitations and Standards**

4.1.1. The MDHI of the Hot Oil Heater designated as S001 shall not exceed 216.7 MMBTU/hr and, for each Hot Oil Heater designated as S016-S019 and S052-S053, shall not exceed 61.58 MMBTU/hr. All Hot Oil Heaters (S001, S016-S019, S052-S053) shall be equipped with Low-NOx burners.  
**[45CSR13, R13-2896, Condition 5.1.1.]**

4.1.2. Maximum emissions from the Hot Oil Heaters shall not exceed the following:

a. The maximum emissions from S001 shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
S001	Nitrogen Oxides	9.75	42.71
	Carbon Monoxide	3.25	14.24
	PM <sub>2.5</sub> /PM <sub>10</sub> /PM <sup>(1)(2)</sup>	1.61	7.07
	SO <sub>2</sub> <sup>(3)</sup>	0.15	0.67
	VOCs	0.37	1.61

(1) Includes Condensables.

(2) Compliance with this limit will ensure compliance with 45CSR§2-4.1.b. (condition 4.1.4.b)

(3) Compliance with this limit will ensure compliance with 45CSR§10-3.1.e.

b. The maximum emissions from each heater S016-S019 and S052-S053 shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
S016-S019, S052-S053	Nitrogen Oxides	1.48	6.47
	Carbon Monoxide	3.63	15.91
	SO <sub>2</sub> <sup>(3)</sup>	0.04	0.19
	PM <sub>2.5</sub> /PM <sub>10</sub> /PM <sup>(1)(2)</sup>	0.46	2.01
	VOCs	0.33	1.45

(1) Includes Condensables.

(2) Compliance with this limit will ensure compliance with 45CSR§2-4.1.b. (condition 4.1.4.b)

(3) Compliance with this limit will ensure compliance with 45CSR§10-3.1.e.

**[45CSR§2-4.1.b.; 45CSR§10-3.1.e.; 45CSR13, R13-2896, Condition 5.1.2.]**

4.1.3. The quantity of natural gas that shall be consumed in the 216.7 MMBTU/hr Hot Oil Heater (S001) shall not exceed 225,571 standard cubic feet per hour and 1976 x 10<sup>6</sup> standard cubic feet per year. The quantity of

natural gas that shall be consumed in each 61.58 MMBTU/hr Hot Oil Heaters (S016-S019 and S052-S053) shall not exceed 64,101 standard cubic feet per hour and  $562 \times 10^6$  standard cubic feet per year.  
**[45CSR13, R13-2896, Condition 5.1.3.]**

4.1.4. **45CSR2**

Each Hot Oil Heater is subject to the applicable limitations and standards under 45CSR2, including the requirements as given below under (a) through (c):

- a. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six minute block average.  
**[45CSR§2-3.1.]**
- b. The permittee shall not cause, suffer, allow or permit the discharge of particulate matter into the open air from the fuel burning units, measured in terms of pounds per hour in excess of the amount determined as follows:
  - (1) The product of 0.09 and the total design heat input for the fuel burning units in million British Thermal Units (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.  
**[45CSR§2-4.1(b)]**
- c. The visible emission standards set forth in section 3 of 45CSR2 shall apply at all times except in periods of start-ups, shutdowns and malfunctions. Where the Director believes that start-ups and shutdowns are excessive in duration and/or frequency, the Director may require an owner or operator to provide a written report demonstrating that such frequent start-ups and shutdowns are necessary.  
**[45CSR§2-9.1.]**

**[45CSR13, R13-2896, Condition 5.1.4.]**

4.1.5. **40 CFR 60, Subpart Db**

Hot Oil Heater S001 is subject to the applicable limitations and standards under 40 CFR 60, Subpart Db, including the requirements as given below under (a) through (c):

- a. Units firing only very low sulfur oil, gaseous fuel, a mixture of these fuels, or a mixture of these fuels with any other fuels with a potential SO<sub>2</sub> emission rate of 140 ng/J (0.32 lb/MMBtu) heat input or less are exempt from the SO<sub>2</sub> emissions limit in paragraph (k)(1) of this section.  
**[45CSR16; 40CFR§60.42b(k)(2)]**
- b. Except as provided under paragraphs (k) and (l) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that is subject to the provisions of this section and that combusts only coal, oil, or natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain NO<sub>x</sub> (expressed as NO<sub>2</sub>) in excess of the following emission limits:  
**[45CSR16; 40CFR§60.44b(a)]**
  - (1) Low heat release rate: 0.10 lb/MMBtu
  - (2) High heat release rate: 0.20 lb/MMBtu**[45CSR16; 40CFR§§60.44b(a)(1)(i) and (ii)]**



- c. Except as provided under paragraphs (g), (h), and (i) of this section, the owner or operator of an affected facility subject to a NO<sub>x</sub> standard under §60.44b shall comply with either paragraphs (b)(1) or (b)(2) of this section.

**[45CSR16; 40CFR§60.48b(b)]**

- (1) Install, calibrate, maintain, and operate CEMS for measuring NO<sub>x</sub> and O<sub>2</sub> (or CO<sub>2</sub>) emissions discharged to the atmosphere, and shall record the output of the system.

**[45CSR16; 40CFR§60.48b(b)(1)]**

- d. Pursuant to §60.49b(r)(2)(iv), the WVDAQ approves quarterly fuel sampling for S001.

**[45CSR13, R13-2896, Condition 5.1.5.]**

4.1.6. **40 CFR 60, Subpart Dc**

Hot Oil Heaters S016-S019 and S052-S053 are subject to all applicable provisions of 40 CFR 60, Subpart Dc, provided that compliance with any more stringent limitation set forth under this permit shall also be demonstrated. Recordkeeping and reporting requirements shall be conducted in accordance with §60.48c. These reports shall be submitted in accordance with the time lines and in the order set forth in §60.48c and submitted to the addresses listed in Section 3.5.3.

**[45CSR13, R13-2896, Condition 5.1.6.]**

## 4.2. Monitoring Requirements

- 4.2.1. At such reasonable times as the Secretary may designate, the permittee shall conduct Method 9 emission observations for the purpose of demonstrating compliance with section 4.1.4 of this permit. Method 9 shall be conducted in accordance with 40 CFR 60 Appendix A.

**[45CSR§2-3.2; 45CSR13, R13-2896, Condition 5.2.1.]**

4.2.2. **40 CFR 60, Subpart Db**

Hot Oil Heater S001 is subject to the applicable limitations and standards under 40 CFR 60, Subpart Db:

- a. CEMS shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero span.

**[45CSR16; 40CFR§60.48b(c)]**

- b. The 1-hour average NO<sub>x</sub> emission rates measured by the continuous NO<sub>x</sub> monitor required by condition 4.1.5. and required under 40CFR§60.13(h) shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under 40CFR§60.44b. The 1-hour averages shall be calculated using the data points required under 40CFR§60.13(h)(2).

**[45CSR16; 40CFR§60.48b(d)]**

- c. The procedures under 40CFR§60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems.

1. For affected facilities combusting coal, wood or municipal-type solid waste, the span value for a COMS shall be between 60 and 80 percent.
2. For affected facilities combusting coal, oil, or natural gas, the span value for NO<sub>x</sub> is determined using one of the following procedures:

- i. Except as provided under paragraph (c)(2)(ii) of this condition, NO<sub>x</sub> span values shall be determined as follows:

Fuel	Span values for NO <sub>x</sub> (ppm)
Natural gas	500.
Oil	500.
Coal	1,000.
Mixtures	500 (x + y) + 1,000z.

Where:

x = Fraction of total heat input derived from natural gas;

y = Fraction of total heat input derived from oil; and

z = Fraction of total heat input derived from coal.

- ii. As an alternative to meeting the requirements of paragraph (c)(2)(i) of this condition, the owner or operator of an affected facility may elect to use the NO<sub>x</sub> span values determined according to section 2.1.2 in appendix A to part 75 of this chapter.
3. All span values computed under paragraph (e)(2)(i) of this section for combusting mixtures of regulated fuels are rounded to the nearest 500 ppm. Span values computed under paragraph (e)(2)(ii) of this section shall be rounded off according to section 2.1.2 in appendix A to part 75 of this chapter.

**[45CSR16; 40CFR§60.48b(e)]**

- d. When NO<sub>x</sub> emission data are not obtained because of CEMS breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7 of appendix A of this part, Method 7A of appendix A of this part, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days.

**[45CSR16; 40CFR§60.48b(f)]**

### 4.3. Testing Requirements

- 4.3.1. At such reasonable time(s) as the Secretary may designate, in accordance with the provisions of 3.3 of this permit, the permittee shall conduct or have conducted test(s) to determine compliance with the emission limitations established under 4.1.2(a) and (b).

**[45CSR§§2-8.1.b and 8.1.c; 45CSR13, R13-2896, Condition 5.3.1.]**

### 4.4. Recordkeeping Requirements

#### 4.4.1. Records of Fuel Usage

- a. To demonstrate continuous compliance with sections 4.1.1-4.1.3, the permittee shall monitor and record the monthly and twelve (12) month rolling total of the amount of natural gas consumed in S001, S016-S019, and S052-S053.

**[45CSR13, R13-2896, Condition 5.4.1.]**

- b. The owner or operator shall maintain records of the operating schedule and the quantity and quality of fuel consumed in each fuel burning unit in a manner to be established by the Director. Such records are

to be maintained on-site and made available to the Director or his duly authorized representative upon request.

**[45CSR§2-8.3.c]**

- c. 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:
  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]**

4.4.2. **40 CFR 60, Subpart Db**

Hot Oil Heater S001 is subject to the applicable limitations and standards under 40 CFR 60, Subpart Db:

- a. The owner or operator of an affected facility shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for coal, distillate oil, residual oil, natural gas, wood, and municipal-type solid waste for the reporting period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.

**[45CSR16; 40CFR§60.49b(d)(1)]**

- b. The owner or operator of an affected facility subject to the NO<sub>x</sub> standards under §60.44b shall maintain records of the following information for each steam generating unit operating day:
  1. Calendar date;
  2. The average hourly NO<sub>x</sub> emission rates (expressed as NO<sub>2</sub>) (ng/J or lb/MMBtu heat input) measured or predicted;
  3. The 30-day average NO<sub>x</sub> emission rates (ng/J or lb/MMBtu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days;
  4. Identification of the steam generating unit operating days when the calculated 30-day average NO<sub>x</sub> emission rates are in excess of the NO<sub>x</sub> emissions standards under §60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken;
  5. Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken;
  6. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data;
  7. Identification of “F” factor used for calculations, method of determination, and type of fuel combusted;
  8. Identification of the times when the pollutant concentration exceeded full span of the CEMS;

9. Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and
10. Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of 40CFR60.

**[45CSR16; 40CFR§60.49b(g)]**

- c. The owner or operator of an affected facility who elects to use the fuel-based compliance alternatives in 40CFR§60.42b or §60.43b shall either:
  1. The owner or operator of an affected facility who elects to demonstrate that the affected facility combusts only very low sulfur oil, natural gas, wood, a mixture of these fuels, or any of these fuels (or a mixture of these fuels) in combination with other fuels that are known to contain an insignificant amount of sulfur in 40CFR§60.42b(j) or §60.42b(k) shall obtain and maintain at the affected facility fuel receipts (such as a current, valid purchase contract, tariff sheet, or transportation contract) from the fuel supplier that certify that the oil meets the definition of distillate oil and gaseous fuel meets the definition of natural gas as defined in §60.41b and the applicable sulfur limit. For the purposes of this section, the distillate oil need not meet the fuel nitrogen content specification in the definition of distillate oil. Reports shall be submitted to the Administrator certifying that only very low sulfur oil meeting this definition, natural gas, wood, and/or other fuels that are known to contain insignificant amounts of sulfur were combusted in the affected facility during the reporting period; or
  2. The owner or operator of an affected facility who elects to demonstrate compliance based on fuel analysis in §60.42b or §60.43b shall develop and submit a site-specific fuel analysis plan to the Administrator for review and approval no later than 60 days before the date you intend to demonstrate compliance. Each fuel analysis plan shall include a minimum initial requirement of weekly testing and each analysis report shall contain, at a minimum, the following information:
    - i. The potential sulfur emissions rate of the representative fuel mixture in ng/J heat input;
    - ii. The method used to determine the potential sulfur emissions rate of each constituent of the mixture. For distillate oil and natural gas a fuel receipt or tariff sheet is acceptable;
    - iii. The ratio of different fuels in the mixture; and
    - iv. The owner or operator can petition the Administrator to approve monthly or quarterly (condition 4.1.5.d.) sampling in place of weekly sampling.

**[45CSR16; 40CFR§60.49b(r)]**

**4.4.3. 40 CFR 60, Subpart Dc**

Hot Oil Heaters S016-S019 and S052-S053 are subject to the following applicable provisions of 40 CFR 60, Subpart Dc:

- a. Except as provided under paragraphs (b) and (c) of this condition, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

**[45CSR16; 40CFR§60.48c(g)(1)]**

- b. As an alternative to meeting the requirements of paragraph (a) of this condition, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in §60.48c(f) to demonstrate compliance with the SO<sub>2</sub> 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.  
**[45CSR16; 40CFR§60.48c(g)(2)]**
- c. As an alternative to meeting the requirements of paragraph (a) of this condition, 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 this subpart) 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 SO<sub>2</sub> 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.  
**[45CSR16; 40CFR§60.48c(g)(3)]**
- d. All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.  
**[45CSR16; 40CFR§60.48c(i)]**

#### **4.5. Reporting Requirements**

- 4.5.1. 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 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, R13-2896, Condition 5.5.1.]**
- 4.5.2. **40 CFR 60, Subpart Db**  
Hot Oil Heater S001 is subject to the applicable limitations and standards under 40 CFR 60, Subpart Db:
  - a. Owner/operator shall report performance test data from the initial performance test and the performance evaluation of the CEMS using the applicable performance specification in Appendix B of this part.  
**[45CSR16; 40CFR§60.48b(b)]**
  - b. Owner/operator is required to submit excess emission reports for any excess emissions that occurred during the reporting period.  
**[45CSR16; 40CFR§60.48b(h)(2)(i)]**

#### **4.6. Compliance Plan**

- 4.6.1. None

**5.0 Cryogenic HMO/Stabilizer Heaters [emission unit ID(s): S013, S026, S037, S041, S045, S049, S056]**

**5.1. Limitations and Standards**

5.1.1. **Maximum Design Heat Input.** The maximum design heat input for the Cryogenic HMO Heaters shall not exceed 26.3 MMBTU/hr for units S013, S026, S037, S045, S049 and 54.67 MMBTU/hr for unit S041. The maximum design heat input for the Stabilizer Heater (S056) shall not exceed 10.09 MMBTU/hr. **[45CSR13, R13-2896, Condition 6.1.1.]**

5.1.2. Maximum emissions from the Cryogenic HMO/Stabilizer Heaters shall not exceed the following:

a. The maximum emissions from Cryogenic HMO Heaters S013, S026, S037, S045, S049 shall not exceed the following individual unit limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
S013, S026, S037, S045, S049	Nitrogen Oxides	2.58	11.29
	Carbon Monoxide	2.17	9.49
	PM <sub>2.5</sub> /PM <sub>10</sub> /PM <sup>(1)(2)</sup>	0.20	0.86
	SO <sub>2</sub> <sup>(3)</sup>	0.02	0.08
	VOCs	0.14	0.62

(1) Includes Condensables.

(2) Compliance with this limit will ensure compliance with 45CSR§2-4.1.b.

(3) Compliance with this limit will ensure compliance with 45CSR§10-3.1.e.

b. The maximum emissions from Cryogenic HMO Heater S041 shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
S041	Nitrogen Oxides	5.36	23.48
	Carbon Monoxide	4.50	19.72
	PM <sub>2.5</sub> /PM <sub>10</sub> /PM <sup>(1)(2)</sup>	0.41	1.78
	SO <sub>2</sub> <sup>(3)</sup>	0.04	0.17
	VOCs	0.29	1.29

(1) Includes Condensables.

(2) Compliance with this limit will ensure compliance with 45CSR§2-4.1.b.

(3) Compliance with this limit will ensure compliance with 45CSR§10-3.1.e.

- c. The maximum emissions from Stabilizer Heater S056 shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
S056	Nitrogen Oxides	0.99	4.33
	Carbon Monoxide	0.83	3.64
	PM <sub>2.5</sub> /PM <sub>10</sub> /PM <sup>(1)(2)</sup>	0.08	0.33
	SO <sub>2</sub> <sup>(3)</sup>	0.01	0.03
	VOCs	0.05	0.24

- (1) Includes Condensables.  
 (2) Compliance with this limit will ensure compliance with 45CSR§2-4.1.b.  
 (3) Compliance with this limit will ensure compliance with 45CSR§10-3.1.e.

**[45CSR§2-4.1.b.; 45CSR§10-3.1.e.; 45CSR13, R13-2896, Condition 6.1.2.]**

- 5.1.3. To demonstrate compliance with Section 5.1.2, the quantity of natural gas that shall be consumed in each of the 26.3 MMBTU/hr Cryogenic HMO Heaters (S013, S026, S037, S045, S049) shall not exceed 27,377 standard cubic feet per hour and 240 x 10<sup>6</sup> standard cubic feet per year. The quantity of natural gas that shall be consumed in the 54.67 MMBTU/hr Cryogenic HMO Heater (S041) shall not exceed 56,908 standard cubic feet per hour and 499 x 10<sup>6</sup> standard cubic feet per year. The quantity of natural gas that shall be consumed in the 10.09 MMBTU/hr Stabilizer Heater (S056) shall not exceed 10,503 standard cubic feet per hour and 92 x 10<sup>6</sup> standard cubic feet per year.

**[45CSR13, R13-2896, Condition 6.1.3.]**

5.1.4. **45CSR2**

Each Cryogenic HMO and Stabilizer Heaters is subject to the applicable limitations and standards under 45CSR2, including the requirements as given below under (a) through (c):

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

**[45CSR§2-3.1.]**

- b. The permittee shall not cause, suffer, allow or permit the discharge of particulate matter into the open air from the fuel burning units, measured in terms of pounds per hour in excess of the amount determined as follows:

- (1) The product of 0.09 and the total design heat input for the fuel burning units in million British Thermal Units (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.

**[45CSR§2-4.1(b)]**

- c. The visible emission standards set forth in section 3 of 45CSR2 shall apply at all times except in periods of start-ups, shutdowns and malfunctions. Where the Director believes that start-ups and shutdowns are excessive in duration and/or frequency, the Director may require an owner or operator to provide a written report demonstrating that such frequent start-ups and shutdowns are necessary.

**[45CSR§2-9.1.]**

**[45CSR13, R13-2896, Condition 6.1.4.]**

5.1.5. **40 CFR 60, Subpart Dc**

The Cryogenic HMO and Stabilizer Heaters are subject to all applicable provisions of 40 CFR 60, Subpart Dc, provided that compliance with any more stringent limitation set forth under this permit shall also be demonstrated. Recordkeeping and reporting requirements shall be conducted in accordance with 40CFR§60.48c. These reports shall be submitted in accordance with the time lines and in the order set forth in 40CFR§60.48c and submitted to the addresses listed in Section 3.5.3.

**[45CSR13, R13-2896, Condition 6.1.5.]**

**5.2. Monitoring Requirements**

5.2.1. At such reasonable times as the Secretary may designate, the permittee shall conduct Method 9 emission observations for the purpose of demonstrating compliance with section 5.1.4 of this permit. Method 9 shall be conducted in accordance with 40 CFR 60 Appendix A.

**[45CSR13, R13-2896, Condition 6.2.1.]**

**5.3. Testing Requirements**

5.3.1. Compliance with the visible emission requirements of section 5.1.4 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 5.1.4. Continuous opacity monitors shall not be required on fuel burning units which employ wet scrubbing systems for emission control.

**[45CSR§2-3.2.; 45CSR13, R13-2896, Condition 6.3.1.]**

5.3.2. At such reasonable time(s) as the Secretary may designate, in accordance with the provisions of 3.3 of this permit, the permittee shall conduct or have conducted test(s) to determine compliance with the emission limitations established under 5.1.2(a), (b), and (c).

**[45CSR§§2-8.1.b and 8.1.c]**

**5.4. Recordkeeping Requirements**

5.4.1. **Records of Fuel Usage**

a. To demonstrate compliance with sections 5.1.1, 5.1.2, 5.1.3, the permittee shall monitor and record the monthly and twelve-month rolling total of the amount of natural gas consumed in all heaters listed in this section.

**[45CSR13, R13-2896, Condition 6.4.1.]**

b. The owner or operator shall maintain records of the operating schedule and the quantity and quality of fuel consumed in each fuel burning unit in a manner to be established by the Director. Such records are to be maintained on-site and made available to the Director or his duly authorized representative upon request.

**[45CSR§2-8.3.c]**

c. 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:



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]**

- 5.4.2. The permittee shall maintain records of all monitoring data required by Section 5.2.1 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, R13-2896, Condition 6.4.2.]**

- 5.4.3. **40 CFR 60, Subpart Dc**

The Cryogenic HMO and Stabilizer Heaters are subject to the following applicable provisions of 40 CFR 60, Subpart Dc:

- a. Except as provided under paragraphs (b) and (c) of this condition, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

**[45CSR16; 40CFR§60.48c(g)(1)]**

- b. As an alternative to meeting the requirements of paragraph (a) of this condition, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in §60.48c(f) to demonstrate compliance with the SO<sub>2</sub> 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.

**[45CSR16; 40CFR§60.48c(g)(2)]**

- c. As an alternative to meeting the requirements of paragraph (a) of this condition, 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 this subpart) 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 SO<sub>2</sub> 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.

**[45CSR16; 40CFR§60.48c(g)(3)]**

- d. All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

**[45CSR16; 40CFR§60.48c(i)]**

## **5.5. Reporting Requirements**

- 5.5.1. 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, R13-2896, Condition 6.5.1.]**

## **5.6. Compliance Plan**

- 5.6.1. None

**6.0 Regeneration Gas Heaters [emission unit ID(s): S012, S024, S036, S040, S044, S048]**

**6.1 Limitations and Standards**

6.1.1. **Maximum Design Heat Input.** The maximum design heat input for the Regeneration Gas Heaters shall not exceed 9.7 MMBTU/hr for units S012, S024, S036, S044, S048 and 19.28 MMBTU/hr for unit S040. [45CSR13, R13-2896, Condition 7.1.1.]

6.1.2. Maximum emissions from the Regeneration Gas Heaters shall not exceed the following:

a. The maximum emissions from units S012, S024, S036, S044, and S048 shall not exceed the following individual unit limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
S012, S024, S036, S044, S048	Nitrogen Oxides	0.95	4.17
	Carbon Monoxide	0.80	3.50
	PM <sub>2.5</sub> /PM <sub>10</sub> /PM <sup>(1)</sup>	0.07	0.32
	VOCs	0.05	0.23

(1) Includes Condensables.

b. The maximum emissions from unit S040 shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
S040	Nitrogen Oxides	1.89	8.28
	Carbon Monoxide	1.59	6.95
	PM <sub>2.5</sub> /PM <sub>10</sub> /PM <sup>(1)</sup>	0.14	0.63
	VOCs	0.10	0.46

(1) Includes Condensables.

[45CSR13, R13-2896, Condition 7.1.2.]

6.1.3. To demonstrate compliance with Section 6.1.2, the quantity of natural gas that shall be consumed in each of the 9.7 MMBTU/hr Regeneration Gas Heaters (S012, S024, S036, S044, and S048) shall not exceed 10,097 standard cubic feet per hour and 88 x 10<sup>6</sup> standard cubic feet per year. The quantity of natural gas that shall be consumed in the 19.28 MMBTU/hr Regeneration Gas Heater (S040) shall not exceed 20,069 standard cubic feet per hour and 176 x 10<sup>6</sup> standard cubic feet per year.

[45CSR13, R13-2896, Condition 7.1.3.]

**6.2 Monitoring Requirements**

6.2.1. None

### **6.3. Testing Requirements**

6.3.1. None

### **6.4. Recordkeeping Requirements**

6.4.1. To demonstrate compliance with sections 6.1.1, 6.1.2, 6.1.3, the permittee shall monitor and record the monthly and twelve month rolling total of the amount of natural gas consumed in all heaters listed in this section.

[45CSR13, R13-2896, Condition 7.4.1.]

### **6.5. Reporting Requirements**

6.5.1. None

### **6.6. Compliance Plan**

6.6.1. None

**7.0 Fire Pumps [emission unit ID(s): S002, S003]**

**7.1. Limitations and Standards**

7.1.1. The quantity of diesel fuel that shall be consumed in each of the 700 hp diesel-fired fire pump engines, Caterpillar Model C18 (S002, S003) shall not exceed 35.9 gallons per hour and 3,590 gallons per rolling twelve (12) month period during non-emergency use.

**[45CSR13, R13-2896, Condition 8.1.1.]**

7.1.2. Maximum emissions from each of the 700 hp diesel-fired fire pumps, Caterpillar Model C18 (S002, S003) shall not exceed the following limits for the entire life of the engine:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
S002	NMHC + Nitrogen Oxides <sup>(1)</sup>	4.63	0.23
	Carbon Monoxide	4.01	0.20
S003	PM <sub>2.5</sub> /PM <sub>10</sub> /PM <sup>(1)(2)</sup>	0.23	0.01
	Volatile Organic Compounds	4.63	0.23

(1) Calculated using emission limits in Table 4 of 40CFR60, Subpart IIII

(2) Includes Condensables

**[45CSR16; 40CFR§§60.4205(c) and 4206; Table 4 of 40CFR60, Subpart IIII; 45CSR13, R13-2896, Conditions 8.1.2. and 8.1.4.]**

7.1.3. **Maximum Annual Operation Limitation.** The maximum yearly hours of operation for each of the 700 hp diesel fired fire pump engines, Caterpillar Model C18 (S002, S003) shall not exceed an annual limit of 100 hours of non-emergency use as recorded with a non-resettable hour meter. Compliance with the Maximum Yearly Operation Limitation shall be determined using a twelve (12) month rolling total. A twelve (12) month rolling total shall mean the sum of the hours of operation at any given time during the previous twelve consecutive calendar months.

**[45CSR13, R13-2896, Condition 8.1.3.]**

7.1.4. The permittee must ensure diesel fuel used in unit meets the requirements of 40CFR§80.510(b) for nonroad diesel fuel.

**[45CSR16; 40CFR§60.4207(b)]**

7.1.5. **40 CFR 63, Subpart ZZZZ**

S002 and S003 are each subject to all applicable regulations given under 40 CFR 63, Subpart ZZZZ including the following:

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

**[45CSR34; 40CFR§63.6590(c); 45CSR13, R13-2896, Condition 8.1.5.]**

7.1.6. The permittee must satisfy the following compliance requirements:

- a. If the permittee is an owner or operator and must comply with the emission standards specified in this subpart, the permittee must do all of the following, except as permitted under paragraph (d) of this section:
  1. Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;
  2. Change only those emission-related settings that are permitted by the manufacturer; and
  3. Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to the permittee.
- b. The permittee shall comply with the emissions standards specified in 40CFR § 60.4205(c) by purchasing an engine certified to the emission standards. The unit must be installed and configured according to the manufacturer's related specifications.
- c. If the permittee owns or operates an emergency stationary ICE, the permittee must operate the emergency stationary ICE according to the requirements in paragraphs (c)(1) through (3) of this condition. In order for the engine to be considered an emergency stationary ICE, 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 (c)(1) through (3) of this condition, is prohibited. If the permittee does not operate the engine according to the requirements in paragraphs (c)(1) through (3) of this condition, the engine will not be considered an emergency engine 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. The permittee may operate the emergency stationary ICE for any combination of the purposes specified in paragraphs (c)(2)(i) through (iii) of this condition for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (c)(3) of this condition counts as part of the 100 hours per calendar year allowed by this paragraph (c)(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.
    - ii. Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.
    - iii. Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

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 (c)(2) of this section. Except as provided in paragraph (c)(3)(i) of this condition, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.
  - i. The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:
    - A. The engine is dispatched by the local balancing authority or local transmission and distribution system operator;
    - B. The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.
    - C. The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.
    - D. The power is provided only to the facility itself or to support the local transmission and distribution system.
    - E. The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.
  - d. If the permittee does not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or the permittee changes emission-related settings in a way that is not permitted by the manufacturer, the permittee must demonstrate compliance as follows:
    1. If the permittee is an owner or operator of a stationary CI internal combustion engine greater than 500 HP, the permittee 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 with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. The permittee must conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.

**[45CSR16; 40CFR§§60.4211(a), (c), (f), (g)(3)]**

- 7.1.7. The permittee shall comply with the General Provisions of 40CFR60, specified in Table 8 of 40CFR60, Subpart III.  
[45CSR16; 40CFR§60.4218]

## **7.2. Monitoring Requirements**

- 7.2.1. The permittee must install a non-resettable meter to monitor hours of operation.  
[45CSR16; 40CFR§60.4209(a)]

## **7.3. Testing Requirements**

- 7.3.1. Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests pursuant to 40CFR60, Subpart III must do so according to 40CFR§§60.4212(a) through (e).  
[45CSR16; 40CFR§60.4212]

## **7.4. Recordkeeping Requirements**

- 7.4.1. If the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.  
[45CSR16; 40CFR§60.4214(b)]

## **7.5. Reporting Requirements**

- 7.5.1. None

## **7.6. Compliance Plan**

- 7.6.1. None



## 8.0 Emergency Generator [emission unit ID(s): S057]

### 8.1 Limitations and Standards

- 8.1.1. The permittee is authorized to install and operate one (1) or more natural gas-fired, 4-Stroke Lean Burn (4SLB) spark ignition reciprocating internal combustion engines with an aggregate horsepower not to exceed 16,000 to act as emergency generators. Maximum emissions from each of the engines shall not exceed their individual limits as given in 40 CFR 60, Subpart JJJJ for the entire life of the engine. The maximum aggregate emissions from all such engines shall not exceed those given in the following table:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
S057	Nitrogen Oxides <sup>(1)</sup>	70.55	3.53
	Carbon Monoxide <sup>(1)</sup>	141.10	7.05
	PM <sub>2.5</sub> /PM <sub>10</sub> /PM <sup>(2)</sup>	1.28	0.06
	Volatile Organic Compounds <sup>(1)</sup>	35.27	1.76
	Formaldehyde	6.76	0.34

(1) Calculated using emission limits in Table 1 of 40CFR60, Subpart JJJJ

(2) Includes Condensables

[45CSR16; 40CFR§§60.4233(e) and 4234; Table 1 of 40CFR60, Subpart JJJJ; 45CSR13, R13-2896, Conditions 9.1.1. and 9.1.3.]

- 8.1.2. **Maximum Annual Operation Limitation.** The maximum yearly hours of operation for each of the engines shall not exceed an annual limit of 100 hours of non-emergency use as recorded with a non-resettable hour meter. Compliance with the Maximum Yearly Operation Limitation shall be determined using a twelve (12) month rolling total. A twelve (12) month rolling total shall mean the sum of the hours of operation at any given time during the previous twelve consecutive calendar months.

[45CSR16; 40CFR§60.4237; 45CSR13, R13-2896, Condition 9.1.2.]

- 8.1.3. If the permittee owns or operates an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (a) through (c) 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 (a) through (c) of this condition, is prohibited. If you do not operate the engine according to the requirements in paragraphs (a) through (c) of this condition, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

- a. There is no time limit on the use of emergency stationary ICE in emergency situations.
- b. You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (b)(1) through (3) of this condition for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (c) of this condition counts as part of the 100 hours per calendar year allowed by this paragraph (b).

1. 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.
  2. Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.
  3. Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.
- c. 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 (b) of this condition. Except as provided in paragraph (c)(1) of this condition, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.
1. The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:
    - i. The engine is dispatched by the local balancing authority or local transmission and distribution system operator;
    - ii. The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.
    - iii. The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.
    - iv. The power is provided only to the facility itself or to support the local transmission and distribution system.
    - v. The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

**[45CSR16; 40CFR§60.4243(d)]**

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

**[45CSR16; 40CFR§60.4243(g)]**

8.1.5. The permittee must demonstrate compliance according to one of the methods specified in paragraphs (a) and (b) of this condition.

a. Purchasing an engine certified according to procedures specified in this subpart, for the same model year and demonstrating compliance according to one of the methods specified in 40CFR§60.4243(a).

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

1. 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.

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

**[45CSR16; 40CFR§§60.4243(b)(1) and (b)(2)]**

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

**[45CSR16; 40CFR§60.4243(e)]**

8.1.7. Table 3 to 40CFR60, Subpart JJJJ shows which parts of the General Provisions in 40CFR§§60.1 through 60.19 apply to the permittee.

**[45CSR16; 40CFR§60.4246]**

8.1.8. **40 CFR 63, Subpart ZZZZ**

The emergency generators (S057) are each subject to all applicable regulations given under 40 CFR 63, Subpart ZZZZ including the following:

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

**[45CSR34; 40CFR§63.6590(c); 45CSR13, R13-2896, Condition 9.1.4.]**

## 8.2. Monitoring Requirements

8.2.1. None

## 8.3. Testing Requirements

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

- a. Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in §60.8 and under the specific conditions that are specified by Table 2 to 40CFR60, Subpart JJJJ.
- b. You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c). If your stationary SI internal combustion engine is non-operational, you do not need to startup the engine solely to conduct a performance test; however, you must conduct the performance test immediately upon startup of the engine.
- c. You must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.
- d. To determine compliance with the NO<sub>x</sub> mass per unit output emission limitation, convert the concentration of NO<sub>x</sub> in the engine exhaust using Equation 1 of this section:

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

Where:

ER = Emission rate of NO<sub>x</sub> in g/HP-hr.

C<sub>d</sub> = Measured NO<sub>x</sub> concentration in parts per million by volume (ppmv).

1.912 × 10<sup>-3</sup> = Conversion constant for ppm NO<sub>x</sub> to grams per standard cubic meter at 20 degrees Celsius.

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

T = Time of test run, in hours.

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

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

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

Where:

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

$C_d$  = Measured CO concentration in ppmv.

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

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

T = Time of test run, in hours.

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

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

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

Where:

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

$C_d$  = VOC concentration measured as propane in ppmv.

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

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

T = Time of test run, in hours.

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

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

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

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.

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

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.

$$C_{P_{eq}} = 0.6098 \times C_{icorr} \quad (Eq. 6)$$

Where:

$C_{P_{eq}}$  = Concentration of compound i in mg of propane equivalent per DSCM.

[45CSR16; 40CFR§60.4244]

#### 8.4. Recordkeeping Requirements

- 8.4.1. Owners or operators of stationary SI ICE must meet the following notification, reporting and recordkeeping requirements.
- a. Owners and operators of all stationary SI ICE must keep records of the information in paragraphs (a)(1) through (4) of this section.
    1. All notifications submitted to comply with this subpart and all documentation supporting any notification.
    2. Maintenance conducted on the engine.
    3. If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable.
    4. If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to 40CFR§60.4243(a)(2), documentation that the engine meets the emission standards.
  - b. For all stationary SI emergency ICE greater than or equal to 500 HP manufactured on or after July 1, 2010, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than or equal to 130 HP and less than 500 HP manufactured on or after July 1, 2011 that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than 25 HP

and less than 130 HP manufactured on or after July 1, 2008, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation.

**[45CSR16; 40CFR§§60.4245(a) and (b)]**

## **8.5. Reporting Requirements**

8.5.1. None

## **8.6. Compliance Plan**

8.6.1. None

## 9.0 Glycol Dehydration Units [emission unit ID(s): S006, S029, S032]

### 9.1. Limitations and Standards

9.1.1. The maximum aggregate wet natural gas throughput to Glycol Dehydration Unit S006 shall not exceed 460 MMscf/day or 167,900 MMscf/year. The maximum aggregate wet natural gas throughput to Glycol Dehydration Unit S032 shall not exceed 230 MMscf/day or 83,950 MMscf/year.  
**[45CSR13, R13-2896, Condition 10.1.1.]**

9.1.2. The maximum glycol recirculation rate in each Glycol Dehydration Unit (S006 and S032) shall not exceed 40 gallons per minute limit.  
**[45CSR13, R13-2896, Condition 10.1.2.]**

9.1.3. The maximum aggregate controlled emissions generated from each Glycol Dehydration Unit (S006 and S032), including the still vent and the flash tank, but not including the combustion exhaust emissions from the Reboiler, shall not exceed the limits given in the following tables:

a. Glycol Dehydration Unit S006:

<b>Pollutant</b>	<b>Maximum Hourly Emissions (lb/hr)</b>	<b>Maximum Annual Emissions (ton/year)</b>
VOCs	1.78	7.80
<i>n-Hexane</i>	<i>0.04</i>	<i>0.17</i>
<i>Benzene</i>	<i>0.03</i>	<i>0.13</i>
<i>Toluene</i>	<i>0.05</i>	<i>0.23</i>
<i>Xylene</i>	<i>0.03</i>	<i>0.13</i>
Total HAPs	0.15	0.66

(1) Emissions based on GLYCalc Version 4.0 using wet gas throughputs as limited under 9.1.1 and a 10% safety factor (on uncontrolled emissions).



b. Glycol Dehydration Unit S032:

<b>Pollutant</b>	<b>Maximum Hourly Emissions (lb/hr)</b>	<b>Maximum Annual Emissions (ton/year)</b>
VOCs	2.17	9.50
<i>n-Hexane</i>	0.04	0.18
<i>Benzene</i>	0.03	0.13
<i>Toluene</i>	0.12	0.52
<i>Xylene</i>	0.14	0.61
Total HAPs	0.33	1.45

(2) Emissions based on GLYCalc Version 4.0 using wet gas throughputs as limited under 9.1.1 and a 10% safety factor (on uncontrolled emissions).

**[45CSR13, R13-2896, Condition 10.1.3.]**

9.1.4. Still Vent and flash tank vapors from S006 shall be routed to the Hot Oil Heater (S001: C001) and used as fuel. Still Vent and flash tank vapors from S032 shall be routed either to the Hot Oil Heater (S001: C001) and used as fuel or sent to the associated Vapor Combustor (V003: C009) for control.

**[45CSR13, R13-2896, Condition 10.1.4.]**

9.1.5. **40 CFR 63, Subpart HH: Exemptions**

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

**[45CSR34; 40 CFR §63.764(e)(1)]**

a. The actual annual average flowrate of natural gas to the glycol dehydration unit is less than 85 thousand standard cubic meters per day, as determined by the procedures specified in §63.772(b)(1) of this subpart; or

**[45CSR34; 40 CFR §63.764(e)(1)(i)]**

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

**[45CSR34; 40 CFR §63.764(e)(1)(ii)]**

**[45CSR13, R13-2896, Condition 10.1.5.]**

9.1.6. The Reboiler (S029) shall operate according to the following requirements:

a. The MDHI of the unit shall not exceed 3.0 mmBtu/hr and it shall only be fired by natural gas;

- b. The maximum combustion exhaust emissions from the Reboiler shall not exceed the limits given in the following table:

<b>Pollutant</b>	<b>Maximum Hourly Emissions (lb/hr)</b>	<b>Maximum Annual Emissions (ton/year)</b>
Carbon Monoxide	0.25	1.08
Nitrogen Oxides	0.29	1.29

- c. As the annual emission limits given in 9.1.6(b) are based on operating 8,760 hours/year, there is no limit on the annual hours of operation or fuel usage of the Reboiler.

**[45CSR13, R13-2896, Condition 10.1.6.]**

- 9.1.7. The Vapor Combustor (V003) shall operate according to the following requirements:

- a. The vapor combustor shall be designed, operated, and maintained according to good engineering practices or manufacturing recommendations so as to achieve, at a minimum, a hydrocarbon combustion rate of 98.0%. The vapor combustor shall have an MDHI, including the pilot light, not to exceed 5.59 MMBtu/hr.
- b. The emissions from the vapor combustor (not including pass-through emissions from the regenerator still vent and flash tank) shall not exceed the following limits:

<b>Pollutant</b>	<b>Maximum Hourly Emissions (lb/hr)</b>	<b>Maximum Annual Emissions (ton/year)</b>
Carbon Monoxide	1.54	6.74
Nitrogen Oxides	0.77	3.38

- c. As the annual emission limits given in 9.1.7(b) are based on operating 8,760 hours/year, there is no limit on the annual hours of operation or waste gas combustion in the vapor combustor;
- d. The vapor combustor shall be operated with a flame present at all times, as determined by the methods specified in section 9.2.4.;
- e. The vapor combustor shall be designed for and operated with no visible emissions as determined by the methods specified in section 9.3.2. except for either (1) or (2):
1. periods not to exceed a total of one minute during any 15-minute period, determined on a monthly basis; or
  2. periods not to exceed a total of two (2) minutes during any hour, determined on a quarterly basis if the enclosed combustion device installed was a model tested under §60.5413(d) which meets the criteria in §60.5413(d)(11).
- f. The vapor combustor shall be operated at all times when emissions are vented to it;
- g. To ensure compliance with 9.1.7(f), the permittee shall monitor in accordance with sections 9.2.4. of this permit;

- h. The permittee shall operate and maintain the vapor combustor according to the manufacturer's specifications for operating and maintenance requirements to maintain the minimum guaranteed control efficiency of 98%; and
- i. The vapor combustor is subject to the applicable requirements specified in 45CSR6 (Condition 9.1.8).

**[45CSR13, R13-2896, Condition 10.1.7.]**

9.1.8. The Vapor Combustor (V003) shall operate according to the following requirements from 45CSR6:

- a. 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

$$\text{Emissions (lb/hr)} = 5.43 \times 7.14\text{E-}02 = \mathbf{0.39 \text{ lb/hr}}$$

**[45CSR§6-4.1]**

- b. Emission of Visible Particulate Matter. No person shall cause or allow emission of smoke into the atmosphere from any incinerator which is twenty percent (20%) opacity or greater.

**[45CSR§6-4.3]**

- c. The provisions of condition 9.1.8.b. shall not apply to smoke which is less than forty percent (40%) opacity, for a period or periods aggregating no more than eight (8) minutes per start-up, or six (6) minutes in any sixty (60)-minute period for stoking operations.

**[45CSR§6-4.4]**

- d. No person shall cause or allow the emission of particles of unburned or partially burned refuse or ash from any incinerator which are large enough to be individually distinguished in the open air.

**[45CSR§6-4.5]**

- e. Incinerators, including all associated equipment and grounds, shall be designed, operated and maintained so as to prevent the emission of objectionable odors.

**[45CSR§6-4.6]**

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

- a. The owner or operator shall determine actual average benzene or BTEX emissions using the model GRI-GLYCalc™, Version 3.0 or higher, and the procedures presented in the associated GRI-GLYCalc™ Technical Reference Manual. Inputs to the model shall be representative of actual operating conditions

of the glycol dehydration unit and may be determined using the procedures documented in the Gas Research Institute (GRI) report entitled “Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions” (GRI-95/0368.1); or

- b. The owner or operator shall determine an average mass rate of benzene or BTEX emissions in kilograms per hour through direct measurement using the methods in 40CFR§§63.772(a)(1)(i) or (ii), or an alternative method according to 40CFR§63.7(f). Annual emissions in kilograms per year shall be determined by multiplying the mass rate by the number of hours the unit is operated per year. This result shall be converted to megagrams per year.

**[45CSR34; 40CFR§63.772(b)(2)]**

## 9.2. Monitoring Requirements

- 9.2.1. For the purposes of demonstrating compliance with the maximum wet gas throughput limits set forth in 9.1.1., the permittee shall monitor and maintain monthly and rolling twelve-month records of the wet gas throughputs in each of the Glycol Dehydration Units.

**[45CSR13, R13-2896, Condition 10.2.1.]**

- 9.2.2. Compliance with the Maximum Glycol Recirculation Limitations set forth in 9.1.2. shall be determined using an average of a minimum of quarterly readings of the actual glycol pump(s) rate. If more than one pump is operating simultaneously then the rate of each operating pump shall be recorded and totaled for compliance purposes.

**[45CSR13, R13-2896, Condition 10.2.2.]**

- 9.2.3. Representative gas sample collection and analysis frequency for dehydration units shall be determined as set forth in the schedule provided in the following table:

<b>Wet Gas Sampling and Analysis Frequency for Dehydration Units Based on Potential HAP Emission Rates</b>	
Each dehydration unit exempt from § 63.764(d) requirements and with federally enforceable controls	Upon request by the Secretary.
Each dehydration unit exempt from § 63.764(d) requirements and without federally enforceable controls	An initial compliance evaluation within 180 days of registration issuance or within 180 days of start-up of the dehydration unit, whichever is later.

**[45CSR13, R13-2896, Condition 10.2.3.]**

- 9.2.4. To demonstrate compliance with the pilot flame requirements of sections 9.1.7(d), the permittee shall follow (a) and (b).

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

- b. For any absence of pilot flame, or other indication of smoking or improper equipment operation, you must ensure the equipment is returned to proper operation as soon as practicable after the event occurs.

At a minimum, you must: (1) Check the air vent for obstruction. If an obstruction is observed, you must clear the obstruction as soon as practicable. (2) Check for liquid reaching the combustor.

- c. The permittee is exempt from the pilot flame requirements of paragraphs (a) and (b) of this section if the permittee installed an enclosed combustion device model that was tested under §60.5413(d) which meets the criteria in §60.5413(d)(11).

**[45CSR13, R13-2896, Condition 10.2.4.]**

### **9.3. Testing Requirements**

- 9.3.1. The permittee shall sample wet natural gas in accordance with the Gas Processor Association (GPA) Method 2166 and analyze the samples in accordance with GPA Method 2286. The permittee may utilize other equivalent methods provided they are approved in advance by DAQ as part of a testing protocol. If alternative methods are proposed, a test protocol shall be submitted for approval no later than 60 days before the scheduled test date.

Note: The DAQ defines a representative wet gas sample to be one that is characteristic of the average gas composition dehydrated throughout a calendar year. If an isolated sample is not indicative of the annual average composition, then a company 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, R13-2896, Condition 10.3.1.]**

- 9.3.2. To demonstrate compliance with the visible emissions requirements of section 9.1.7(e), the permittee shall conduct visible emission checks and/or opacity monitoring and recordkeeping for all emission sources subject to an opacity limit.
  - a. The visible emission check shall determine the presence or absence of visible emissions. The observations shall be conducted according to Section 11 of EPA Method 22. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40CFR Part 60, Appendix A, Method 22 or from the lecture portion of the 40CFR Part 60, Appendix A, Method 9 certification course. The observation period shall be:
    - 1. a minimum of 15 minutes if demonstrating compliance with 9.1.7(e)(1); or
    - 2. a minimum of 1 hour if demonstrating compliance with 9.1.7(e)(2).
  - b. The visible emission check shall be conducted initially within 180 days of start-up to demonstrate compliance while vapors are being sent to the control device.
  - c. If during this visible emission check or at any other time visible emissions are observed, compliance with section 9.1.7(e) shall be determined by conducting opacity tests in accordance with Method 9 or 40 CFR 60, Appendix A.

**[45CSR13, R13-2896, Condition 10.3.2.]**

- 9.3.3. At such reasonable times as the Secretary may designate, the operator of any incinerator shall be required to conduct or have conducted stack tests to determine the particulate matter loading, by using 40 CFR Part 60, Appendix A, Method 5, and volatile organic compound loading, by using Methods 18 and 25A of 40 CFR

Part 60, Appendix A, Method 320 of 40 CFR Part 63, Appendix A, or ASTM D 6348-03 or other equivalent U.S. EPA approved method approved by the Secretary, in exhaust gases. Such tests shall be conducted in such manner as the Secretary may specify and be filed on forms and in a manner acceptable to the Secretary. The Secretary may, at the Secretary's option, witness or conduct such stack tests. Should the Secretary exercise his or her option to conduct such tests, the operator will provide all the necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment such as scaffolding, railings and ladders to comply with generally accepted good safety practices. The Secretary may conduct such other tests as the Secretary may deem necessary to evaluate air pollution emissions other than those noted above.

**[45CSR§6-7.1 and 7.2; 45CSR13, R13-2896, Condition 10.3.3.]**

#### **9.4. Recordkeeping Requirements**

- 9.4.1. For the purpose of demonstrating compliance with the continuous pilot flame requirements in 9.1.7(d), the permittee shall maintain records of the times and duration of all periods when the pilot flame was not present, and vapors were vented to the device.
- a. If the permittee is demonstrating compliance to 9.2.4. with visual inspections, the permittee shall maintain records of the inspections.
  - b. If the permittee is demonstrating compliance to 9.2.4. with an enclosed combustion device model that was tested under the conditions of § 60.5413(d), a record shall be maintained of the performance test results.

**[45CSR13, R13-2896, Condition 10.4.1.]**

- 9.4.2. For the purpose of demonstrating compliance with the visible emissions and opacity requirements, the permittee shall maintain records of the visible emission opacity tests and checks. The permittee shall maintain records of all monitoring data required by section 9.3.2 documenting the date and time of each visible emission check, the emission point or equipment/ source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80°F, 6-10 mph NE wind) during the visual emission check(s). Should a visible emission observation be required to be performed per the requirements specified in Method 9, the data records of each observation shall be maintained per the requirements of Method 9. For an emission unit out of service during the evaluation, the record of observation may note "out of service" (O/S) or equivalent.

**[45CSR13, R13-2896, Condition 10.4.2.]**

- 9.4.3. To demonstrate compliance with section 9.1.7(h), the permittee shall maintain records of the manufacturer's specifications for operating and maintenance requirements to maintain the control efficiency.

**[45CSR13, R13-2896, Condition 10.4.3.]**

- 9.4.4. The permittee shall maintain records of any testing that is conducted according to section 9.3.

**[45CSR13, R13-2896, Condition 10.4.4.]**

- 9.4.5. The permittee shall maintain records of the actual average benzene emissions (in terms of benzene emissions per year) as determined in accordance with 40CFR§63.772(b)(2).

**[45CSR34; 40CFR§63.774(d)(1)(ii)]**

## **9.5. Reporting Requirements**

- 9.5.1. Any deviation of the allowable visible emission requirement for any emission source discovered during observation using 40CFR Part 60, Appendix A, Method 9 per section 9.3.2.c. must be reported in writing to the Director of the DAQ as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.  
**[45CSR13, R13-2896, Condition 10.5.1.]**
- 9.5.2. Any bypass event of the registered control device must be reported in writing to the Director of the DAQ as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the date of the bypass, the estimate of VOC emissions released to the atmosphere as a result of the bypass, the cause or suspected cause of the bypass, and any corrective measures taken or planned.  
**[45CSR13, R13-2896, Condition 10.5.2.]**
- 9.5.3. Any time the air pollution control device is not operating when emissions are vented to it, shall be reported in writing to the Director of the DAQ as soon as practicable, but within ten (10) calendar days of the discovery.  
**[45CSR13, R13-2896, Condition 10.5.3.]**

## **9.6. Compliance Plan**

- 9.6.1. None

**10.0 40 CFR 60 Subpart Kb, Storage Tanks [emission unit ID(s): TK-802, TK-2802, TK-3802, TK-4802, TK-5802, TK-6802, TK-7802, VRU]**

**10.1. Limitations and Standards**

10.1.1. Each of the Natural Gasoline Storage Tanks (TK-802, TK-2802, TK-3802, TK-4802, TK-5802, and TK-6802) will utilize a natural gas blanket to eliminate natural gasoline vapors from being emitted to atmosphere. Working and breathing losses of natural gas from these tanks shall be collected by the VRU and sent via closed vent system to the Hot Oil Heater (S001) for use as fuel.

**[45CSR13, R13-2896, Condition 12.1.1.]**

10.1.2. The Refrigerated Propane Storage Tank (TK-7802) shall utilize the VRU to recapture propane product that flashes-off from the storage tank, re-condense the product, and then route it back to the storage tank.

**[45CSR13, R13-2896, Condition 12.1.2.]**

10.1.3. The VRU shall employ a vapor return which shall be designed to achieve a guaranteed capture efficiency of 100% for each storage tank listed in this section.

**[45CSR13, R13-2896, Condition 12.1.3.]**

10.1.4. The Natural Gasoline Storage Tanks and the Refrigerated Propane Storage Tank are subject to all applicable requirements of 40 CFR 60, Subpart Kb including the following:

a. The owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m<sup>3</sup> containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa but less than 76.6 kPa or with a design capacity greater than or equal to 75 m<sup>3</sup> but less than 151 m<sup>3</sup> containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa but less than 76.6 kPa, shall equip each storage vessel with one of the following:

**[45CSR16; 40 CFR §60.112b(a)]**

1. A closed vent system and control device meeting the following specifications:

(i) The closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in part 60, subpart VV, §60.485(b).

**[45CSR16; 40 CFR §60.112b(a)(3)(i)]**

(ii) The control device shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater. If a flare is used as the control device, it shall meet the specifications described in the general control device requirements (§60.18) of the General Provisions.

**[45CSR16; 40 CFR §60.112b(a)(3)(ii)]**

**[45CSR13, R13-2896, Condition 12.1.4.]**

10.1.5. The owner or operator of each source that is equipped with a closed vent system and control device as required in 40CFR§§60.112b (a)(3) or (b)(2) (other than a flare) is exempt from 40CFR§60.8 of the General Provisions and shall meet the following requirements.



- a. Submit for approval by the Administrator as an attachment to the notification required by 40CFR§60.7(a)(1) or, if the facility is exempt from 40CFR§60.7(a)(1), as an attachment to the notification required by 40CFR§60.7(a)(2), an operating plan containing the information listed below.
  1. Documentation demonstrating that the control device will achieve the required control efficiency during maximum loading conditions. This documentation is to include a description of the gas stream which enters the control device, including flow and VOC content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device. If the control device or the closed vent capture system receives vapors, gases, or liquids other than fuels from sources that are not designated sources under this subpart, the efficiency demonstration is to include consideration of all vapors, gases, and liquids received by the closed vent capture system and control device. If an enclosed combustion device with a minimum residence time of 0.75 seconds and a minimum temperature of 816 °C is used to meet the 95 percent requirement, documentation that those conditions will exist is sufficient to meet the requirements of this paragraph.
  2. A description of the parameter or parameters to be monitored to ensure that the control device will be operated in conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters).
- b. Operate the closed vent system and control device and monitor the parameters of the closed vent system and control device in accordance with the operating plan submitted to the Administrator in accordance with paragraph (a) of this condition, unless the plan was modified by the Administrator during the review process. In this case, the modified plan applies.

[45CSR16; 40CFR§60.113b(c)]

## 10.2. Monitoring Requirements

- 10.2.1. To demonstrate compliance with section 10.1.3, the permittee shall monitor the vapor recovery unit system in accordance with the plans and specifications and manufacturer's recommendations.  
[45CSR13, R13-2896, Condition 12.2.1.]

## 10.3. Testing Requirements

- 10.3.1. None

## 10.4. Recordkeeping Requirements

- 10.4.1. **Record of Maintenance of Vapor Recovery Unit.** The permittee shall maintain accurate records of the vapor recovery unit equipment inspection and/or preventative maintenance procedures.  
[45CSR13, R13-2896, Condition 12.3.1.]
- 10.4.2. **Record of Malfunctions of Vapor Recovery Unit.** The permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the vapor recovery unit 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, R13-2896, Condition 12.3.2.]**

- 10.4.3. After installing control equipment in accordance with 40CFR§§60.112b (a)(3) or (b)(1) (closed vent system and control device other than a flare), the owner or operator shall keep the following records.

The permittee shall keep copies of all records required by this section, except for the record required by 10.4.3.a, for at least two years. The record required by 10.4.3.a will be kept for the life of the control equipment.

- a. A copy of the operating plan.
- b. A record of the measured values of the parameters monitored in accordance with 40CFR§60.113b(c)(2).

**[45CSR16; 40CFR§§60.115b and 60.115b(c)]**

- 10.4.4. The permittee must comply with the following recordkeeping requirements:

- a. The permittee shall keep copies of all records required by 40CFR60, Subpart Kb, except for the record required by 10.4.4.b, for at least 2 years. The record required by 10.4.4.b will be kept for the life of the source.
- b. The owner or operator of each storage vessel as specified in 40CFR§60.110b(a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.

**[45CSR16; 40CFR§§60.115b(a) and (b)]**

## **10.5. Reporting Requirements**

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

**[45CSR13, R13-2896, Condition 12.3.3.]**

## **10.6. Compliance Plan**

- 10.6.1. None

**11.0 Flare [emission unit ID(s): S004A]**

**11.1. Limitations and Standards**

11.1.1. The permittee shall utilize a non-assisted Callidus CAL-MP staged, multi-point ground flare system (with a maximum aggregate pilot light heat input of 1.629 MMBTU/hr), designated as S004A, for control of potential emissions from maintenance events, equipment blowdowns, pressure relief valves, and other controlled sources. The flare shall have a maximum design capacity of 19.8 mmscf/hr.

**[45CSR13, R13-2896, Condition 13.1.1.]**

11.1.2. The Flare (S004A) shall operate according to the following requirements:

a. Maximum aggregate combustion exhaust emissions (not including uncombusted pass-through emissions of VOCs) from operation of the Flare (including those contributed by the pilot light) shall not exceed the following during routine maintenance events, equipment blowdowns, from pressure relief valves, and other controlled sources:

<b>Pollutant</b>	<b>Maximum Hourly Emissions (lb/hr)</b>	<b>Maximum Annual Emissions (ton/year)</b>
Nitrogen Oxides	1,539.61	6.73
Carbon Monoxide	3,073.64	13.43
PM <sub>2.5</sub> /PM <sub>10</sub> /PM <sup>(1)</sup>	25.34	0.25
VOCs	18.34	0.18

(1) Compliance with this limit will ensure compliance with 45CSR§6-4.1 (Condition 11.1.4.a)

b. Based on the minimum VOC destruction and removal efficiency (DRE) of 98.0% as given under 11.1.6., maximum emissions of uncombusted pass-through VOCs and HAPs (generated during routine maintenance events, equipment blowdowns, and from pressure relief valves) emitted at the Flare (as uncombusted pass-through emissions) shall not exceed 10,153 lbs/hour and 12.71 tons/yr of VOCs and 4.53 lbs/hour and 0.08 tons/yr of HAPs.

**[45CSR13, R13-2896, Condition 13.1.2.]**

11.1.3. The total heat input of waste gases sent to the Flare during routine pigging events, equipment blowdowns, the ethane treater flash tanks, irregular process vents, and from the closed vent system shall not exceed 83,208 MMBTU per rolling twelve-month period.

**[45CSR13, R13-2896, Condition 13.1.3.]**

11.1.4. The Flare is subject to 45CSR6. The requirements of 45CSR6 include but are not limited to the following:

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

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

Where, the factor, F, is either 5.43 for an incinerator with a capacity of less than 15,000 lbs/hr or 2.72 for an incinerator with a capacity of 15,000 lbs/hr or greater.

**[45CSR§6-4.1]**

- b. No person shall cause, suffer, allow or permit emission of smoke into the atmosphere from any incinerator which is twenty (20%) percent opacity or greater.  
**[45CSR§6-4.3]**
- c. The provisions of paragraph (b) shall not apply to smoke which is less than forty (40%) percent opacity, for a period or periods aggregating no more than eight (8) minutes per startup.  
**[45CSR§6-4.4]**
- d. No person shall cause or allow the emission of particles of unburned or partially burned refuse or ash from any incinerator which are large enough to be individually distinguished in the open air.  
**[45CSR§6-4.5]**
- e. Incinerators, including all associated equipment and grounds, shall be designed, operated and maintained so as to prevent the emission of objectionable odors.  
**[45CSR§6-4.6]**
- f. At such reasonable times as the Secretary may designate, the operator of any incinerator shall be required to conduct or have conducted stack tests to determine the particulate matter loading, by using 40 CFR Part 60, Appendix A, Method 5 or other equivalent U.S. EPA approved method approved by the Secretary, in exhaust gases. Such tests shall be conducted in such manner as the Secretary may specify and be filed on forms and in a manner acceptable to the Secretary. The Secretary may, at the Secretary's option, witness or conduct such stack tests. Should the Secretary exercise his or her option to conduct such tests, the operator will provide all the necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment such as scaffolding, railings and ladders to comply with generally accepted good safety practices.  
**[45CSR§6-7.1]**
- g. The Secretary may conduct such other tests as the Secretary may deem necessary to evaluate air pollution emissions other than those noted above.  
**[45CSR§6-7.2]**
- h. Due to unavoidable malfunction of equipment, emissions exceeding those provided for in this rule may be permitted by the Director for periods not to exceed five (5) days upon specific application to the Director. Such application shall be made within twenty-four (24) hours of the malfunction. In cases of major equipment failure, additional time periods may be granted by the Director provided a corrective program has been submitted by the owner or operator and approved by the Director.  
**[45CSR§6-8.2]**

**[45CSR13, R13-2896, Condition 13.1.4.]**

- 11.1.5. A pilot flame must be present at all times of operation of the Flare. The presence of a pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.  
**[45CSR13, R13-2896, Condition 13.1.5.]**
- 11.1.6. The Flare shall be operated and designed in accordance with the information filed in permit application R13-2896F to achieve a VOC DRE of 98.0%.  
**[45CSR13, R13-2896, Condition 13.1.7.]**
- 11.1.7. The inlet gas flow rate of the Flare must be equal to or less than the maximum specified by the manufacturer.  
**[45CSR13, R13-2896, Condition 13.1.8.]**

- 11.1.8. The permittee will comply with the requirements of Section 2.17 of this permit during emergency operation of the Flare.  
**[45CSR13, R13-2896, Condition 13.1.9.]**

## **11.2. Monitoring Requirements**

- 11.2.1. In order to demonstrate compliance with the requirements of 11.1.2, 11.1.3 and 11.1.4(a), the permittee shall monitor the aggregate throughput and heat input of waste gases sent to the Flare on a monthly basis.  
**[45CSR13, R13-2896, Condition 13.2.1.]**

- 11.2.2. To demonstrate compliance with the flame requirements of 11.1.5, the presence of a flame shall be continuously monitored using a thermocouple or any other equivalent device to detect the presence of a flame.  
**[45CSR13, R13-2896, Condition 13.2.2.]**

- 11.2.3. The permittee shall meet the following Visible Emissions Requirements for the Ground Flare:

- a. To demonstrate compliance with the visible emissions requirements of 45CSR6, the permittee shall conduct the following visible emission checks and/or opacity monitoring and recordkeeping for the Ground Flare:
- (1) The visible emission check shall determine the presence or absence of visible emissions. The observations shall be conducted according to Section 11 of EPA Method 22. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40CFR Part 60, Appendix A, Method 22 or from the lecture portion of the 40CFR Part 60, Appendix A, Method 9 certification course. The observation period (Section 11 of EPA Method 22) shall be a minimum of one (1) hour each calendar month during flaring operation;
  - (2) As the Ground Flare is of smokeless design, any observation of visible emissions will indicate incorrect operation of the flare. Therefore, upon the observation of visible emissions, the permittee shall, at the next available safe opportunity, cease operation of the flare and attempt to correct the problem. After an attempt to correct the problem, the permittee shall then conduct a minimum of one (1) hour of visible emissions observations according to 11.2.3(a) during the flaring operation;
  - (3) The permittee shall maintain records of all monitoring data required by 11.2.3 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);
  - (4) 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, R13-2896, Condition 13.2.3.]**

### **11.3. Testing Requirements**

11.3.1. None

### **11.4. Recordkeeping Requirements**

11.4.1. For the purpose of demonstrating compliance with section 11.1.5 and 11.2.2., the permittee shall maintain records of the times and duration of all periods which the pilot flame was absent.  
**[45CSR13, R13-2896, Condition 13.2.4.]**

### **11.5. Reporting Requirements**

11.5.1. If permittee is required by the Director to demonstrate compliance with section 11.1.4.f and 11.1.4.g, 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, R13-2896, Condition 13.2.5.]**

11.5.2. Any deviation(s) from the flare design and operation criteria in Section 11.1.6 and permit application R13-2896F, shall be reported in writing to the Director as soon as practicable, but no later than ten (10) calendar days of discovery of such deviation.  
**[45CSR13, R13-2896, Condition 13.2.6.]**

11.5.3. The permittee shall report to the Director, the time, cause of event, estimate of emissions and corrective actions taken when the Ground Flare was used for an emergency at the facility.  
**[45CSR13, R13-2896, Condition 13.2.7.]**

### **11.6. Compliance Plan**

11.6.1. None

## 12.0 Ethane Amine Units [emission unit ID(s): S011, S054]

### 12.1. Limitations and Standards

12.1.1. **Maximum Throughput Limitation.** The maximum sour ethane throughput to each individual Ethane Amine Unit shall not exceed 129 mmscf/day and 47,085 mmscf/year (or, alternatively 81,523 barrels/day and 29,755,895 barrels/year of treated ethane). 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, R13-2896, Condition 14.1.1.]**

12.1.2. Each Ethane Amine Unit (S011, S054) shall be designed and operated in accordance with the following:

- a. Carbon dioxide will be removed from the ethane product in an amine contacting system;
- b. The total ethane product shall be contacted with an amine solution in the Amine Contactor where the carbon dioxide in the ethane product is removed to less than 500 ppmw;
- c. The rich amine from the Contactor is regenerated in the Amine Regenerator where heat input is used to drive the carbon dioxide and water overhead and vented to the atmosphere; and
- d. The lean amine from the bottom of the Regenerator is recycled back to the Amine Contactor.

**[45CSR13, R13-2896, Condition 14.1.2.]**

12.1.3. Off gas from both Ethane Amine Units' flash tanks shall be collected and sent to the Ground Flare (S004A) for combustion.

**[45CSR13, R13-2896, Condition 14.1.3.]**

12.1.4. Maximum methanol and VOC emissions from Ethane Amine Unit S011 shall not exceed 1.82 pounds per hour and 7.99 tons per year, and 1.98 pounds per hour and 8.67 tons per year, respectively.

**[45CSR13, R13-2896, Condition 14.1.4.]**

12.1.5. The still vent emissions from S054 shall be, at a minimum of 95% of time the unit is in operation, captured by the vapor recovery unit (VRU) and routed to the residue gas discharge line. During VRU downtime, emissions from S054 still vent shall vent to atmosphere. Maximum methanol and VOC emissions from Ethane Amine Unit S054 shall not exceed 1.82 pounds per hour and 0.40 tons per year, and 1.98 pounds per hour and 0.43 tons per year, respectively.

**[45CSR13, R13-2896, Condition 14.1.5.]**

### 12.2. Monitoring Requirements

12.2.1. In order to show compliance with 12.1.1., the permittee shall either: (1) monitor and record the monthly and twelve-month total throughput of sour ethane fed to both Ethane Amine Units, or (2) monitor and record the monthly and twelve-month total throughput of total treated ethane from both Ethane Amine Units.

**[45CSR13, R13-2896, Condition 14.2.1.]**

12.2.2. The permittee shall monitor and record the monthly and twelve-month total percentage of time Ethane Amine Unit S054 is operated when the VRU is not in operation.

**[45CSR13, R13-2896, Condition 14.2.2.]**

### **12.3. Testing Requirements**

- 12.3.1. The permittee shall conduct, at a minimum of once per twelve-month period, sampling of the inlet gas stream to the Ethane Amine Units. The results of this test shall be used, with appropriate modeling techniques (such as use of ProMax software), to verify that the emissions of the unit are in compliance with those given under 12.1.4. and 12.1.5 above.

**[45CSR13, R13-2896, Condition 14.2.3.]**

### **12.4. Recordkeeping Requirements**

- 12.4.1. None

### **12.5. Reporting Requirements**

- 12.5.1. None

### **12.6. Compliance Plan**

- 12.6.1. None



**13.0 Other Storage Tanks and Liquids Loading/Unloading [emission unit ID(s): TK-906, TK-2906, TK-907, TK-2907, S008, S015, S033, S055, L-1]**

**13.1. Limitations and Standards**

13.1.1. The maximum design capacity of material loading/unloading and maximum associated emissions shall not exceed the following for the specific NGLs:

Emission Unit ID	Material Loaded/Unloaded	Truck (gpm)	Rail (gpm)	Barge (gpm)	VOC Emissions	
					lb/hr	TPY
S008	Propane	3,600 (vb)	4,000 (vb)	4,000 (vb)	4.36	2.18
	Isobutane			No		
	Butanes			No		
	NGL			No		
S033	Natural Gasoline	600 (vb) n/a	2,000 (vb) n/a	n/a 4,000	97.22	82.69
S015	Slop Oil/Produced Water	150	No	No	2.32	0.11
L-1	Gasoline Dispenser	20 (gal/hr)	No	No	0.18	0.072
S055	Pressurized NGL/Condensate (Unloading)	3,600	n/a	No	9.05	19.83

**[45CSR13, R13-2896, Condition 15.1.1.]**

13.1.2. The maximum Slop Oil/Produced Water loaded into trucks (S015) and Gasoline Dispenser Loading (L-1) shall not exceed a maximum of 2,007,070 and 12,000 gallons per year, respectively. The maximum Natural Gasoline loaded into barges (S033) shall not exceed a maximum of 408,240,000 gallons per year.

**[45CSR13, R13-2896, Condition 15.1.2.]**

13.1.3. The main Liquids Loading area (S008, S033) shall employ vapor balance (closed system) to route all displaced vapors back to the tanks when loading propane, isobutane, butanes, natural gasoline, or NGLs to truck or railcar *and* when loading propane to barge. Natural Gasoline barge loading (S033) operations, and Slop Oil/Produced Water (S015), and Gasoline Dispenser (L-1) truck loading operations are not required to use vapor balance.

**[45CSR13, R13-2896, Condition 15.1.3.]**

13.1.4. All truck loading of Slop Oil and Produced Water shall be done using the submerged-fill method. The “submerged-fill method” shall, for the purposes of this permit, mean either bottom-filling or filling by extending the pipe to near the bottom of the tank, and as soon as is practicable, below the level of liquid.

**[45CSR13, R13-2896, Condition 15.1.4.]**

- 13.1.5. The maximum annual throughput and VOC emissions for the specified tanks shall not exceed what is given in the following table:

<b>Tank</b>	<b>Material</b>	<b>Throughput (gallons)</b>	<b>Emissions (tons)</b>
TK-L-1	Gasoline <sup>(1)</sup>	12,000	0.13
TK-906	Slop Oil	248,712	0.05
TK-907	Produced Water	754,824	0.14
TK-2906	Slop Oil	248,712	0.05
TK-2907	Produced Water	754,824	0.14

- (1) This is purchased retail gasoline, not natural gasoline as produced on site.

[45CSR13, R13-2896, Condition 15.1.5.]

### **13.2. Monitoring Requirements**

- 13.2.1. None

### **13.3. Testing Requirements**

- 13.3.1. None

### **13.4. Recordkeeping Requirements**

- 13.4.1. To demonstrate compliance with section 13.1.2. and 13.1.5., the permittee shall maintain a monthly record of the amount of liquids handled in the Liquids Loading and Unloading areas (S008, S033, S055) and in the specified storage tanks.

[45CSR13, R13-2896, Condition 15.2.1.]

### **13.5. Reporting Requirements**

- 13.5.1. None

### **13.6. Compliance Plan**

- 13.6.1. None

## 14.0 Pigging Operations [emission unit ID(s): S034, S035]

### 14.1. Limitations and Standards

14.1.1. The permittee shall utilize a non-assisted flare, designated as S034, for control of potential emissions during all times of propane pig trap operations. The flare will have a maximum design capacity of 72,000 scf/hr and be designed and operated to achieve a minimum propane DRE of 98%.  
**[45CSR13, R13-2896, Condition 16.1.1.]**

14.1.2. The maximum annual combustion of waste gases in the pig trap flare (S034) shall not exceed 720,000 scf. The maximum number of pigging events per year for all pig traps shall not exceed the limits and volumes per event (scf) established in the permit application R13-2896G.  
**[45CSR13, R13-2896, Condition 16.1.2.]**

14.1.3. Maximum combustion exhaust emissions (not including uncombusted pass-through emissions of waste gases) from S034 shall not exceed the following:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	24.25	0.15
Carbon Monoxide	13.99	0.08
PM <sub>2.5</sub> /PM <sub>10</sub> /PM	1.31	0.01

**[45CSR13, R13-2896, Condition 16.1.3.]**

14.1.4. Based on the minimum VOC DRE of 98.0% as required under 14.1.1., maximum emissions of uncombusted VOCs emitted at the Pigging Flare shall not exceed 227.77 lbs/hour and 1.37 tons/yr of VOCs. The maximum emissions of VOCs and HAPs emitted from all other pigging operations with the exception of the propane pig trap shall not exceed 1,391.24 lbs/hr and 47.86 tons/yr, and 15.9 lbs/hr and 0.55 tons/yr, respectively.  
**[45CSR13, R13-2896, Condition 16.1.4.]**

14.1.5. The Pigging Flare shall be designed and operated in accordance with 40 CFR 60, Section 60.18.  
**[45CSR13, R13-2896, Condition 16.1.5.]**

14.1.6. The Pigging Flare is subject to 45CSR6. The requirements of 45CSR6 include but are not limited to those given under condition 11.1.4.  
**[45CSR13, R13-2896, Condition 16.1.6.]**

### 14.2. Monitoring Requirements

14.2.1. In order to show compliance with 14.1.2., the permittee shall calculate, based on the information collected under 14.2.2., the throughput (in scf) of waste gases fed to S034 on a monthly and a rolling twelve-month basis.  
**[45CSR13, R13-2896, Condition 16.2.1.]**

- 14.2.2. In order to show compliance with 14.1.2., the permittee shall monitor and record the total number and type of pigging events and the estimated volume per event (in scf) on a monthly and rolling twelve-month total for all pig traps.

**[45CSR13, R13-2896, Condition 16.2.2.]**

- 14.2.3. The permittee shall meet the following Visible Emissions Requirements for the S034:

- a. To demonstrate compliance with the visible emissions requirements of 45CSR6, the permittee shall conduct the following visible emission checks and/or opacity monitoring and recordkeeping for the Pigging Flare:

- (1) The visible emission check shall determine the presence or absence of visible emissions. The observations shall be conducted according to Section 11 of EPA Method 22. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40CFR Part 60, Appendix A, Method 22 or from the lecture portion of the 40 CFR Part 60, Appendix A, Method 9 certification course. The observation period shall be a minimum of one (1) hour at initial commissioning and at least one (1) hour thereafter each calendar year during a pig trap flaring operation;
- (2) As the Pigging Flare is of smokeless design, any observation of visible emissions will indicate incorrect operation of the flare. Therefore, upon the observation of visible emissions, the permittee shall, at the next available safe opportunity, cease operation of the flare and attempt to correct the problem. After an attempt to correct the problem, the permittee shall then conduct a minimum of one (1) hour of visible emissions observations according to 14.2.3(a)(1) during the next pig trap flaring operation; and
- (3) The permittee shall maintain records of all monitoring data required by 14.2.3 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).

**[45CSR13, R13-2896, Condition 16.2.3.]**

### **14.3. Testing Requirements**

- 14.3.1. None

### **14.4. Recordkeeping Requirements**

- 14.4.1. None

### **14.5. Reporting Requirements**

- 14.5.1. None

### **14.6. Compliance Plan**

- 14.6.1. None

**15.0 40 CFR 60 Subpart KKK, OOOO and OOOOa Requirements [emission unit ID(s): FUG AREA 1 through 7 and Compressors]**

**15.1. Limitations and Standards**

**40 CFR 60 Subpart KKK (FUG AREA 1)**

15.1.1. The permittee shall operate FUG AREA 1 (currently Cryo 1 (excluding Demethanizer 1) and Cryo 2) in accordance with all applicable requirements given under 40 CFR 60 Subpart KKK.  
**[45CSR13, R13-2896, Condition 17.1.1.]**

15.1.2. Each owner or operator subject to the provisions of 40CFR60, Subpart KKK shall comply with the requirements of 40CFR§§60.482-1 (a), (b), and (d) and 60.482-2 through 60.482-10, except as provided in 40CFR§60.633, as soon as practicable, but no later than 180 days after initial startup  
**[45CSR16; 40CFR§60.632(a)]**

**40 CFR 60 Subpart OOOO (FUG AREA 2 AND FUG AREA 3)**

15.1.3. The permittee shall operate FUG AREA 2 and FUG AREA 3 (currently Demethanizer 1, Frac 2, and Cryo 3) in accordance with all applicable requirements given under 40 CFR 60 Subpart OOOO.  
**[45CSR13, R13-2896, Condition 17.1.2.]**

15.1.4. The permittee must comply with the requirements of 40CFR§§60.482-1a(a), (b), and (d), 60.482-2a, and 60.482-4a through 60.482-11a, except as provided in 40CFR§60.5401.  
**[45CSR16; 40CFR§60.5400(a)]**

**40 CFR 60 Subpart OOOOa (FUG AREAS 4 – 7)**

15.1.5. The permittee shall operate FUG AREA 4 through 7 (currently Frac 1 and Cryo 4 through 7) in accordance with all applicable requirements given under 40 CFR 60 Subpart OOOOa.  
**[45CSR13, R13-2896, Condition 17.1.3.]**

15.1.6. The permittee must comply with the requirements of 40CFR§§60.482-1a(a), (b), and (d), 60.482-2a, and 60.482-4a through 60.482-11a, except as provided in 40CFR§60.5401a.  
**[45CSR16; 40CFR§60.5400a(a)]**

**All Fugitive Areas**

15.1.7. The permittee shall maintain on-site and available upon request an updated list of logical groupings of plant components and the correct applicability of each group to 40 CFR 60, Subpart KKK, OOOO, and OOOOa. This updated and revised list shall be submitted to the Director within 30 days of any applicability change. This list shall supersede the requirements given under 15.1.1, 15.1.3, and 15.1.5 and shall be considered enforceable until such time as the permit is appropriately revised.  
**[45CSR13, R13-2896, Condition 17.1.4.]**

**Compressor Requirements**

15.1.8. The permittee shall maintain on-site and available upon request an updated list of all reciprocating compressors and the applicability of each to 40CFR60 Subpart OOOO and OOOOa. For each compressor, the permittee shall comply with all applicable requirements given under 40CFR60 Subpart OOOO or

OOOOa, whichever is applicable dependent on the applicability determined under the requirement.  
**[45CSR13, R13-2896, Condition 17.1.5.]**

15.1.9. **Subpart OOOO Standards.** The permittee must comply with the standards in paragraphs (a) through (d) of this condition for each reciprocating compressor affected facility.

- a. The permittee must replace the reciprocating compressor rod packing according to either paragraph (a)(1) or (2) of this condition or the permittee must comply with paragraph (a)(3) 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 the 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.
  3. Collect the emissions from the rod packing using a rod packing emissions collection system which operates under negative pressure and route the rod packing emissions to a process through a closed vent system that meets the requirements of §60.5411(a).
- b. The permittee must demonstrate initial compliance with standards that apply to reciprocating compressor affected facilities as required by §60.5410.
- c. The permittee must demonstrate continuous compliance with standards that apply to reciprocating compressor affected facilities as required by §60.5415.
- d. The permittee must perform the required notification, recordkeeping, and reporting as required by §60.5420.

**[45CSR16; 40CFR§60.5385]**

15.1.10. **Closed vent system requirements for reciprocating compressors under Subpart OOOO.**

- a. Closed vent system requirements for reciprocating compressors complying with condition 15.1.9.a.3.
  1. The permittee must design the closed vent system to route all gases, vapors, and fumes emitted from the material in the reciprocating compressor rod packing emissions collection system or the wet seal fluid degassing system to a control device or to a process that meets the requirements specified in §60.5412(a) through (c).
  2. The permittee must design and operate the closed vent system with no detectable emissions as demonstrated by §60.5416(b).
  3. The permittee must meet the requirements specified in paragraphs (a)(3)(i) and (ii) of this section if the closed vent system contains one or more bypass devices that could be used to divert all or a portion of the gases, vapors, or fumes from entering the control device.

- i. Except as provided in paragraph (a)(3)(ii) of this section, the permittee must comply with either paragraph (a)(3)(i)(A) or (B) of this section for each bypass device.
  - A. The permittee must properly install, calibrate, maintain, and operate a flow indicator at the inlet to the bypass device that could divert the stream away from the control device or process to the atmosphere that is capable of taking periodic readings as specified in §60.5416(a)(4) and either sounds an alarm, or initiates notification via remote alarm to the nearest field office, when the bypass device is open such that the stream is being, or could be, diverted away from the control device or process to the atmosphere. The permittee must maintain records of each time the alarm is activated according to §60.5420(c)(8).
  - B. The permittee must secure the bypass device valve installed at the inlet to the bypass device in the non-diverting position using a car-seal or a lock-and-key type configuration.
- ii. Low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and safety devices are not subject to the requirements of paragraph (a)(3)(i) of this section.

**[45CSR16; 40CFR§§60.5411 and 60.5411(a)]**

15.1.11. **Subpart OOOOa Standards.** The permittee must reduce GHG (in the form of a limitation on emissions of methane) and VOC emissions by complying with the standards in paragraphs (a) through (d) of this condition for each reciprocating compressor affected facility.

- a. The permittee must replace the reciprocating compressor rod packing according to either paragraph (a)(1) or (2) of this condition, or the permittee must comply with paragraph (a)(3) of this condition.
  1. On or before the compressor has operated for 26,000 hours. The number of hours of operation must be continuously monitored beginning upon initial startup of the reciprocating compressor affected facility, or the date of the most recent reciprocating compressor rod packing replacement, whichever is later.
  2. Prior to 36 months from the date of the most recent rod packing replacement, or 36 months from the date of startup for a new reciprocating compressor for which the rod packing has not yet been replaced.
  3. Collect the methane and VOC emissions from the rod packing using a rod packing emissions collection system that operates under negative pressure and route the rod packing emissions to a process through a closed vent system that meets the requirements of §60.5411a(a) and (d).
- b. The permittee must demonstrate initial compliance with standards that apply to reciprocating compressor affected facilities as required by §60.5410a(c).
- c. The permittee must demonstrate continuous compliance with standards that apply to reciprocating compressor affected facilities as required by §60.5415a(c).
- d. The permittee must perform the reporting as required by §60.5420a(b)(1) and (4) and the recordkeeping as required by §60.5420a(c)(3), (6) through (9), and (17), as applicable.

**[45CSRR16; 40CFR§60.5385a]**

15.1.12. **Closed vent system requirements for reciprocating compressors under Subpart OOOOa.** The permittee must meet the applicable requirements of this section for each cover and closed vent system used to comply with the emission standards for the reciprocating compressors complying with condition 15.1.11.a.3.

- a. Closed vent system requirements for reciprocating compressors, centrifugal compressor wet seal degassing systems and pneumatic pumps.
  1. The permittee must design the closed vent system to route all gases, vapors, and fumes emitted from the reciprocating compressor rod packing emissions collection system, the wet seal fluid degassing system or pneumatic pump to a control device or to a process. For reciprocating and centrifugal compressors, the closed vent system must route all gases, vapors, and fumes to a control device that meets the requirements specified in §60.5412a(a) through (c).
  2. The permittee must design and operate the closed vent system with no detectable emissions as demonstrated by §60.5416a(b).
  3. The permittee must meet the requirements specified in paragraphs (a)(3)(i) and (ii) of this section if the closed vent system contains one or more bypass devices that could be used to divert all or a portion of the gases, vapors, or fumes from entering the control device.
    - i. Except as provided in paragraph (a)(3)(ii) of this section, the permittee must comply with either paragraph (a)(3)(i)(A) or (B) of this section for each bypass device.
      - A. The permittee must properly install, calibrate, maintain, and operate a flow indicator at the inlet to the bypass device that could divert the stream away from the control device or process to the atmosphere that is capable of taking periodic readings as specified in §60.5416a(a)(4)(i) and sounds an alarm, or initiates notification via remote alarm to the nearest field office, when the bypass device is open such that the stream is being, or could be, diverted away from the control device or process to the atmosphere. The permittee must maintain records of each time the alarm is activated according to §60.5420a(c)(8).
      - B. The permittee must secure the bypass device valve installed at the inlet to the bypass device in the non-diverting position using a car-seal or a lock-and-key type configuration.
    - ii. Low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and safety devices are not subject to the requirements of paragraph (a)(3)(i) of this section.
- b. Closed vent systems requirements for centrifugal compressor wet seal fluid degassing systems, reciprocating compressors, pneumatic pumps and storage vessels using a control device or routing emissions to a process.
  1. The permittee must conduct an assessment that the closed vent system is of sufficient design and capacity to ensure that all emissions from the storage vessel are routed to the control device and that the control device is of sufficient design and capacity to accommodate all emissions from the affected facility and have it certified by a qualified professional engineer in accordance with paragraphs (b)(1)(i) and (ii) of this section.
    - i. The permittee must provide the following certification, signed and dated by the qualified professional engineer: "I certify that the closed vent system design and capacity assessment was



prepared under my direction or supervision. I further certify that the closed vent system design and capacity assessment was conducted and this report was prepared pursuant to the requirements of subpart OOOOa of 40 CFR part 60. Based on my professional knowledge and experience, and inquiry of personnel involved in the assessment, the certification submitted herein is true, accurate, and complete. I am aware that there are penalties for knowingly submitting false information.”

- ii. The assessment shall be prepared under the direction or supervision of the qualified professional engineer who signs the certification in paragraph (b)(1)(i) of this section.

**[45CSR16; 40CFR§§60.5411a, 60.5411a(a), and 60.5411a(d)]**

15.1.13. The permittee is deemed to be in compliance with 40CFR60, Subpart OOOO if they are in compliance with all applicable provisions of 40CFR60, Subpart OOOOa.

**[45CSR16; 40CFR§60.5370(d)]**

## **15.2. Monitoring Requirements**

### **40 CFR 60 Subpart KKK (FUG AREA 1)**

15.2.1. Leak Detection:

- a. Each owner or operator subject to the provisions of 40CFR60, Subpart KKK may comply with the following exceptions to the provisions of subpart VV.
- b. 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.
- c. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.
- d. Leak Repair:
  1. 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 40CFR§60.482-9.
  2. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

**[45CSR16; 40CFR§§60.633(a) and (b)]**

### **40 CFR 60 Subpart OOOO (FUG AREA 2 AND FUG AREA 3)**

15.2.2. Leak Detection:

- a. The permittee may comply with the following exceptions to the provisions of 40CFR§§60.5400(a) and (b).
- b. 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 40CFR§60.485a(b) except as provided in

40CFR§60.5400(c) and in paragraphs (d) and (e) of 15.2.2, and CFR§§60.482-4a(a) through (c) of 40CFR60, subpart VVa.

- c. If an instrument reading of 500 ppm or greater is measured, a leak is detected.
- d. Leak Repair:
  - 1. 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 40CFR§60.482-9a.
  - 2. A first attempt at repair must be made no later than 5 calendar days after each leak is detected.

**[45CSR16; 40CFR§§60.5401(a) and (b)]**

**40 CFR 60 Subpart OOOOa (FUG AREAS 4 – 7)**

15.2.3. Leak Detection:

- a. The permittee may comply with the following exceptions to the provisions of 40CFR§§60.5400a(a) and (b).
- b. 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 40CFR§60.485a(b) except as provided in 40CFR§60.5400a(c) and in paragraphs (d) and (e) of 15.2.3, and 40CFR§§60.482-4a(a) through (c) of subpart VVa.
- c. If an instrument reading of 500 ppm or greater is measured, a leak is detected.
- d. Leak Repair:
  - 15.2.1. 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 40CFR§60.482-9a.
  - 15.2.2. A first attempt at repair must be made no later than 5 calendar days after each leak is detected.

**[45CSR16; 40CFR§§60.5401a(a) and (b)]**

**Compressors**

15.2.4. **Initial Compliance Demonstration for 40 C.F.R. 60 Subpart OOOO.** To achieve initial compliance with the standards for each reciprocating compressor affected facility the permittee must comply with paragraphs (a) through (d) of this condition.

- a. If complying with §60.5385(a)(1) or (2), during the initial compliance period, the permittee must continuously monitor the number of hours of operation or track the number of months since the last rod packing replacement.

- b. If complying with §60.5385(a)(3), the permittee must operate the rod packing emissions collection system under negative pressure and route emissions to a process through a closed vent system that meets the requirements of §60.5411(a).
- c. The permittee must submit the initial annual report for the reciprocating compressor as required in §60.5420(b).
- d. The permittee must maintain the records as specified in §60.5420(c)(3) for each reciprocating compressor affected facility.

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

15.2.5. **Continuous Compliance Demonstration for 40 C.F.R. 60 Subpart OOOO.** For each reciprocating compressor affected facility complying with §60.5385(a)(1) or (2), the permittee must demonstrate continuous compliance according to paragraphs (a) through (c) of this condition. For each reciprocating compressor affected facility complying with §60.5385(a)(3), the permittee must demonstrate continuous compliance according to paragraph (d) of this condition.

- a. The permittee must continuously monitor the number of hours of operation for each reciprocating compressor affected facility or track the number of months since initial startup, or October 15, 2012, or the date of the most recent reciprocating compressor rod packing replacement, whichever is later.
- b. The permittee must submit the annual report as required in §60.5420(b) and maintain records as required in §60.5420(c)(3).
- c. The permittee 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.
- d. The permittee must operate the rod packing emissions collection system under negative pressure and continuously comply with the closed vent requirements in §60.5416(a) and (b).

**[45CSR16; 40CFR§60.5415(c)]**

15.2.6. **Initial Compliance Demonstration for 40 C.F.R. 60 Subpart OOOOa.** To achieve initial compliance with the standards for each reciprocating compressor affected facility the permittee must comply with paragraphs (a) through (d) of this condition.

- a. If complying with §60.5385a(a)(1) or (2), during the initial compliance period, the permittee must continuously monitor the number of hours of operation or track the number of months since the last rod packing replacement.
- b. If complying with §60.5385a(a)(3), the permittee must operate the rod packing emissions collection system under negative pressure and route emissions to a process through a closed vent system that meets the requirements of §60.5411a(a) and (d).
- c. The permittee must submit the initial annual report for the reciprocating compressor as required in §60.5420a(b)(1) and (4).

- d. The permittee must maintain the records as specified in §60.5420a(c)(3) for each reciprocating compressor affected facility.

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

15.2.7. **Continuous Compliance Demonstration for 40 C.F.R. 60 Subpart OOOOa.** For each reciprocating compressor affected facility complying with §60.5385a(a)(1) or (2), the permittee must demonstrate continuous compliance according to paragraphs (a) through (c) of this condition. For each reciprocating compressor affected facility complying with §60.5385a(a)(3), the permittee must demonstrate continuous compliance according to paragraph (d) of this condition.

- a. The permittee must continuously monitor the number of hours of operation for each reciprocating compressor affected facility or track the number of months since initial startup or the date of the most recent reciprocating compressor rod packing replacement, whichever is later.
- b. The permittee must submit the annual reports as required in §60.5420a(b)(1) and (4) and maintain records as required in §60.5420a(c)(3).
- c. The permittee must replace the reciprocating compressor rod packing on or before the total number of hours of operation reaches 26,000 hours or the number of months since the most recent rod packing replacement reaches 36 months.
- d. The permittee must operate the rod packing emissions collection system under negative pressure and continuously comply with the cover and closed vent requirements in §60.5416a(a) and (b).

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

### 15.3. Testing Requirements

15.3.1. **Inspections for closed vent systems installed on each reciprocating compressor affected facility under Subpart OOOO.** Except as provided in paragraphs (b)(11) and (12) of §60.5416, the permittee must inspect each closed vent system according to the procedures and schedule specified in paragraphs (a) and (b) of this condition, and inspect each bypass device according to the procedures of paragraph (d) of this condition for reciprocating compressors complying with permit condition 15.1.9.a.3.

- a. For each closed vent system joint, seam, or other connection that is permanently or semi-permanently sealed (e.g., a welded joint between two sections of hard piping or a bolted and gasketed ducting flange), the permittee must meet the requirements specified in paragraphs (a)(1) and (2) of this condition.
  - 1. Conduct an initial inspection according to the test methods and procedures specified in paragraph (b) of §60.5416 to demonstrate that the closed vent system operates with no detectable emissions. The permittee must maintain records of the inspection results as specified in §60.5420(c)(6).
  - 2. Conduct annual visual inspections for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in piping; loose connections; liquid leaks; or broken or missing caps or other closure devices. The permittee must monitor a component or connection using the test methods and procedures in condition 15.3.2. to demonstrate that it operates with no detectable emissions following any time the component is repaired or replaced or the connection is

unsealed. The permittee must maintain records of the inspection results as specified in §60.5420(c)(6).

- b. For closed vent system components other than those specified in paragraph (a) of this condition, the permittee must meet the requirements of paragraphs (b)(1) through (3) of this condition.
  1. Conduct an initial inspection according to the test methods and procedures specified in paragraph (b) of §60.5416 to demonstrate that the closed vent system operates with no detectable emissions. The permittee must maintain records of the inspection results as specified in §60.5420(c)(6).
  2. Conduct annual inspections according to the test methods and procedures specified in paragraph (b) of §60.5416 to demonstrate that the components or connections operate with no detectable emissions. The permittee must maintain records of the inspection results as specified in §60.5420(c)(6).
  3. Conduct annual visual inspections for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in ductwork; loose connections; liquid leaks; or broken or missing caps or other closure devices. The permittee must maintain records of the inspection results as specified in §60.5420(c)(6).
- c. For each cover, the permittee must meet the following requirements:
  1. Conduct visual inspections for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the cover, or between the cover and the separator wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices. In the case where the storage vessel is buried partially or entirely underground, the permittee must inspect only those portions of the cover that extend to or above the ground surface, and those connections that are on such portions of the cover (e.g., fill ports, access hatches, gauge wells, etc.) and can be opened to the atmosphere.
  2. The permittee must initially conduct the inspections specified in paragraph (c)(1) of this condition following the installation of the cover. Thereafter, the permittee must perform the inspection at least once every calendar year, except as provided in paragraphs (b)(11) and (12) of §60.5416. The permittee must maintain records of the inspection results as specified in §60.5420(c)(7).
- d. For each bypass device, except as provided for in §60.5411, the permittee must meet the following requirements:
  1. Set the flow indicator to take a reading at least once every 15 minutes at the inlet to the bypass device that could divert the steam away from the control device to the atmosphere.
  2. If the bypass device valve installed at the inlet to the bypass device is secured in the non-diverting position using a car-seal or a lock-and-key type configuration, visually inspect the seal or closure mechanism at least once every month to verify that the valve is maintained in the non-diverting position and the vent stream is not diverted through the bypass device. The permittee must maintain records of the inspections according to §60.5420(c)(8).

**[45CSR16; 40CFR§§60.5416, 60.5416(a), 60.5416(a)(1), (2), (3), and (4)]**

- 15.3.2. **No detectable emissions test methods and procedures under Subpart OOOO.** If the permittee is required to conduct an inspection of a closed vent system at the reciprocating compressor affected facility as specified in paragraphs (a)(1) or (2) of §60.5416 (permit condition 15.3.1.a. or 15.3.1.b.), the permittee must meet the requirements of paragraphs (b)(1) through (13) of §60.5416.  
**[45CSR16; 40CFR§§60.5416 and 60.5416(b)]**
- 15.3.3. **Inspections for closed vent systems installed on each reciprocating compressor affected facility under Subpart OOOOa.** Except as provided in paragraphs (b)(11) and (12) of §60.5416a, the permittee must inspect each closed vent system according to the procedures and schedule specified in paragraphs (a) and (b) of this condition, inspect each cover according to the procedures and schedule specified in paragraph (c) of this condition, and inspect each bypass device according to the procedures of paragraph (d) of this condition for reciprocating compressors complying with condition 15.1.11.a.3.
- a. For each closed vent system joint, seam, or other connection that is permanently or semi-permanently sealed (e.g., a welded joint between two sections of hard piping or a bolted and gasketed ducting flange), the permittee must meet the requirements specified in paragraphs (a)(1) and (2) of this section..
- (i) Conduct an initial inspection according to the test methods and procedures specified in condition 15.3.4. to demonstrate that the closed vent system operates with no detectable emissions. The permittee must maintain records of the inspection results as specified in §60.5420a(c)(6).
- (ii) Conduct annual visual inspections for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in piping; loose connections; liquid leaks; or broken or missing caps or other closure devices. The permittee must monitor a component or connection using the test methods and procedures in condition 15.3.4. to demonstrate that it operates with no detectable emissions following any time the component is repaired or replaced or the connection is unsealed. The permittee must maintain records of the inspection results as specified in §60.5420a(c)(6).
- b. For closed vent system components other than those specified in paragraph (a)(1) of this section, the permittee must meet the requirements of paragraphs (b)(1) through (3) of this section.
1. Conduct an initial inspection according to the test methods and procedures specified in condition 15.3.4. to demonstrate that the closed vent system operates with no detectable emissions. The permittee must maintain records of the inspection results as specified in §60.5420a(c)(6).
2. Conduct annual inspections according to the test methods and procedures specified in condition 15.3.4. to demonstrate that the components or connections operate with no detectable emissions. The permittee must maintain records of the inspection results as specified in §60.5420a(c)(6).
3. Conduct annual visual inspections for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in ductwork; loose connections; liquid leaks; or broken or missing caps or other closure devices. The permittee must maintain records of the inspection results as specified in §60.5420a(c)(6).
- c. For each cover, the permittee must meet the requirements in paragraphs (c)(1) and (2) of this condition.

1. Conduct visual inspections for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the cover, or between the cover and the separator wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices. In the case where the storage vessel is buried partially or entirely underground, the permittee must inspect only those portions of the cover that extend to or above the ground surface, and those connections that are on such portions of the cover (e.g., fill ports, access hatches, gauge wells, etc.) and can be opened to the atmosphere.
  2. The permittee must initially conduct the inspections specified in paragraph (c)(1) of this condition following the installation of the cover. Thereafter, the permittee must perform the inspection at least once every calendar year, except as provided in paragraphs (b)(11) and (12) of §60.5416a. The permittee must maintain records of the inspection results as specified in §60.5420a(c)(7).
- d. For each bypass device, except as provided for in §60.5411a(c)(3)(ii), the permittee must meet the requirements of paragraphs (d)(1) or (2) of this section.
1. Set the flow indicator to take a reading at least once every 15 minutes at the inlet to the bypass device that could divert the steam away from the control device to the atmosphere.
  2. If the bypass device valve installed at the inlet to the bypass device is secured in the non-diverting position using a car-seal or a lock-and-key type configuration, visually inspect the seal or closure mechanism at least once every month to verify that the valve is maintained in the non-diverting position and the vent stream is not diverted through the bypass device. The permittee must maintain records of the inspections according to §60.5420a(c)(8).

**[45CSR16; 40 C.F.R. §§ 60.5416a, 60.5416a(a), 60.5416a(a)(1), (2), and (4)]**

- 15.3.4. **No detectable emissions test methods and procedures under Subpart OOOOa.** If the permittee is required to conduct an inspection of a closed vent system at the reciprocating compressor affected facility as specified in condition 15.3.3.a. or 15.3.3.b., the permittee must meet the requirements of paragraphs (b)(1) through (13) of §60.5416a.

**[45CSR16; 40CFR§§60.5416a and 60.5416a(b)]**

## **15.4. Recordkeeping Requirements**

### **40 CFR 60 Subpart KKK (FUG AREA1)**

- 15.4.1. Each owner or operator subject to the provisions of this subpart shall comply with the requirements of condition 15.4.2 in addition to the requirements of 40CFR§60.486.
- [45CSR16; 40CFR§60.635(a)]**
- 15.4.2. The following recordkeeping requirements shall apply to pressure relief devices subject to the requirements of 40CFR§60.633(b)(1).
- a. When each leak is detected as specified in 40CFR§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.

- b. When each leak is detected as specified in 40CFR§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:
  1. The instrument and operator identification numbers and the equipment identification number.
  2. The date the leak was detected and the dates of each attempt to repair the leak.
  3. Repair methods applied in each attempt to repair the leak.
  4. “Above 10,000 ppm” if the maximum instrument reading measured by the methods specified in 40CFR§60.635(a) after each repair attempt is 10,000 ppm or greater.
  5. “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.
  6. The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.
  7. The expected date of successful repair of the leak if a leak is not repaired within 15 days.
  8. Dates of process unit shutdowns that occur while the equipment is unrepaired.
  9. The date of successful repair of the leak.
  10. A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of 40CFR§60.482-4(a). The designation of equipment subject to the provisions of 40CFR§60.482-4(a) shall be signed by the owner or operator.

**[45CSR16; 40CFR§60.635(b)]**

**40 CFR 60 Subpart OOOO (FUG AREA 2 AND FUG AREA 3)**

- 15.4.3. The permittee must comply with the requirements of condition 15.4.4 in addition to the requirements of 40CFR§60.486a.

**[45CSR16; 40CFR§60.5421(a)]**

- 15.4.4. The following recordkeeping requirements apply to pressure relief devices subject to the requirements of 40CFR§60.5401(b)(1).

- a. When each leak is detected as specified in 40CFR§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.
- b. When each leak is detected as specified in 40CFR§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:
  1. The instrument and operator identification numbers and the equipment identification number.
  2. The date the leak was detected and the dates of each attempt to repair the leak.



3. Repair methods applied in each attempt to repair the leak.
4. “Above 500 ppm” if the maximum instrument reading measured by the methods specified in 15.4.3 after each repair attempt is 500 ppm or greater.
5. “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.
6. The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.
7. The expected date of successful repair of the leak if a leak is not repaired within 15 days.
8. Dates of process unit shutdowns that occur while the equipment is unrepaired.
9. The date of successful repair of the leak.
10. A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of 40CFR§60.482-4a(a). The designation of equipment subject to the provisions of 40CFR§60.482-4a(a) must be signed by the owner or operator.

**[45CSR16; 40CFR§60.5421(b)]**

**40CFR 60 Subpart OOOOa (FUG AREAS 4 – 7)**

- 15.4.5. The permittee must comply with the requirements of condition 15.4.6. in addition to the requirements of 40CFR§60.486a.

**[45CSR16; 40CFR§60.5421a(a)]**

- 15.4.6. The following recordkeeping requirements apply to pressure relief devices subject to the requirements of 40CFR§60.5401a(b)(1).
- a. When each leak is detected as specified in 40CFR§60.5401a(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.
  - b. When each leak is detected as specified in 40CFR§60.5401a(b)(2), the information specified in paragraphs (b)(1) through (10) of this condition must be recorded in a log and shall be kept for 2 years in a readily accessible location:
    1. The instrument and operator identification numbers and the equipment identification number.
    2. The date the leak was detected and the dates of each attempt to repair the leak.
    3. Repair methods applied in each attempt to repair the leak.
    4. “Above 500 ppm” if the maximum instrument reading measured by the methods specified in §60.5400a(d) after each repair attempt is 500 ppm or greater.

5. “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.
6. The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.
7. The expected date of successful repair of the leak if a leak is not repaired within 15 days.
8. Dates of process unit shutdowns that occur while the equipment is unrepaired.
9. The date of successful repair of the leak.
10. A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of 40CFR§60.482-4a(a). The designation of equipment subject to the provisions of 40CFR§60.482-4a(a) must be signed by the owner or operator.

**[45CSR16; 40CFR§60.5421a(b)]**

**Compressors**

- 15.4.7. **Recordkeeping requirements under Subpart OOOO.** The permittee must maintain the records identified as specified in §60.7(f) and in paragraphs (a) for compressors complying with §60.5385(a)(1) or (2), and (b), (c), (d), and (e) of this condition for compressors complying with §60.5385(a)(3). All records required by this subpart must be maintained either onsite or at the nearest local field office for at least 5 years.
- a. For each reciprocating compressor affected facility, the permittee must maintain the following records:
    1. 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.
    2. 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).
    3. Records of deviations in cases where the reciprocating compressor was not operated in compliance with the requirements specified in §60.5385.
  - b. Records of each closed vent system inspection required under §60.5416(a)(1) and (2) for reciprocating compressors.
  - c. A record of each cover inspection required under §60.5416(a)(3) for reciprocating compressors.
  - d. If the permittee is subject to the bypass requirements of §60.5416(a)(4) for reciprocating compressors, a record of each inspection or a record each time the key is checked out or a record of each time the alarm is sounded.

- e. If the permittee is subject to the closed vent system no detectable emissions requirements of §60.5416(b) for reciprocating compressors, a record of the monitoring conducted in accordance with §60.5416(b).

**[45CSR16; 40CFR§§60.5420(c), (c)(3), (c)(6), (c)(7), (c)(8), and (c)(9)]**

15.4.8. **Recordkeeping requirements under Subpart OOOOa.** The permittee must maintain the records identified as specified in §60.7(f) and in paragraphs (a) for compressors complying with §60.5385a(a)(1) or (2), and (b) through (f) of this condition for compressors complying with §60.5385a(a)(3). All records required by this subpart must be maintained either onsite or at the nearest local field office for at least 5 years. Any records required to be maintained by 40 C.F.R. 60 Subpart OOOOa that are submitted electronically via the EPA's CDX may be maintained in electronic format.

- a. For each reciprocating compressor affected facility, the permittee must maintain the records in paragraphs (a)(1) through (3) of this condition.
  - 1. Records of the cumulative number of hours of operation or number of months since initial startup or the previous replacement of the reciprocating compressor rod packing, whichever is later. Alternatively, a statement that emissions from the rod packing are being routed to a process through a closed vent system under negative pressure.
  - 2. 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 §60.5385a(a)(3).
  - 3. Records of deviations in cases where the reciprocating compressor was not operated in compliance with the requirements specified in §60.5385a.
- b. Records of each closed vent system inspection required under §60.5416a(a)(1) and (2) for reciprocating compressors.
- c. A record of each cover inspection required under §60.5416a(a)(3) for reciprocating compressors.
- d. If the permittee is subject to the bypass requirements of §60.5416a(a)(4) for reciprocating compressors, a record of each inspection or a record of each time the key is checked out or a record of each time the alarm is sounded.
- e. If the permittee is subject to the closed vent system no detectable emissions requirements of §60.5416a(b) for reciprocating compressors, a record of the monitoring conducted in accordance with §60.5416a(b).
- f. For each closed vent system routing to a control device or process, the records of the assessment conducted according to §60.5411a(d):
  - 1. A copy of the assessment conducted according to §60.5411a(d)(1);
  - 2. A copy of the certification according to §60.5411a(d)(1)(i); and

3. The owner or operator shall retain copies of all certifications, assessments and any related records for a period of five years and make them available if directed by the delegated authority.

**[45CSR16; 40CFR§§60.5420a(c), (c)(3), (c)(6), (c)(7), (c)(8), (c)(9), and (c)(17)]**

## **15.5. Reporting Requirements**

### **40 CFR 60 Subpart KKK (FUG AREA 1)**

- 15.5.1. Each owner or operator subject to the provisions of this subpart shall comply with the requirements of conditions 15.5.2. and 15.5.3. in addition to the requirements of 40CFR§60.487.

**[45CSR16; 40CFR§60.636(a)]**

- 15.5.2. An owner or operator shall include the following information in the initial semiannual report in addition to the information required in 40CFR§§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 40CFR§60.482-4(c).

**[45CSR16; 40CFR§60.636(b)]**

- 15.5.3. An owner or operator shall include the following information in all semiannual reports in addition to the information required in 40CFR§§60.487(c)(2) (i) through (vi):

- a. Number of pressure relief devices for which leaks were detected as required in 40CFR§60.633(b)(2) and

- b. Number of pressure relief devices for which leaks were not repaired as required in 40CFR§60.633(b)(3).

**[45CSR16; 40CFR§60.636(c)]**

### **40 CFR 60 Subpart OOOO (FUG AREA 2 AND FUG AREA 3)**

- 15.5.4. The permittee must comply with the requirements of conditions 15.5.5. and 15.5.6. in addition to the requirements of 40CFR§§60.487a(a), (b), (c)(2)(i) through (iv), and (c)(2)(vii) through (viii).

**[45CSR16; 40CFR§60.5422(a)]**

- 15.5.5. An owner or operator must include the following information in the initial semiannual report in addition to the information required in 40CFR§§60.487a(b)(1) through (4): Number of pressure relief devices subject to the requirements of 40CFR§60.5401(b) except for those pressure relief devices designated for no detectable emissions under the provisions of 40CFR§60.482-4a(a) and those pressure relief devices complying with 40CFR§60.482-4a(c).

**[45CSR16; 40CFR§60.5422(b)]**

- 15.5.6. An owner or operator must include the following information in all semiannual reports in addition to the information required in 40CFR§§60.487a(c)(2)(i) through (vi):

- a. Number of pressure relief devices for which leaks were detected as required in 40CFR§60.5401(b)(2); and

- b. Number of pressure relief devices for which leaks were not repaired as required in 40CFR§60.5401(b)(3).

**[45CSR16; 40CFR§60.5422(c)]**

**40CFR 60 Subpart OOOOa (FUG AREAS 4 – 7)**

- 15.5.7. The permittee must comply with the requirements of conditions 15.5.8. and 15.5.9. in addition to the requirements of 40CFR§§60.487a(a), (b), (c)(2)(i) through (iv), and (c)(2)(vii) through (viii). The permittee must submit semiannual reports to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>)). Use the appropriate electronic report in CEDRI for this subpart or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the CEDRI Web site (<https://www3.epa.gov/ttn/chief/cedri/>). If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, submit the report to the Administrator at the appropriate address listed in §60.4. Once the form has been available in CEDRI for at least 90 days, the permittee must begin submitting all subsequent reports via CEDRI. The report must be submitted by the deadline specified in this subpart, regardless of the method in which the report is submitted.

**[45CSR16; 40CFR§60.5422a(a)]**

- 15.5.8. An owner or operator must include the following information in the initial semiannual report in addition to the information required in 40CFR§§60.487a(b)(1) through (4): Number of pressure relief devices subject to the requirements of 40CFR§60.5401a(b) except for those pressure relief devices designated for no detectable emissions under the provisions of 40CFR§60.482-4a(a) and those pressure relief devices complying with 40CFR§60.482-4a(c).

**[45CSR16; 40CFR§60.5422a(b)]**

- 15.5.9. An owner or operator must include the information specified in paragraphs (a) and (b) of 15.5.9 in all semiannual reports in addition to the information required in 40CFR§§60.487a(c)(2)(i) through (vi):

- a. Number of pressure relief devices for which leaks were detected as required in 40CFR§60.5401a(b)(2); and
- b. Number of pressure relief devices for which leaks were not repaired as required in 40CFR§60.5401a(b)(3).

**[45CSR16; 40CFR§60.5422a(c)]**

**Compressors**

- 15.5.10. **Reporting requirements under Subpart OOOO.** The permittee must submit annual reports containing the information specified in paragraphs (a) and (b) of this condition to the Administrator and performance test reports as specified in paragraph (7) 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 the permittee owns or operates more than one affected facility, the permittee may submit one report for multiple affected facilities provided the report contains all of the information required as specified in paragraphs (a) and (b) of this condition, and paragraph (7) of §60.5420(b). Annual reports may coincide with title V reports as long as all the required elements of the annual report are included. The permittee may arrange with the Administrator a common

schedule on which reports required by this part may be submitted as long as the schedule does not extend the reporting period.

- a. The general information specified in paragraphs (a)(1) through (4) of this condition.
  1. The company name and address of the affected facility.
  2. An identification of each affected facility being included in the annual report.
  3. Beginning and ending dates of the reporting period.
  4. A certification by a certifying official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- b. For each reciprocating compressor affected facility, the information specified in paragraphs (b)(1) through (2) of this condition.
  1. The cumulative number of hours of operation or the number of months since initial startup, since October 15, 2012, or since the previous reciprocating compressor rod packing replacement, whichever is later.
  2. Records of deviations specified in paragraph (c)(3)(iii) of §60.5420 that occurred during the reporting period.

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

15.5.11. **Reporting requirements under Subpart OOOOa.** The permittee must submit annual reports containing the information specified in paragraphs (b)(1) and (b)(4) of §60.5420a. The permittee must submit annual reports following the procedure specified in paragraph (b)(11) of §60.5420a. The initial annual report is due no later than 90 days after the end of the initial compliance period as determined according to §60.5410a. Subsequent annual reports are due no later than same date each year as the initial annual report. If the permittee owns or operates more than one affected facility, the permittee may submit one report for multiple affected facilities provided the report contains all of the information required as specified in paragraphs (b)(1) through (8) of §60.5420a, except as provided in paragraph (b)(13) of §60.5420a. Annual reports may coincide with title V reports as long as all the required elements of the annual report are included. The permittee may arrange with the Administrator a common schedule on which reports required by this part may be submitted as long as the schedule does not extend the reporting period.

- a. The general information specified in paragraphs (a)(1) through (4) of this condition for all reports.
  1. The company name, facility site name associated with the affected facility, US Well ID or US Well ID associated with the affected facility, if applicable, and address of the affected facility. If an address is not available for the site, include a description of the site location and provide the latitude and longitude coordinates of the site in decimal degrees to an accuracy and precision of five (5) decimals of a degree using the North American Datum of 1983.
  2. An identification of each affected facility being included in the annual report.
  3. Beginning and ending dates of the reporting period.

4. A certification by a certifying official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- b. For each reciprocating compressor affected facility, the information specified in paragraphs (b)(1) and (2) of this condition.
    1. The cumulative number of hours of operation or the number of months since initial startup or since the previous reciprocating compressor rod packing replacement, whichever is later. Alternatively, a statement that emissions from the rod packing are being routed to a process through a closed vent system under negative pressure.
    2. Records of deviations specified in paragraph (c)(3)(iii) of §60.5420a that occurred during the reporting period.
  - c. The permittee must submit reports to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX (<https://cdx.epa.gov/>.) The permittee must use the appropriate electronic report in CEDRI for this subpart or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the CEDRI Web site (<https://www3.epa.gov/ttn/chief/cedri/>). If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the permittee must submit the report to the Administrator at the appropriate address listed in §60.4. Once the form has been available in CEDRI for at least 90 calendar days, the permittee must begin submitting all subsequent reports via CEDRI. The reports must be submitted by the deadlines specified in this subpart, regardless of the method in which the reports are submitted.

**[45CSR16; 40CFR§§60.5420a(b), (b)(1), (b)(4) and (b)(11)]**

## **15.6. Compliance Plan**

15.6.1. None

West Virginia Department of Environmental Protection

Austin Caperton

Cabinet Secretary

# Permit to Operate



Pursuant to

**Title V**

of the Clean Air Act

*Issued to:*

**Blue Racer Midstream, LLC**

**Natrium Extraction and Fractionation Processing Plant (NPP)**

**R30-05100142-2020**

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*Laura M. Crowder*

*Director, Division of Air Quality*

*Issued: April 14, 2020 • Effective: April 28, 2020*  
*Expiration: April 14, 2025 • Renewal Application Due: October 14, 2024*



Permit Number: **R30-05100142-2020**  
Permittee: **Blue Racer Midstream, LLC**  
Facility Name: **Natrium Extraction and Fractionation Processing Plant (NPP)**  
Permittee Mailing Address: **5949 Sherry Lane, Suite 1300; Dallas, TX 75225**

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*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.*

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Facility Location:	Proctor, Marshall County, West Virginia
Facility Mailing Address:	5949 Sherry Lane, Suite 1300, Dallas, TX 75225
Telephone Number:	(304) 455-4220
Type of Business Entity:	LLC
Facility Description:	Natural Gas Extraction/Fractionation Facility
SIC Codes:	1321
UTM Coordinates:	512.1 km Easting • 4,400.8 km Northing • Zone 17

Permit Writer: Rex Compston, P.E.

*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.*

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

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

### 1.1 Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
<b>Heaters</b>					
S001	P001	Hot Oil Heater	2014	216.7 MMBtu/hr	None
S012	P012	Regeneration Gas Heater	2013	9.7 MMBTU/hr	None
S013	P013	Cryogenic Hot Medium Oil (HMO) Heater	2013	26.3 MMBtu/hr	None
S016	P016	Hot Oil Heater	2014	61.58 MMBtu/hr	None
S017	P017	Hot Oil Heater	2014	61.58 MMBtu/hr	None
S018	P018	Hot Oil Heater	2014	61.58 MMBtu/hr	None
S019	P019	Hot Oil Heater	2014	61.58 MMBtu/hr	None
S024	P024	Regeneration Gas Heater	2018	9.7 MMBtu/hr	None
S026	P026	Cryogenic HMO Heater	2018	26.3 MMBtu/hr	None
S036	P036	Regeneration Gas Heater	2019	9.7 MMBTU/hr	None
S037	P037	Cryogenic HMO Heater	2019	26.3 MMBtu/hr	None
S040	P040	Regeneration Gas Heater	2019	19.28 MMBTU/hr	None
S041	P041	Cryogenic HMO Heater	2019	54.67 MMBTU/hr	None
S044	P044	Regeneration Gas Heater	2019	9.7 MMBTU/hr	None
S045	P045	Cryogenic HMO Heater	2019	26.3 MMBtu/hr	None
S048	P048	Regeneration Gas Heater	2019	9.7 MMBTU/hr	None
S049	P049	Cryogenic HMO Heater	2019	26.3 MMBtu/hr	None
S052	P052	Hot Oil Heater	2019	61.58 MMBtu/hr	None
S053	P053	Hot Oil Heater	2019	61.58 MMBtu/hr	None
S056	P056	Stabilizer Heater	2019	10.09 MMBtu/hr	None
<b>Glycol Dehydration Units</b>					
S006	P001 <sup>(1)</sup>	Glycol Dehydration System	2011	460 MMscfd	C001 <sup>(1)</sup>
		Glycol Dehydration Flash Tank			
S032	V003 P001 <sup>(1)</sup>	Glycol Dehydration System	2018	230 MMscfd	C009 <sup>(1)</sup>
		Glycol Dehydration Flash Tank			
S029	P029	Glycol Reboiler	2018	3.0 MMBtu/hr	None
<b>Storage Tanks<sup>(2)</sup></b>					
TK-802	P001	Natural Gasoline Storage Tank	2011	714,000 gal	Natural Gas Blanket <sup>(3)</sup>
TK-2802	P001	Natural Gasoline Storage Tank	2014	1,260,000 gal	Natural Gas Blanket <sup>(3)</sup>
TK-3802	P001	Natural Gasoline Storage Tank	2019	714,000 gal	Natural Gas Blanket <sup>(3)</sup>
TK-4802	P001	Natural Gasoline Storage Tank	2019	1,260,000 gal	Natural Gas Blanket <sup>(3)</sup>
TK-5802	P001	Natural Gasoline Storage Tank	2019	714,000 gal	Natural Gas Blanket <sup>(3)</sup>
TK-6802	P001	Natural Gasoline Storage Tank	2019	1,260,000 gal	Natural Gas Blanket <sup>(3)</sup>
TK-7802	TK-7802	Refrigerated Propane Storage Tank	2019	4,200,000 gal	VRU

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
US-800	Flare <sup>(4)</sup>	Spherical NGL Storage Tank	2011	2,142,000 gal	Pressure Tank
US-801	Flare <sup>(4)</sup>	Spherical NGL Storage Tank	2011	865,200 gal	Pressure Tank
US-804	Flare <sup>(4)</sup>	Spherical NGL Storage Tank	2011	865,200 gal	Pressure Tank
US-805	Flare <sup>(4)</sup>	Spherical NGL Storage Tank	2011	865,200 gal	Pressure Tank
US-2800	Flare <sup>(4)</sup>	Spherical NGL Storage Tank	2019	2,142,000 gal	Pressure Tank
US-2801	Flare <sup>(4)</sup>	Spherical NGL Storage Tank	2019	865,200 gal	Pressure Tank
US-2804	Flare <sup>(4)</sup>	Spherical NGL Storage Tank	2019	865,200 gal	Pressure Tank
US-2805	Flare <sup>(4)</sup>	Spherical NGL Storage Tank	2019	865,200 gal	Pressure Tank
N/A	N/A	Four (4) Pressurized NGL Bullet Tanks (V-1905, V-1915, V-1925, V-1935)	2014	90,000 gal (each)	Pressure Tank
N/A	N/A	Four (4) Pressurized NGL Bullet Tanks (V-2905, V-2915, V-2925, V-2935)	2019	90,000 gal (each)	Pressure Tank
TK-906	TK-906	Slop Tank	2011	21,000 gal	None
TK-2906	TK-2906	Slop Tank	2019	21,000 gal	None
TK-907	TK-907	Produced Water Tank	2012	63,000 gal	None
TK-2907	TK-2907	Produced Water Tank	2019	63,000 gal	None

**Other Emission Units**

S011	P005	Ethane Amine Regenerator	2012	129 mmscfd	None
S054	P054	Ethane Amine Regenerator	2019	129 mmscfd	VRU
S008	P008	Product Loading (Truck, Rail, Propane Barge)	2011	3,600 gpm (truck) 4,000 gpm (rail) 4,000 gpm (barge)	VRU
S015	S015	Slop Water Truck Loading	2011	150 gpm	None
S033	P033	Natural Gasoline Loading (Barge)	2017	4,000 gpm	None
S055	P055	Pressurized NGL/Condensate Unloading	2012	3,600 gpm	None
L-1	L-1	Gasoline Dispenser Loading	2017	20 gal/hr	None
S002	P002	Caterpillar Model C18 Fire Pump #1 Diesel (Manufactured 2011)	2012	700 HP	None
S003	P003	Caterpillar Model C18 Fire Pump #2 Diesel (Manufactured 2011)	2012	700 HP	None
S057	P057	Natural Gas, 4-Stroke Lean Burn Emergency Generators <sup>(5)</sup> (Manufactured after June 12, 2006)	2019	16,000 HP <sup>(5)</sup>	None
S034	P034	Propane Pigging (including Flare)	2017	N/A	Flare (C034)
S035	P035	Pigging Operations	2017	N/A	None

**Fugitive Emissions Sources**

FUG AREA 1	N/A	Fugitive Area 1	2011	N/A	None
FUG AREA 2	N/A	Fugitive Area 2	2011	N/A	None

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
FUG AREA 3	N/A	Fugitive Area 3	2018	N/A	None
FUG AREA 4	N/A	Fugitive Area 4	2019	N/A	None
FUG AREA 5	N/A	Fugitive Area 5	2019	N/A	None
FUG AREA 6	N/A	Fugitive Area 6	2019	N/A	None
FUG AREA 7	N/A	Fugitive Area 7	2019	N/A	None
S010	N/A	Unpaved Roads	2011	N/A	None

**Control Devices**

S004A	P004A	Callidus CAL-MP Staged, Multi-Point Ground Flare System (C004A)	2015	19,800,000 scf/hr	N/A
V003	V003	Vapor Combustor (C009)	2015	3,380 scf/hr	N/A
S034	P034	Propane Pig Trap Flare (C034)	2017	72,000 scf/hr	N/A

Control Device ID	Emission Unit	Pollutant	Control Device	Control Efficiency
C004A	Maintenance, Blowdowns, Pressure Relief Valves	VOCs	Flare (S004A)	98.0 %
		Total HAPs		98.0 %
C034	Pigging Flare (S034)	VOCs	Pigging Flare (S034)	98.0%
C009	Glycol Dehydration Flash Tank/Still Vents (S032)	VOCs	Vapor Combustor (V003)	98.0 %
		Total HAPs		98.0 %

- (1) Still Vent and flash tank vapors from S006 will be routed to the Hot Oil Heater (S001: C001) and used as fuel. Still Vent and flash tank vapors from S032 shall be routed either to the Hot Oil Heater (S001: C001) and used as fuel or sent to the associated Vapor Combustor (V003: C009) for control.
- (2) Other storage tanks that are not listed here (see Table N-3 in permit application R13-2896F) but meet the *de minimis* requirements under 45CSR13 (*Storage vessels having less than 10,567 gallons capacity containing petroleum or organic liquids with a vapor pressure of 1.5 psia or less at storage temperature, provided that the emissions from all such organic liquid storage tanks, in the aggregate, are less than 2 tons per year for hazardous air pollutants or VOCs*) are authorized at the facility.
- (3) Tank uses a natural gas blanket to prevent emissions of natural gasoline. Working/breathing losses of natural gas blanket are collected and sent to Hot Oil Heater (S001) as a supplemental fuel.
- (4) This tank shall be pressurized in excess of 204.9 kPa (which exempts the tank from applicability to 40 CFR 60, Subpart Kb) and normally has no emissions. In the case of emergency, emissions from the tank can be flared in C004A.
- (5) The permittee has the option of constructing one or more emergency generators of the type listed with an aggregate horsepower not to exceed 16,000.

Note: Other storage tanks and pressure vessels not listed within the Title V Equipment Table are authorized at this facility according to insignificant activities listed under the Title V General Form Section 24, Item 19.

**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
R13-2896G	February 18, 2020

## 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

<b>CAAA</b>	Clean Air Act Amendments	<b>NSPS</b>	New Source Performance Standards
<b>CBI</b>	Confidential Business Information	<b>PM</b>	Particulate Matter
<b>CEM</b>	Continuous Emission Monitor	<b>PM<sub>10</sub></b>	Particulate Matter less than 10µm in diameter
<b>CES</b>	Certified Emission Statement	<b>pph</b>	Pounds per Hour
<b>C.F.R. or CFR</b>	Code of Federal Regulations	<b>ppm</b>	Parts per Million
<b>CO</b>	Carbon Monoxide	<b>PSD</b>	Prevention of Significant Deterioration
<b>C.S.R. or CSR</b>	Codes of State Rules	<b>psi</b>	Pounds per Square Inch
<b>DAQ</b>	Division of Air Quality	<b>SIC</b>	Standard Industrial Classification
<b>DEP</b>	Department of Environmental Protection	<b>SIP</b>	State Implementation Plan
<b>FOIA</b>	Freedom of Information Act	<b>SO<sub>2</sub></b>	Sulfur Dioxide
<b>HAP</b>	Hazardous Air Pollutant	<b>TAP</b>	Toxic Air Pollutant
<b>HON</b>	Hazardous Organic NESHAP	<b>TPY</b>	Tons per Year
<b>HP</b>	Horsepower	<b>TRS</b>	Total Reduced Sulfur
<b>lbs/hr or lb/hr</b>	Pounds per Hour	<b>TSP</b>	Total Suspended Particulate
<b>LDAR</b>	Leak Detection and Repair	<b>USEPA</b>	United States Environmental Protection Agency
<b>m</b>	Thousand	<b>UTM</b>	Universal Transverse Mercator
<b>MACT</b>	Maximum Achievable Control Technology	<b>VEE</b>	Visual Emissions Evaluation
<b>mm</b>	Million	<b>VOC</b>	Volatile Organic Compounds
<b>mmBtu/hr</b>	Million British Thermal Units per Hour		
<b>mmft<sup>3</sup>/hr or mmcf/hr</b>	Million Cubic Feet Burned per Hour		
<b>NA or N/A</b>	Not Applicable		
<b>NAAQS</b>	National Ambient Air Quality Standards		
<b>NESHAPS</b>	National Emissions Standards for Hazardous Air Pollutants		
<b>NO<sub>x</sub></b>	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]

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- 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 be less than 10 tons/year of any single HAP and 25 tons/year of any combination of HAPs. Compliance with this Section shall ensure that the facility is a minor HAP source.  
[45CSR13, R13-2896, Condition 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 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.  
[45CSR§13-5.10.; 45CSR13, R13-2896, Condition 4.1.3.]
- 3.1.11. **Maximum Throughput Limitation.** The total maximum combined wet natural gas throughput of the gas processing plant, as processed in a maximum of seven (7) Cryogenic Plants, shall not exceed 1,725 mmscf/day. To demonstrate compliance, the permittee shall maintain records of the amount of natural gas processed in the gas processing plant.  
[45CSR§13-5.10.; 45CSR13, R13-2896, Condition 4.1.5.]
- 3.1.12. No person shall cause, suffer, allow or permit fugitive particulate matter to be discharged beyond the boundary lines of the property on which the discharge originates or at any public or residential location, which causes or contributes to statutory air pollution.  
[45CSR§17-3.1]
- 3.1.13. When a person is found in violation of this 45CSR17, the Director may require the person to utilize a system to minimize fugitive particulate matter. This system to minimize fugitive particulate matter may include, but is not limited to, the following:
- a. Use, where practicable, of water or chemicals for control of particulate matter in demolition of existing buildings or structures, construction operations, grading of roads or the clearing of land;
  - b. Application of asphalt, water or suitable chemicals on unpaved roads, material stockpiles and other surfaces which can create airborne particulate matter;
  - c. Covering of material transport vehicles, or treatment of cargo, to prevent contents from dripping, sifting, leaking or otherwise escaping and becoming airborne, and prompt removal of tracked material from roads or streets; or
  - d. Installation and use of hoods, fans and fabric filters to enclose and vent the handling of materials, including adequate containment methods during sandblasting, abrasive cleaning or other similar operations.
- [45CSR§17-3.2]

## 3.2. Monitoring Requirements

- 3.2.1. N/A



### 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, R13-2896, Condition 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 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

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

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

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

**[45CSR13, R13-2896, Condition 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 57<sup>th</sup> Street SE  
Charleston, WV 25304

#### US EPA:

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

#### DAQ Compliance and Enforcement<sup>1</sup>:

DEPAirQualityReports@wv.gov

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

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

**DAQ:**  
DEPAirQualityReports@wv.gov

**US EPA:**  
R3\_APD\_Permits@epa.gov

**[45CSR§30-5.3.e.]**

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

**DAQ:**  
DEPAirQualityReports@wv.gov

**[45CSR§30-5.1.c.3.A.]**

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

3.5.8. **Deviations.**

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

**[45CSR§30-5.1.c.3.C.]**

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

[45CSR§30-5.1.c.3.B.]

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

[45CSR§30-4.3.h.1.B.]

### 3.6. Compliance Plan

- 3.6.1. None

### 3.7. Permit Shield

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

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

- a. 45CSR19 – *Requirements for Pre-Construction Review, Determination of Emission Offsets for Proposed New or Modified Stationary Sources of Air Pollutants and Emission Trading for Intrasource Pollutants:* The facility is in an SO<sub>2</sub> non-attainment area, but facility-wide SO<sub>2</sub> PTE of the plant is less than 100 TPY. Therefore, the facility is not defined as a “major stationary source” under 45CSR19.
- b. 45CSR27 – *To Prevent and Control the Emissions of Toxic Air Pollutants:* Natural gas is included as a petroleum product and contains less than 5% benzene by weight. 45CSR§27-2.4 exempts 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.”
- c. 40 C.F.R. 63 Subpart HH – *National Emission Standards for Hazardous Air Pollutants for Oil and Natural Gas Production Facilities:* The facility would not be subject to the equipment leak standards under 40CFR§63.769 because it is an area source of HAPs, which limits applicability under Subpart HH to only the (TEG) dehydration unit according to §63.760(b)(2).
- d. 40 C.F.R. 63 Subpart DDDDD – *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters:* This subpart does not apply to the facility since it is not a major source of HAPs as defined in 40CFR§63.7575.
- e. 40 C.F.R. 63 Subpart JJJJJ – *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources:* This subpart does not apply to the facility since the heaters are fueled by natural gas and gas-fired boilers are exempt per 40CFR§63.11195(e).

**4.0 Hot Oil Heaters [emission unit ID(s): S001, S016-S019, S052-S053]**

**4.1. Limitations and Standards**

4.1.1. The MDHI of the Hot Oil Heater designated as S001 shall not exceed 216.7 MMBTU/hr and, for each Hot Oil Heater designated as S016-S019 and S052-S053, shall not exceed 61.58 MMBTU/hr. All Hot Oil Heaters (S001, S016-S019, S052-S053) shall be equipped with Low-NOx burners. **[45CSR13, R13-2896, Condition 5.1.1.]**

4.1.2. Maximum emissions from the Hot Oil Heaters shall not exceed the following:

a. The maximum emissions from S001 shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
S001	Nitrogen Oxides	9.75	42.71
	Carbon Monoxide	3.25	14.24
	PM <sub>2.5</sub> /PM <sub>10</sub> /PM <sup>(1)(2)</sup>	1.61	7.07
	SO <sub>2</sub> <sup>(3)</sup>	0.15	0.67
	VOCs	0.37	1.61

(1) Includes Condensables.

(2) Compliance with this limit will ensure compliance with 45CSR§2-4.1.b. (condition 4.1.4.b)

(3) Compliance with this limit will ensure compliance with 45CSR§10-3.1.e.

b. The maximum emissions from each heater S016-S019 and S052-S053 shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
S016-S019, S052-S053	Nitrogen Oxides	1.48	6.47
	Carbon Monoxide	3.63	15.91
	SO <sub>2</sub> <sup>(3)</sup>	0.04	0.19
	PM <sub>2.5</sub> /PM <sub>10</sub> /PM <sup>(1)(2)</sup>	0.46	2.01
	VOCs	0.33	1.45

(1) Includes Condensables.

(2) Compliance with this limit will ensure compliance with 45CSR§2-4.1.b. (condition 4.1.4.b)

(3) Compliance with this limit will ensure compliance with 45CSR§10-3.1.e.

**[45CSR§2-4.1.b.; 45CSR§10-3.1.e.; 45CSR13, R13-2896, Condition 5.1.2.]**

4.1.3. The quantity of natural gas that shall be consumed in the 216.7 MMBTU/hr Hot Oil Heater (S001) shall not exceed 225,571 standard cubic feet per hour and 1976 x 10<sup>6</sup> standard cubic feet per year. The quantity of

natural gas that shall be consumed in each 61.58 MMBTU/hr Hot Oil Heaters (S016-S019 and S052-S053) shall not exceed 64,101 standard cubic feet per hour and  $562 \times 10^6$  standard cubic feet per year.  
**[45CSR13, R13-2896, Condition 5.1.3.]**

4.1.4. **45CSR2**

Each Hot Oil Heater is subject to the applicable limitations and standards under 45CSR2, including the requirements as given below under (a) through (c):

- a. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six minute block average.  
**[45CSR§2-3.1.]**
- b. The permittee shall not cause, suffer, allow or permit the discharge of particulate matter into the open air from the fuel burning units, measured in terms of pounds per hour in excess of the amount determined as follows:
  - (1) The product of 0.09 and the total design heat input for the fuel burning units in million British Thermal Units (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.  
**[45CSR§2-4.1(b)]**
- c. The visible emission standards set forth in section 3 of 45CSR2 shall apply at all times except in periods of start-ups, shutdowns and malfunctions. Where the Director believes that start-ups and shutdowns are excessive in duration and/or frequency, the Director may require an owner or operator to provide a written report demonstrating that such frequent start-ups and shutdowns are necessary.  
**[45CSR§2-9.1.]**

**[45CSR13, R13-2896, Condition 5.1.4.]**

4.1.5. **40 CFR 60, Subpart Db**

Hot Oil Heater S001 is subject to the applicable limitations and standards under 40 CFR 60, Subpart Db, including the requirements as given below under (a) through (c):

- a. Units firing only very low sulfur oil, gaseous fuel, a mixture of these fuels, or a mixture of these fuels with any other fuels with a potential SO<sub>2</sub> emission rate of 140 ng/J (0.32 lb/MMBtu) heat input or less are exempt from the SO<sub>2</sub> emissions limit in paragraph (k)(1) of this section.  
**[45CSR16; 40CFR§60.42b(k)(2)]**
- b. Except as provided under paragraphs (k) and (l) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that is subject to the provisions of this section and that combusts only coal, oil, or natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain NO<sub>x</sub> (expressed as NO<sub>2</sub>) in excess of the following emission limits:  
**[45CSR16; 40CFR§60.44b(a)]**
  - (1) Low heat release rate: 0.10 lb/MMBtu
  - (2) High heat release rate: 0.20 lb/MMBtu**[45CSR16; 40CFR§§60.44b(a)(1)(i) and (ii)]**

- c. Except as provided under paragraphs (g), (h), and (i) of this section, the owner or operator of an affected facility subject to a NO<sub>x</sub> standard under §60.44b shall comply with either paragraphs (b)(1) or (b)(2) of this section.

**[45CSR16; 40CFR§60.48b(b)]**

- (1) Install, calibrate, maintain, and operate CEMS for measuring NO<sub>x</sub> and O<sub>2</sub> (or CO<sub>2</sub>) emissions discharged to the atmosphere, and shall record the output of the system.

**[45CSR16; 40CFR§60.48b(b)(1)]**

- d. Pursuant to §60.49b(r)(2)(iv), the WVDAQ approves quarterly fuel sampling for S001.

**[45CSR13, R13-2896, Condition 5.1.5.]**

4.1.6. **40 CFR 60, Subpart Dc**

Hot Oil Heaters S016-S019 and S052-S053 are subject to all applicable provisions of 40 CFR 60, Subpart Dc, provided that compliance with any more stringent limitation set forth under this permit shall also be demonstrated. Recordkeeping and reporting requirements shall be conducted in accordance with §60.48c. These reports shall be submitted in accordance with the time lines and in the order set forth in §60.48c and submitted to the addresses listed in Section 3.5.3.

**[45CSR13, R13-2896, Condition 5.1.6.]**

## 4.2. Monitoring Requirements

- 4.2.1. At such reasonable times as the Secretary may designate, the permittee shall conduct Method 9 emission observations for the purpose of demonstrating compliance with section 4.1.4 of this permit. Method 9 shall be conducted in accordance with 40 CFR 60 Appendix A.

**[45CSR§2-3.2; 45CSR13, R13-2896, Condition 5.2.1.]**

4.2.2. **40 CFR 60, Subpart Db**

Hot Oil Heater S001 is subject to the applicable limitations and standards under 40 CFR 60, Subpart Db:

- a. CEMS shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero span.

**[45CSR16; 40CFR§60.48b(c)]**

- b. The 1-hour average NO<sub>x</sub> emission rates measured by the continuous NO<sub>x</sub> monitor required by condition 4.1.5. and required under 40CFR§60.13(h) shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under 40CFR§60.44b. The 1-hour averages shall be calculated using the data points required under 40CFR§60.13(h)(2).

**[45CSR16; 40CFR§60.48b(d)]**

- c. The procedures under 40CFR§60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems.

1. For affected facilities combusting coal, wood or municipal-type solid waste, the span value for a COMS shall be between 60 and 80 percent.
2. For affected facilities combusting coal, oil, or natural gas, the span value for NO<sub>x</sub> is determined using one of the following procedures:



- i. Except as provided under paragraph (c)(2)(ii) of this condition, NO<sub>x</sub> span values shall be determined as follows:

Fuel	Span values for NO <sub>x</sub> (ppm)
Natural gas	500.
Oil	500.
Coal	1,000.
Mixtures	500 (x + y) + 1,000z.

Where:

x = Fraction of total heat input derived from natural gas;

y = Fraction of total heat input derived from oil; and

z = Fraction of total heat input derived from coal.

- ii. As an alternative to meeting the requirements of paragraph (c)(2)(i) of this condition, the owner or operator of an affected facility may elect to use the NO<sub>x</sub> span values determined according to section 2.1.2 in appendix A to part 75 of this chapter.
3. All span values computed under paragraph (e)(2)(i) of this section for combusting mixtures of regulated fuels are rounded to the nearest 500 ppm. Span values computed under paragraph (e)(2)(ii) of this section shall be rounded off according to section 2.1.2 in appendix A to part 75 of this chapter.

**[45CSR16; 40CFR§60.48b(e)]**

- d. When NO<sub>x</sub> emission data are not obtained because of CEMS breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7 of appendix A of this part, Method 7A of appendix A of this part, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days.

**[45CSR16; 40CFR§60.48b(f)]**

### 4.3. Testing Requirements

- 4.3.1. At such reasonable time(s) as the Secretary may designate, in accordance with the provisions of 3.3 of this permit, the permittee shall conduct or have conducted test(s) to determine compliance with the emission limitations established under 4.1.2(a) and (b).

**[45CSR§§2-8.1.b and 8.1.c; 45CSR13, R13-2896, Condition 5.3.1.]**

### 4.4. Recordkeeping Requirements

#### 4.4.1. Records of Fuel Usage

- a. To demonstrate continuous compliance with sections 4.1.1-4.1.3, the permittee shall monitor and record the monthly and twelve (12) month rolling total of the amount of natural gas consumed in S001, S016-S019, and S052-S053.

**[45CSR13, R13-2896, Condition 5.4.1.]**

- b. The owner or operator shall maintain records of the operating schedule and the quantity and quality of fuel consumed in each fuel burning unit in a manner to be established by the Director. Such records are

to be maintained on-site and made available to the Director or his duly authorized representative upon request.

**[45CSR§2-8.3.c]**

- c. 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:
  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]**

4.4.2. **40 CFR 60, Subpart Db**

Hot Oil Heater S001 is subject to the applicable limitations and standards under 40 CFR 60, Subpart Db:

- a. The owner or operator of an affected facility shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for coal, distillate oil, residual oil, natural gas, wood, and municipal-type solid waste for the reporting period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.

**[45CSR16; 40CFR§60.49b(d)(1)]**

- b. The owner or operator of an affected facility subject to the NO<sub>x</sub> standards under §60.44b shall maintain records of the following information for each steam generating unit operating day:
  1. Calendar date;
  2. The average hourly NO<sub>x</sub> emission rates (expressed as NO<sub>2</sub>) (ng/J or lb/MMBtu heat input) measured or predicted;
  3. The 30-day average NO<sub>x</sub> emission rates (ng/J or lb/MMBtu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days;
  4. Identification of the steam generating unit operating days when the calculated 30-day average NO<sub>x</sub> emission rates are in excess of the NO<sub>x</sub> emissions standards under §60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken;
  5. Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken;
  6. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data;
  7. Identification of “F” factor used for calculations, method of determination, and type of fuel combusted;
  8. Identification of the times when the pollutant concentration exceeded full span of the CEMS;

9. Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and
10. Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of 40CFR60.

**[45CSR16; 40CFR§60.49b(g)]**

- c. The owner or operator of an affected facility who elects to use the fuel-based compliance alternatives in 40CFR§60.42b or §60.43b shall either:
  1. The owner or operator of an affected facility who elects to demonstrate that the affected facility combusts only very low sulfur oil, natural gas, wood, a mixture of these fuels, or any of these fuels (or a mixture of these fuels) in combination with other fuels that are known to contain an insignificant amount of sulfur in 40CFR§60.42b(j) or §60.42b(k) shall obtain and maintain at the affected facility fuel receipts (such as a current, valid purchase contract, tariff sheet, or transportation contract) from the fuel supplier that certify that the oil meets the definition of distillate oil and gaseous fuel meets the definition of natural gas as defined in §60.41b and the applicable sulfur limit. For the purposes of this section, the distillate oil need not meet the fuel nitrogen content specification in the definition of distillate oil. Reports shall be submitted to the Administrator certifying that only very low sulfur oil meeting this definition, natural gas, wood, and/or other fuels that are known to contain insignificant amounts of sulfur were combusted in the affected facility during the reporting period; or
  2. The owner or operator of an affected facility who elects to demonstrate compliance based on fuel analysis in §60.42b or §60.43b shall develop and submit a site-specific fuel analysis plan to the Administrator for review and approval no later than 60 days before the date you intend to demonstrate compliance. Each fuel analysis plan shall include a minimum initial requirement of weekly testing and each analysis report shall contain, at a minimum, the following information:
    - i. The potential sulfur emissions rate of the representative fuel mixture in ng/J heat input;
    - ii. The method used to determine the potential sulfur emissions rate of each constituent of the mixture. For distillate oil and natural gas a fuel receipt or tariff sheet is acceptable;
    - iii. The ratio of different fuels in the mixture; and
    - iv. The owner or operator can petition the Administrator to approve monthly or quarterly (condition 4.1.5.d.) sampling in place of weekly sampling.

**[45CSR16; 40CFR§60.49b(r)]**

**4.4.3. 40 CFR 60, Subpart Dc**

Hot Oil Heaters S016-S019 and S052-S053 are subject to the following applicable provisions of 40 CFR 60, Subpart Dc:

- a. Except as provided under paragraphs (b) and (c) of this condition, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

**[45CSR16; 40CFR§60.48c(g)(1)]**

- b. As an alternative to meeting the requirements of paragraph (a) of this condition, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in §60.48c(f) to demonstrate compliance with the SO<sub>2</sub> 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.  
**[45CSR16; 40CFR§60.48c(g)(2)]**
- c. As an alternative to meeting the requirements of paragraph (a) of this condition, 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 this subpart) 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 SO<sub>2</sub> 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.  
**[45CSR16; 40CFR§60.48c(g)(3)]**
- d. All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.  
**[45CSR16; 40CFR§60.48c(i)]**

#### **4.5. Reporting Requirements**

- 4.5.1. 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 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, R13-2896, Condition 5.5.1.]**
- 4.5.2. **40 CFR 60, Subpart Db**  
Hot Oil Heater S001 is subject to the applicable limitations and standards under 40 CFR 60, Subpart Db:
  - a. Owner/operator shall report performance test data from the initial performance test and the performance evaluation of the CEMS using the applicable performance specification in Appendix B of this part.  
**[45CSR16; 40CFR§60.48b(b)]**
  - b. Owner/operator is required to submit excess emission reports for any excess emissions that occurred during the reporting period.  
**[45CSR16; 40CFR§60.48b(h)(2)(i)]**

#### **4.6. Compliance Plan**

- 4.6.1. None

**5.0 Cryogenic HMO/Stabilizer Heaters [emission unit ID(s): S013, S026, S037, S041, S045, S049, S056]**

**5.1. Limitations and Standards**

5.1.1. **Maximum Design Heat Input.** The maximum design heat input for the Cryogenic HMO Heaters shall not exceed 26.3 MMBTU/hr for units S013, S026, S037, S045, S049 and 54.67 MMBTU/hr for unit S041. The maximum design heat input for the Stabilizer Heater (S056) shall not exceed 10.09 MMBTU/hr. **[45CSR13, R13-2896, Condition 6.1.1.]**

5.1.2. Maximum emissions from the Cryogenic HMO/Stabilizer Heaters shall not exceed the following:

a. The maximum emissions from Cryogenic HMO Heaters S013, S026, S037, S045, S049 shall not exceed the following individual unit limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
S013, S026, S037, S045, S049	Nitrogen Oxides	2.58	11.29
	Carbon Monoxide	2.17	9.49
	PM <sub>2.5</sub> /PM <sub>10</sub> /PM <sup>(1)(2)</sup>	0.20	0.86
	SO <sub>2</sub> <sup>(3)</sup>	0.02	0.08
	VOCs	0.14	0.62

(1) Includes Condensables.

(2) Compliance with this limit will ensure compliance with 45CSR§2-4.1.b.

(3) Compliance with this limit will ensure compliance with 45CSR§10-3.1.e.

b. The maximum emissions from Cryogenic HMO Heater S041 shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
S041	Nitrogen Oxides	5.36	23.48
	Carbon Monoxide	4.50	19.72
	PM <sub>2.5</sub> /PM <sub>10</sub> /PM <sup>(1)(2)</sup>	0.41	1.78
	SO <sub>2</sub> <sup>(3)</sup>	0.04	0.17
	VOCs	0.29	1.29

(1) Includes Condensables.

(2) Compliance with this limit will ensure compliance with 45CSR§2-4.1.b.

(3) Compliance with this limit will ensure compliance with 45CSR§10-3.1.e.

- c. The maximum emissions from Stabilizer Heater S056 shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
S056	Nitrogen Oxides	0.99	4.33
	Carbon Monoxide	0.83	3.64
	PM <sub>2.5</sub> /PM <sub>10</sub> /PM <sup>(1)(2)</sup>	0.08	0.33
	SO <sub>2</sub> <sup>(3)</sup>	0.01	0.03
	VOCs	0.05	0.24

- (1) Includes Condensables.  
 (2) Compliance with this limit will ensure compliance with 45CSR§2-4.1.b.  
 (3) Compliance with this limit will ensure compliance with 45CSR§10-3.1.e.

**[45CSR§2-4.1.b.; 45CSR§10-3.1.e.; 45CSR13, R13-2896, Condition 6.1.2.]**

- 5.1.3. To demonstrate compliance with Section 5.1.2, the quantity of natural gas that shall be consumed in each of the 26.3 MMBTU/hr Cryogenic HMO Heaters (S013, S026, S037, S045, S049) shall not exceed 27,377 standard cubic feet per hour and 240 x 10<sup>6</sup> standard cubic feet per year. The quantity of natural gas that shall be consumed in the 54.67 MMBTU/hr Cryogenic HMO Heater (S041) shall not exceed 56,908 standard cubic feet per hour and 499 x 10<sup>6</sup> standard cubic feet per year. The quantity of natural gas that shall be consumed in the 10.09 MMBTU/hr Stabilizer Heater (S056) shall not exceed 10,503 standard cubic feet per hour and 92 x 10<sup>6</sup> standard cubic feet per year.

**[45CSR13, R13-2896, Condition 6.1.3.]**

5.1.4. **45CSR2**

Each Cryogenic HMO and Stabilizer Heaters is subject to the applicable limitations and standards under 45CSR2, including the requirements as given below under (a) through (c):

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

**[45CSR§2-3.1.]**

- b. The permittee shall not cause, suffer, allow or permit the discharge of particulate matter into the open air from the fuel burning units, measured in terms of pounds per hour in excess of the amount determined as follows:

- (1) The product of 0.09 and the total design heat input for the fuel burning units in million British Thermal Units (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.

**[45CSR§2-4.1(b)]**

- c. The visible emission standards set forth in section 3 of 45CSR2 shall apply at all times except in periods of start-ups, shutdowns and malfunctions. Where the Director believes that start-ups and shutdowns are excessive in duration and/or frequency, the Director may require an owner or operator to provide a written report demonstrating that such frequent start-ups and shutdowns are necessary.

**[45CSR§2-9.1.]**

**[45CSR13, R13-2896, Condition 6.1.4.]**

**5.1.5. 40 CFR 60, Subpart Dc**

The Cryogenic HMO and Stabilizer Heaters are subject to all applicable provisions of 40 CFR 60, Subpart Dc, provided that compliance with any more stringent limitation set forth under this permit shall also be demonstrated. Recordkeeping and reporting requirements shall be conducted in accordance with 40CFR§60.48c. These reports shall be submitted in accordance with the time lines and in the order set forth in 40CFR§60.48c and submitted to the addresses listed in Section 3.5.3.

**[45CSR13, R13-2896, Condition 6.1.5.]**

**5.2. Monitoring Requirements**

5.2.1. At such reasonable times as the Secretary may designate, the permittee shall conduct Method 9 emission observations for the purpose of demonstrating compliance with section 5.1.4 of this permit. Method 9 shall be conducted in accordance with 40 CFR 60 Appendix A.

**[45CSR13, R13-2896, Condition 6.2.1.]**

**5.3. Testing Requirements**

5.3.1. Compliance with the visible emission requirements of section 5.1.4 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 5.1.4. Continuous opacity monitors shall not be required on fuel burning units which employ wet scrubbing systems for emission control.

**[45CSR§2-3.2.; 45CSR13, R13-2896, Condition 6.3.1.]**

5.3.2. At such reasonable time(s) as the Secretary may designate, in accordance with the provisions of 3.3 of this permit, the permittee shall conduct or have conducted test(s) to determine compliance with the emission limitations established under 5.1.2(a), (b), and (c).

**[45CSR§§2-8.1.b and 8.1.c]**

**5.4. Recordkeeping Requirements**

**5.4.1. Records of Fuel Usage**

a. To demonstrate compliance with sections 5.1.1, 5.1.2, 5.1.3, the permittee shall monitor and record the monthly and twelve-month rolling total of the amount of natural gas consumed in all heaters listed in this section.

**[45CSR13, R13-2896, Condition 6.4.1.]**

b. The owner or operator shall maintain records of the operating schedule and the quantity and quality of fuel consumed in each fuel burning unit in a manner to be established by the Director. Such records are to be maintained on-site and made available to the Director or his duly authorized representative upon request.

**[45CSR§2-8.3.c]**

c. 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:

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]**

- 5.4.2. The permittee shall maintain records of all monitoring data required by Section 5.2.1 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, R13-2896, Condition 6.4.2.]**

- 5.4.3. **40 CFR 60, Subpart Dc**

The Cryogenic HMO and Stabilizer Heaters are subject to the following applicable provisions of 40 CFR 60, Subpart Dc:

- a. Except as provided under paragraphs (b) and (c) of this condition, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

**[45CSR16; 40CFR§60.48c(g)(1)]**

- b. As an alternative to meeting the requirements of paragraph (a) of this condition, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in §60.48c(f) to demonstrate compliance with the SO<sub>2</sub> 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.

**[45CSR16; 40CFR§60.48c(g)(2)]**

- c. As an alternative to meeting the requirements of paragraph (a) of this condition, 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 this subpart) 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 SO<sub>2</sub> 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.

**[45CSR16; 40CFR§60.48c(g)(3)]**

- d. All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

**[45CSR16; 40CFR§60.48c(i)]**



## **5.5. Reporting Requirements**

- 5.5.1. 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, R13-2896, Condition 6.5.1.]**

## **5.6. Compliance Plan**

- 5.6.1. None

**6.0 Regeneration Gas Heaters [emission unit ID(s): S012, S024, S036, S040, S044, S048]**

**6.1 Limitations and Standards**

6.1.1. **Maximum Design Heat Input.** The maximum design heat input for the Regeneration Gas Heaters shall not exceed 9.7 MMBTU/hr for units S012, S024, S036, S044, S048 and 19.28 MMBTU/hr for unit S040. **[45CSR13, R13-2896, Condition 7.1.1.]**

6.1.2. Maximum emissions from the Regeneration Gas Heaters shall not exceed the following:

a. The maximum emissions from units S012, S024, S036, S044, and S048 shall not exceed the following individual unit limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
S012, S024, S036, S044, S048	Nitrogen Oxides	0.95	4.17
	Carbon Monoxide	0.80	3.50
	PM <sub>2.5</sub> /PM <sub>10</sub> /PM <sup>(1)</sup>	0.07	0.32
	VOCs	0.05	0.23

(1) Includes Condensables.

b. The maximum emissions from unit S040 shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
S040	Nitrogen Oxides	1.89	8.28
	Carbon Monoxide	1.59	6.95
	PM <sub>2.5</sub> /PM <sub>10</sub> /PM <sup>(1)</sup>	0.14	0.63
	VOCs	0.10	0.46

(1) Includes Condensables.

**[45CSR13, R13-2896, Condition 7.1.2.]**

6.1.3. To demonstrate compliance with Section 6.1.2, the quantity of natural gas that shall be consumed in each of the 9.7 MMBTU/hr Regeneration Gas Heaters (S012, S024, S036, S044, and S048) shall not exceed 10,097 standard cubic feet per hour and 88 x 10<sup>6</sup> standard cubic feet per year. The quantity of natural gas that shall be consumed in the 19.28 MMBTU/hr Regeneration Gas Heater (S040) shall not exceed 20,069 standard cubic feet per hour and 176 x 10<sup>6</sup> standard cubic feet per year.

**[45CSR13, R13-2896, Condition 7.1.3.]**

**6.2 Monitoring Requirements**

6.2.1. None

### **6.3. Testing Requirements**

6.3.1. None

### **6.4. Recordkeeping Requirements**

6.4.1. To demonstrate compliance with sections 6.1.1, 6.1.2, 6.1.3, the permittee shall monitor and record the monthly and twelve month rolling total of the amount of natural gas consumed in all heaters listed in this section.

[45CSR13, R13-2896, Condition 7.4.1.]

### **6.5. Reporting Requirements**

6.5.1. None

### **6.6. Compliance Plan**

6.6.1. None

**7.0 Fire Pumps [emission unit ID(s): S002, S003]**

**7.1. Limitations and Standards**

7.1.1. The quantity of diesel fuel that shall be consumed in each of the 700 hp diesel-fired fire pump engines, Caterpillar Model C18 (S002, S003) shall not exceed 35.9 gallons per hour and 3,590 gallons per rolling twelve (12) month period during non-emergency use.

**[45CSR13, R13-2896, Condition 8.1.1.]**

7.1.2. Maximum emissions from each of the 700 hp diesel-fired fire pumps, Caterpillar Model C18 (S002, S003) shall not exceed the following limits for the entire life of the engine:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
S002	NMHC + Nitrogen Oxides <sup>(1)</sup>	4.63	0.23
	Carbon Monoxide	4.01	0.20
S003	PM <sub>2.5</sub> /PM <sub>10</sub> /PM <sup>(1)(2)</sup>	0.23	0.01
	Volatile Organic Compounds	4.63	0.23

(1) Calculated using emission limits in Table 4 of 40CFR60, Subpart IIII

(2) Includes Condensables

**[45CSR16; 40CFR§§60.4205(c) and 4206; Table 4 of 40CFR60, Subpart IIII; 45CSR13, R13-2896, Conditions 8.1.2. and 8.1.4.]**

7.1.3. **Maximum Annual Operation Limitation.** The maximum yearly hours of operation for each of the 700 hp diesel fired fire pump engines, Caterpillar Model C18 (S002, S003) shall not exceed an annual limit of 100 hours of non-emergency use as recorded with a non-resettable hour meter. Compliance with the Maximum Yearly Operation Limitation shall be determined using a twelve (12) month rolling total. A twelve (12) month rolling total shall mean the sum of the hours of operation at any given time during the previous twelve consecutive calendar months.

**[45CSR13, R13-2896, Condition 8.1.3.]**

7.1.4. The permittee must ensure diesel fuel used in unit meets the requirements of 40CFR§80.510(b) for nonroad diesel fuel.

**[45CSR16; 40CFR§60.4207(b)]**

7.1.5. **40 CFR 63, Subpart ZZZZ**

S002 and S003 are each subject to all applicable regulations given under 40 CFR 63, Subpart ZZZZ including the following:

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

**[45CSR34; 40CFR§63.6590(c); 45CSR13, R13-2896, Condition 8.1.5.]**

7.1.6. The permittee must satisfy the following compliance requirements:

- a. If the permittee is an owner or operator and must comply with the emission standards specified in this subpart, the permittee must do all of the following, except as permitted under paragraph (d) of this section:
  1. Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;
  2. Change only those emission-related settings that are permitted by the manufacturer; and
  3. Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to the permittee.
- b. The permittee shall comply with the emissions standards specified in 40CFR § 60.4205(c) by purchasing an engine certified to the emission standards. The unit must be installed and configured according to the manufacturer's related specifications.
- c. If the permittee owns or operates an emergency stationary ICE, the permittee must operate the emergency stationary ICE according to the requirements in paragraphs (c)(1) through (3) of this condition. In order for the engine to be considered an emergency stationary ICE, 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 (c)(1) through (3) of this condition, is prohibited. If the permittee does not operate the engine according to the requirements in paragraphs (c)(1) through (3) of this condition, the engine will not be considered an emergency engine 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. The permittee may operate the emergency stationary ICE for any combination of the purposes specified in paragraphs (c)(2)(i) through (iii) of this condition for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (c)(3) of this condition counts as part of the 100 hours per calendar year allowed by this paragraph (c)(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.
    - ii. Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.
    - iii. Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

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 (c)(2) of this section. Except as provided in paragraph (c)(3)(i) of this condition, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.
  - i. The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:
    - A. The engine is dispatched by the local balancing authority or local transmission and distribution system operator;
    - B. The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.
    - C. The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.
    - D. The power is provided only to the facility itself or to support the local transmission and distribution system.
    - E. The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.
  - d. If the permittee does not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or the permittee changes emission-related settings in a way that is not permitted by the manufacturer, the permittee must demonstrate compliance as follows:
    1. If the permittee is an owner or operator of a stationary CI internal combustion engine greater than 500 HP, the permittee 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 with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. The permittee must conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.

**[45CSR16; 40CFR§§60.4211(a), (c), (f), (g)(3)]**

- 7.1.7. The permittee shall comply with the General Provisions of 40CFR60, specified in Table 8 of 40CFR60, Subpart III.  
[45CSR16; 40CFR§60.4218]

## **7.2. Monitoring Requirements**

- 7.2.1. The permittee must install a non-resettable meter to monitor hours of operation.  
[45CSR16; 40CFR§60.4209(a)]

## **7.3. Testing Requirements**

- 7.3.1. Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests pursuant to 40CFR60, Subpart III must do so according to 40CFR§§60.4212(a) through (e).  
[45CSR16; 40CFR§60.4212]

## **7.4. Recordkeeping Requirements**

- 7.4.1. If the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.  
[45CSR16; 40CFR§60.4214(b)]

## **7.5. Reporting Requirements**

- 7.5.1. None

## **7.6. Compliance Plan**

- 7.6.1. None

## 8.0 Emergency Generator [emission unit ID(s): S057]

### 8.1 Limitations and Standards

- 8.1.1. The permittee is authorized to install and operate one (1) or more natural gas-fired, 4-Stroke Lean Burn (4SLB) spark ignition reciprocating internal combustion engines with an aggregate horsepower not to exceed 16,000 to act as emergency generators. Maximum emissions from each of the engines shall not exceed their individual limits as given in 40 CFR 60, Subpart JJJJ for the entire life of the engine. The maximum aggregate emissions from all such engines shall not exceed those given in the following table:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
S057	Nitrogen Oxides <sup>(1)</sup>	70.55	3.53
	Carbon Monoxide <sup>(1)</sup>	141.10	7.05
	PM <sub>2.5</sub> /PM <sub>10</sub> /PM <sup>(2)</sup>	1.28	0.06
	Volatile Organic Compounds <sup>(1)</sup>	35.27	1.76
	Formaldehyde	6.76	0.34

(1) Calculated using emission limits in Table 1 of 40CFR60, Subpart JJJJ

(2) Includes Condensables

**[45CSR16; 40CFR§§60.4233(e) and 4234; Table 1 of 40CFR60, Subpart JJJJ; 45CSR13, R13-2896, Conditions 9.1.1. and 9.1.3.]**

- 8.1.2. **Maximum Annual Operation Limitation.** The maximum yearly hours of operation for each of the engines shall not exceed an annual limit of 100 hours of non-emergency use as recorded with a non-resettable hour meter. Compliance with the Maximum Yearly Operation Limitation shall be determined using a twelve (12) month rolling total. A twelve (12) month rolling total shall mean the sum of the hours of operation at any given time during the previous twelve consecutive calendar months.

**[45CSR16; 40CFR§60.4237; 45CSR13, R13-2896, Condition 9.1.2.]**

- 8.1.3. If the permittee owns or operates an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (a) through (c) 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 (a) through (c) of this condition, is prohibited. If you do not operate the engine according to the requirements in paragraphs (a) through (c) of this condition, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

- a. There is no time limit on the use of emergency stationary ICE in emergency situations.
- b. You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (b)(1) through (3) of this condition for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (c) of this condition counts as part of the 100 hours per calendar year allowed by this paragraph (b).



1. 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.
  2. Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Emergency Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.
  3. Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.
- c. 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 (b) of this condition. Except as provided in paragraph (c)(1) of this condition, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.
1. The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:
    - i. The engine is dispatched by the local balancing authority or local transmission and distribution system operator;
    - ii. The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.
    - iii. The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.
    - iv. The power is provided only to the facility itself or to support the local transmission and distribution system.
    - v. The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

**[45CSR16; 40CFR§60.4243(d)]**

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

**[45CSR16; 40CFR§60.4243(g)]**

8.1.5. The permittee must demonstrate compliance according to one of the methods specified in paragraphs (a) and (b) of this condition.

a. Purchasing an engine certified according to procedures specified in this subpart, for the same model year and demonstrating compliance according to one of the methods specified in 40CFR§60.4243(a).

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

1. 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.

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

**[45CSR16; 40CFR§§60.4243(b)(1) and (b)(2)]**

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

**[45CSR16; 40CFR§60.4243(e)]**

8.1.7. Table 3 to 40CFR60, Subpart JJJJ shows which parts of the General Provisions in 40CFR§§60.1 through 60.19 apply to the permittee.

**[45CSR16; 40CFR§60.4246]**

8.1.8. **40 CFR 63, Subpart ZZZZ**

The emergency generators (S057) are each subject to all applicable regulations given under 40 CFR 63, Subpart ZZZZ including the following:

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

**[45CSR34; 40CFR§63.6590(c); 45CSR13, R13-2896, Condition 9.1.4.]**

## 8.2. Monitoring Requirements

8.2.1. None

## 8.3. Testing Requirements

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

- a. Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in §60.8 and under the specific conditions that are specified by Table 2 to 40CFR60, Subpart JJJJ.
- b. You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c). If your stationary SI internal combustion engine is non-operational, you do not need to startup the engine solely to conduct a performance test; however, you must conduct the performance test immediately upon startup of the engine.
- c. You must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.
- d. To determine compliance with the NO<sub>x</sub> mass per unit output emission limitation, convert the concentration of NO<sub>x</sub> in the engine exhaust using Equation 1 of this section:

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

Where:

ER = Emission rate of NO<sub>x</sub> in g/HP-hr.

C<sub>d</sub> = Measured NO<sub>x</sub> concentration in parts per million by volume (ppmv).

1.912 × 10<sup>-3</sup> = Conversion constant for ppm NO<sub>x</sub> to grams per standard cubic meter at 20 degrees Celsius.

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

T = Time of test run, in hours.

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

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

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

Where:

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

$C_d$  = Measured CO concentration in ppmv.

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

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

T = Time of test run, in hours.

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

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

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

Where:

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

$C_d$  = VOC concentration measured as propane in ppmv.

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

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

T = Time of test run, in hours.

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

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

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

Where:

RF<sub>i</sub> = 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.

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

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.

$$C_{P_{eq}} = 0.6098 \times C_{icorr} \quad (Eq. 6)$$

Where:

$C_{P_{eq}}$  = Concentration of compound i in mg of propane equivalent per DSCM.

[45CSR16; 40CFR§60.4244]

## 8.4. Recordkeeping Requirements

- 8.4.1. Owners or operators of stationary SI ICE must meet the following notification, reporting and recordkeeping requirements.
- a. Owners and operators of all stationary SI ICE must keep records of the information in paragraphs (a)(1) through (4) of this section.
    1. All notifications submitted to comply with this subpart and all documentation supporting any notification.
    2. Maintenance conducted on the engine.
    3. If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable.
    4. If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to 40CFR§60.4243(a)(2), documentation that the engine meets the emission standards.
  - b. For all stationary SI emergency ICE greater than or equal to 500 HP manufactured on or after July 1, 2010, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than or equal to 130 HP and less than 500 HP manufactured on or after July 1, 2011 that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than 25 HP

and less than 130 HP manufactured on or after July 1, 2008, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation.

[45CSR16; 40CFR§§60.4245(a) and (b)]

## **8.5. Reporting Requirements**

8.5.1. None

## **8.6. Compliance Plan**

8.6.1. None

## 9.0 Glycol Dehydration Units [emission unit ID(s): S006, S029, S032]

### 9.1. Limitations and Standards

9.1.1. The maximum aggregate wet natural gas throughput to Glycol Dehydration Unit S006 shall not exceed 460 MMscf/day or 167,900 MMscf/year. The maximum aggregate wet natural gas throughput to Glycol Dehydration Unit S032 shall not exceed 230 MMscf/day or 83,950 MMscf/year.  
**[45CSR13, R13-2896, Condition 10.1.1.]**

9.1.2. The maximum glycol recirculation rate in each Glycol Dehydration Unit (S006 and S032) shall not exceed 40 gallons per minute limit.  
**[45CSR13, R13-2896, Condition 10.1.2.]**

9.1.3. The maximum aggregate controlled emissions generated from each Glycol Dehydration Unit (S006 and S032), including the still vent and the flash tank, but not including the combustion exhaust emissions from the Reboiler, shall not exceed the limits given in the following tables:

a. Glycol Dehydration Unit S006:

<b>Pollutant</b>	<b>Maximum Hourly Emissions (lb/hr)</b>	<b>Maximum Annual Emissions (ton/year)</b>
VOCs	1.78	7.80
<i>n-Hexane</i>	<i>0.04</i>	<i>0.17</i>
<i>Benzene</i>	<i>0.03</i>	<i>0.13</i>
<i>Toluene</i>	<i>0.05</i>	<i>0.23</i>
<i>Xylene</i>	<i>0.03</i>	<i>0.13</i>
Total HAPs	0.15	0.66

(1) Emissions based on GLYCalc Version 4.0 using wet gas throughputs as limited under 9.1.1 and a 10% safety factor (on uncontrolled emissions).

b. Glycol Dehydration Unit S032:

<b>Pollutant</b>	<b>Maximum Hourly Emissions (lb/hr)</b>	<b>Maximum Annual Emissions (ton/year)</b>
VOCs	2.17	9.50
<i>n-Hexane</i>	0.04	0.18
<i>Benzene</i>	0.03	0.13
<i>Toluene</i>	0.12	0.52
<i>Xylene</i>	0.14	0.61
Total HAPs	0.33	1.45

(2) Emissions based on GLYCalc Version 4.0 using wet gas throughputs as limited under 9.1.1 and a 10% safety factor (on uncontrolled emissions).

**[45CSR13, R13-2896, Condition 10.1.3.]**

9.1.4. Still Vent and flash tank vapors from S006 shall be routed to the Hot Oil Heater (S001: C001) and used as fuel. Still Vent and flash tank vapors from S032 shall be routed either to the Hot Oil Heater (S001: C001) and used as fuel or sent to the associated Vapor Combustor (V003: C009) for control.

**[45CSR13, R13-2896, Condition 10.1.4.]**

9.1.5. **40 CFR 63, Subpart HH: Exemptions**

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

**[45CSR34; 40 CFR §63.764(e)(1)]**

a. The actual annual average flowrate of natural gas to the glycol dehydration unit is less than 85 thousand standard cubic meters per day, as determined by the procedures specified in §63.772(b)(1) of this subpart; or

**[45CSR34; 40 CFR §63.764(e)(1)(i)]**

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

**[45CSR34; 40 CFR §63.764(e)(1)(ii)]**

**[45CSR13, R13-2896, Condition 10.1.5.]**

9.1.6. The Reboiler (S029) shall operate according to the following requirements:

a. The MDHI of the unit shall not exceed 3.0 mmBtu/hr and it shall only be fired by natural gas;



- b. The maximum combustion exhaust emissions from the Reboiler shall not exceed the limits given in the following table:

<b>Pollutant</b>	<b>Maximum Hourly Emissions (lb/hr)</b>	<b>Maximum Annual Emissions (ton/year)</b>
Carbon Monoxide	0.25	1.08
Nitrogen Oxides	0.29	1.29

- c. As the annual emission limits given in 9.1.6(b) are based on operating 8,760 hours/year, there is no limit on the annual hours of operation or fuel usage of the Reboiler.

**[45CSR13, R13-2896, Condition 10.1.6.]**

- 9.1.7. The Vapor Combustor (V003) shall operate according to the following requirements:

- a. The vapor combustor shall be designed, operated, and maintained according to good engineering practices or manufacturing recommendations so as to achieve, at a minimum, a hydrocarbon combustion rate of 98.0%. The vapor combustor shall have an MDHI, including the pilot light, not to exceed 5.59 MMBtu/hr.
- b. The emissions from the vapor combustor (not including pass-through emissions from the regenerator still vent and flash tank) shall not exceed the following limits:

<b>Pollutant</b>	<b>Maximum Hourly Emissions (lb/hr)</b>	<b>Maximum Annual Emissions (ton/year)</b>
Carbon Monoxide	1.54	6.74
Nitrogen Oxides	0.77	3.38

- c. As the annual emission limits given in 9.1.7(b) are based on operating 8,760 hours/year, there is no limit on the annual hours of operation or waste gas combustion in the vapor combustor;
- d. The vapor combustor shall be operated with a flame present at all times, as determined by the methods specified in section 9.2.4.;
- e. The vapor combustor shall be designed for and operated with no visible emissions as determined by the methods specified in section 9.3.2. except for either (1) or (2):
1. periods not to exceed a total of one minute during any 15-minute period, determined on a monthly basis; or
  2. periods not to exceed a total of two (2) minutes during any hour, determined on a quarterly basis if the enclosed combustion device installed was a model tested under §60.5413(d) which meets the criteria in §60.5413(d)(11).
- f. The vapor combustor shall be operated at all times when emissions are vented to it;
- g. To ensure compliance with 9.1.7(f), the permittee shall monitor in accordance with sections 9.2.4. of this permit;

- h. The permittee shall operate and maintain the vapor combustor according to the manufacturer's specifications for operating and maintenance requirements to maintain the minimum guaranteed control efficiency of 98%; and
- i. The vapor combustor is subject to the applicable requirements specified in 45CSR6 (Condition 9.1.8).

**[45CSR13, R13-2896, Condition 10.1.7.]**

9.1.8. The Vapor Combustor (V003) shall operate according to the following requirements from 45CSR6:

- a. 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

$$\text{Emissions (lb/hr)} = 5.43 \times 7.14\text{E-}02 = \mathbf{0.39 \text{ lb/hr}}$$

**[45CSR§6-4.1]**

- b. Emission of Visible Particulate Matter. No person shall cause or allow emission of smoke into the atmosphere from any incinerator which is twenty percent (20%) opacity or greater.

**[45CSR§6-4.3]**

- c. The provisions of condition 9.1.8.b. shall not apply to smoke which is less than forty percent (40%) opacity, for a period or periods aggregating no more than eight (8) minutes per start-up, or six (6) minutes in any sixty (60)-minute period for stoking operations.

**[45CSR§6-4.4]**

- d. No person shall cause or allow the emission of particles of unburned or partially burned refuse or ash from any incinerator which are large enough to be individually distinguished in the open air.

**[45CSR§6-4.5]**

- e. Incinerators, including all associated equipment and grounds, shall be designed, operated and maintained so as to prevent the emission of objectionable odors.

**[45CSR§6-4.6]**

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

- a. The owner or operator shall determine actual average benzene or BTEX emissions using the model GRI-GLYCalc™, Version 3.0 or higher, and the procedures presented in the associated GRI-GLYCalc™ Technical Reference Manual. Inputs to the model shall be representative of actual operating conditions

of the glycol dehydration unit and may be determined using the procedures documented in the Gas Research Institute (GRI) report entitled “Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions” (GRI-95/0368.1); or

- b. The owner or operator shall determine an average mass rate of benzene or BTEX emissions in kilograms per hour through direct measurement using the methods in 40CFR§§63.772(a)(1)(i) or (ii), or an alternative method according to 40CFR§63.7(f). Annual emissions in kilograms per year shall be determined by multiplying the mass rate by the number of hours the unit is operated per year. This result shall be converted to megagrams per year.

[45CSR34; 40CFR§63.772(b)(2)]

## 9.2. Monitoring Requirements

- 9.2.1. For the purposes of demonstrating compliance with the maximum wet gas throughput limits set forth in 9.1.1., the permittee shall monitor and maintain monthly and rolling twelve-month records of the wet gas throughputs in each of the Glycol Dehydration Units.

[45CSR13, R13-2896, Condition 10.2.1.]

- 9.2.2. Compliance with the Maximum Glycol Recirculation Limitations set forth in 9.1.2. shall be determined using an average of a minimum of quarterly readings of the actual glycol pump(s) rate. If more than one pump is operating simultaneously then the rate of each operating pump shall be recorded and totaled for compliance purposes.

[45CSR13, R13-2896, Condition 10.2.2.]

- 9.2.3. Representative gas sample collection and analysis frequency for dehydration units shall be determined as set forth in the schedule provided in the following table:

<b>Wet Gas Sampling and Analysis Frequency for Dehydration Units Based on Potential HAP Emission Rates</b>	
Each dehydration unit exempt from § 63.764(d) requirements and with federally enforceable controls	Upon request by the Secretary.
Each dehydration unit exempt from § 63.764(d) requirements and without federally enforceable controls	An initial compliance evaluation within 180 days of registration issuance or within 180 days of start-up of the dehydration unit, whichever is later.

[45CSR13, R13-2896, Condition 10.2.3.]

- 9.2.4. To demonstrate compliance with the pilot flame requirements of sections 9.1.7(d), the permittee shall follow (a) and (b).

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

- b. For any absence of pilot flame, or other indication of smoking or improper equipment operation, you must ensure the equipment is returned to proper operation as soon as practicable after the event occurs.

At a minimum, you must: (1) Check the air vent for obstruction. If an obstruction is observed, you must clear the obstruction as soon as practicable. (2) Check for liquid reaching the combustor.

- c. The permittee is exempt from the pilot flame requirements of paragraphs (a) and (b) of this section if the permittee installed an enclosed combustion device model that was tested under §60.5413(d) which meets the criteria in §60.5413(d)(11).

**[45CSR13, R13-2896, Condition 10.2.4.]**

### **9.3. Testing Requirements**

- 9.3.1. The permittee shall sample wet natural gas in accordance with the Gas Processor Association (GPA) Method 2166 and analyze the samples in accordance with GPA Method 2286. The permittee may utilize other equivalent methods provided they are approved in advance by DAQ as part of a testing protocol. If alternative methods are proposed, a test protocol shall be submitted for approval no later than 60 days before the scheduled test date.

Note: The DAQ defines a representative wet gas sample to be one that is characteristic of the average gas composition dehydrated throughout a calendar year. If an isolated sample is not indicative of the annual average composition, then a company 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, R13-2896, Condition 10.3.1.]**

- 9.3.2. To demonstrate compliance with the visible emissions requirements of section 9.1.7(e), the permittee shall conduct visible emission checks and/or opacity monitoring and recordkeeping for all emission sources subject to an opacity limit.
  - a. The visible emission check shall determine the presence or absence of visible emissions. The observations shall be conducted according to Section 11 of EPA Method 22. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40CFR Part 60, Appendix A, Method 22 or from the lecture portion of the 40CFR Part 60, Appendix A, Method 9 certification course. The observation period shall be:
    - 1. a minimum of 15 minutes if demonstrating compliance with 9.1.7(e)(1); or
    - 2. a minimum of 1 hour if demonstrating compliance with 9.1.7(e)(2).
  - b. The visible emission check shall be conducted initially within 180 days of start-up to demonstrate compliance while vapors are being sent to the control device.
  - c. If during this visible emission check or at any other time visible emissions are observed, compliance with section 9.1.7(e) shall be determined by conducting opacity tests in accordance with Method 9 or 40 CFR 60, Appendix A.

**[45CSR13, R13-2896, Condition 10.3.2.]**

- 9.3.3. At such reasonable times as the Secretary may designate, the operator of any incinerator shall be required to conduct or have conducted stack tests to determine the particulate matter loading, by using 40 CFR Part 60, Appendix A, Method 5, and volatile organic compound loading, by using Methods 18 and 25A of 40 CFR

Part 60, Appendix A, Method 320 of 40 CFR Part 63, Appendix A, or ASTM D 6348-03 or other equivalent U.S. EPA approved method approved by the Secretary, in exhaust gases. Such tests shall be conducted in such manner as the Secretary may specify and be filed on forms and in a manner acceptable to the Secretary. The Secretary may, at the Secretary's option, witness or conduct such stack tests. Should the Secretary exercise his or her option to conduct such tests, the operator will provide all the necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment such as scaffolding, railings and ladders to comply with generally accepted good safety practices. The Secretary may conduct such other tests as the Secretary may deem necessary to evaluate air pollution emissions other than those noted above.

**[45CSR§6-7.1 and 7.2; 45CSR13, R13-2896, Condition 10.3.3.]**

#### **9.4. Recordkeeping Requirements**

- 9.4.1. For the purpose of demonstrating compliance with the continuous pilot flame requirements in 9.1.7(d), the permittee shall maintain records of the times and duration of all periods when the pilot flame was not present, and vapors were vented to the device.
- a. If the permittee is demonstrating compliance to 9.2.4. with visual inspections, the permittee shall maintain records of the inspections.
  - b. If the permittee is demonstrating compliance to 9.2.4. with an enclosed combustion device model that was tested under the conditions of § 60.5413(d), a record shall be maintained of the performance test results.

**[45CSR13, R13-2896, Condition 10.4.1.]**

- 9.4.2. For the purpose of demonstrating compliance with the visible emissions and opacity requirements, the permittee shall maintain records of the visible emission opacity tests and checks. The permittee shall maintain records of all monitoring data required by section 9.3.2 documenting the date and time of each visible emission check, the emission point or equipment/ source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80°F, 6-10 mph NE wind) during the visual emission check(s). Should a visible emission observation be required to be performed per the requirements specified in Method 9, the data records of each observation shall be maintained per the requirements of Method 9. For an emission unit out of service during the evaluation, the record of observation may note "out of service" (O/S) or equivalent.

**[45CSR13, R13-2896, Condition 10.4.2.]**

- 9.4.3. To demonstrate compliance with section 9.1.7(h), the permittee shall maintain records of the manufacturer's specifications for operating and maintenance requirements to maintain the control efficiency.

**[45CSR13, R13-2896, Condition 10.4.3.]**

- 9.4.4. The permittee shall maintain records of any testing that is conducted according to section 9.3.

**[45CSR13, R13-2896, Condition 10.4.4.]**

- 9.4.5. The permittee shall maintain records of the actual average benzene emissions (in terms of benzene emissions per year) as determined in accordance with 40CFR§63.772(b)(2).

**[45CSR34; 40CFR§63.774(d)(1)(ii)]**

## **9.5. Reporting Requirements**

- 9.5.1. Any deviation of the allowable visible emission requirement for any emission source discovered during observation using 40CFR Part 60, Appendix A, Method 9 per section 9.3.2.c. must be reported in writing to the Director of the DAQ as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.  
**[45CSR13, R13-2896, Condition 10.5.1.]**
- 9.5.2. Any bypass event of the registered control device must be reported in writing to the Director of the DAQ as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the date of the bypass, the estimate of VOC emissions released to the atmosphere as a result of the bypass, the cause or suspected cause of the bypass, and any corrective measures taken or planned.  
**[45CSR13, R13-2896, Condition 10.5.2.]**
- 9.5.3. Any time the air pollution control device is not operating when emissions are vented to it, shall be reported in writing to the Director of the DAQ as soon as practicable, but within ten (10) calendar days of the discovery.  
**[45CSR13, R13-2896, Condition 10.5.3.]**

## **9.6. Compliance Plan**

- 9.6.1. None

**10.0 40 CFR 60 Subpart Kb, Storage Tanks [emission unit ID(s): TK-802, TK-2802, TK-3802, TK-4802, TK-5802, TK-6802, TK-7802, VRU]**

**10.1. Limitations and Standards**

10.1.1. Each of the Natural Gasoline Storage Tanks (TK-802, TK-2802, TK-3802, TK-4802, TK-5802, and TK-6802) will utilize a natural gas blanket to eliminate natural gasoline vapors from being emitted to atmosphere. Working and breathing losses of natural gas from these tanks shall be collected by the VRU and sent via closed vent system to the Hot Oil Heater (S001) for use as fuel.

**[45CSR13, R13-2896, Condition 12.1.1.]**

10.1.2. The Refrigerated Propane Storage Tank (TK-7802) shall utilize the VRU to recapture propane product that flashes-off from the storage tank, re-condense the product, and then route it back to the storage tank.

**[45CSR13, R13-2896, Condition 12.1.2.]**

10.1.3. The VRU shall employ a vapor return which shall be designed to achieve a guaranteed capture efficiency of 100% for each storage tank listed in this section.

**[45CSR13, R13-2896, Condition 12.1.3.]**

10.1.4. The Natural Gasoline Storage Tanks and the Refrigerated Propane Storage Tank are subject to all applicable requirements of 40 CFR 60, Subpart Kb including the following:

a. The owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m<sup>3</sup> containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa but less than 76.6 kPa or with a design capacity greater than or equal to 75 m<sup>3</sup> but less than 151 m<sup>3</sup> containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa but less than 76.6 kPa, shall equip each storage vessel with one of the following:

**[45CSR16; 40 CFR §60.112b(a)]**

1. A closed vent system and control device meeting the following specifications:

(i) The closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in part 60, subpart VV, §60.485(b).

**[45CSR16; 40 CFR §60.112b(a)(3)(i)]**

(ii) The control device shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater. If a flare is used as the control device, it shall meet the specifications described in the general control device requirements (§60.18) of the General Provisions.

**[45CSR16; 40 CFR §60.112b(a)(3)(ii)]**

**[45CSR13, R13-2896, Condition 12.1.4.]**

10.1.5. The owner or operator of each source that is equipped with a closed vent system and control device as required in 40CFR§§60.112b (a)(3) or (b)(2) (other than a flare) is exempt from 40CFR§60.8 of the General Provisions and shall meet the following requirements.

- a. Submit for approval by the Administrator as an attachment to the notification required by 40CFR§60.7(a)(1) or, if the facility is exempt from 40CFR§60.7(a)(1), as an attachment to the notification required by 40CFR§60.7(a)(2), an operating plan containing the information listed below.
  1. Documentation demonstrating that the control device will achieve the required control efficiency during maximum loading conditions. This documentation is to include a description of the gas stream which enters the control device, including flow and VOC content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device. If the control device or the closed vent capture system receives vapors, gases, or liquids other than fuels from sources that are not designated sources under this subpart, the efficiency demonstration is to include consideration of all vapors, gases, and liquids received by the closed vent capture system and control device. If an enclosed combustion device with a minimum residence time of 0.75 seconds and a minimum temperature of 816 °C is used to meet the 95 percent requirement, documentation that those conditions will exist is sufficient to meet the requirements of this paragraph.
  2. A description of the parameter or parameters to be monitored to ensure that the control device will be operated in conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters).
- b. Operate the closed vent system and control device and monitor the parameters of the closed vent system and control device in accordance with the operating plan submitted to the Administrator in accordance with paragraph (a) of this condition, unless the plan was modified by the Administrator during the review process. In this case, the modified plan applies.

[45CSR16; 40CFR§60.113b(c)]

## 10.2. Monitoring Requirements

- 10.2.1. To demonstrate compliance with section 10.1.3, the permittee shall monitor the vapor recovery unit system in accordance with the plans and specifications and manufacturer's recommendations.  
[45CSR13, R13-2896, Condition 12.2.1.]

## 10.3. Testing Requirements

- 10.3.1. None

## 10.4. Recordkeeping Requirements

- 10.4.1. **Record of Maintenance of Vapor Recovery Unit.** The permittee shall maintain accurate records of the vapor recovery unit equipment inspection and/or preventative maintenance procedures.  
[45CSR13, R13-2896, Condition 12.3.1.]
- 10.4.2. **Record of Malfunctions of Vapor Recovery Unit.** The permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the vapor recovery unit 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, R13-2896, Condition 12.3.2.]**

- 10.4.3. After installing control equipment in accordance with 40CFR§§60.112b (a)(3) or (b)(1) (closed vent system and control device other than a flare), the owner or operator shall keep the following records.

The permittee shall keep copies of all records required by this section, except for the record required by 10.4.3.a, for at least two years. The record required by 10.4.3.a will be kept for the life of the control equipment.

- a. A copy of the operating plan.
- b. A record of the measured values of the parameters monitored in accordance with 40CFR§60.113b(c)(2).

**[45CSR16; 40CFR§§60.115b and 60.115b(c)]**

- 10.4.4. The permittee must comply with the following recordkeeping requirements:

- a. The permittee shall keep copies of all records required by 40CFR60, Subpart Kb, except for the record required by 10.4.4.b, for at least 2 years. The record required by 10.4.4.b will be kept for the life of the source.
- b. The owner or operator of each storage vessel as specified in 40CFR§60.110b(a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.

**[45CSR16; 40CFR§§60.115b(a) and (b)]**

## **10.5. Reporting Requirements**

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

**[45CSR13, R13-2896, Condition 12.3.3.]**

## **10.6. Compliance Plan**

- 10.6.1. None

**11.0 Flare [emission unit ID(s): S004A]**

**11.1. Limitations and Standards**

11.1.1. The permittee shall utilize a non-assisted Callidus CAL-MP staged, multi-point ground flare system (with a maximum aggregate pilot light heat input of 1.629 MMBTU/hr), designated as S004A, for control of potential emissions from maintenance events, equipment blowdowns, pressure relief valves, and other controlled sources. The flare shall have a maximum design capacity of 19.8 mmscf/hr.  
**[45CSR13, R13-2896, Condition 13.1.1.]**

11.1.2. The Flare (S004A) shall operate according to the following requirements:

- a. Maximum aggregate combustion exhaust emissions (not including uncombusted pass-through emissions of VOCs) from operation of the Flare (including those contributed by the pilot light) shall not exceed the following during routine maintenance events, equipment blowdowns, from pressure relief valves, and other controlled sources:

<b>Pollutant</b>	<b>Maximum Hourly Emissions (lb/hr)</b>	<b>Maximum Annual Emissions (ton/year)</b>
Nitrogen Oxides	1,539.61	6.73
Carbon Monoxide	3,073.64	13.43
PM <sub>2.5</sub> /PM <sub>10</sub> /PM <sup>(1)</sup>	25.34	0.25
VOCs	18.34	0.18

(1) Compliance with this limit will ensure compliance with 45CSR§6-4.1 (Condition 11.1.4.a)

- b. Based on the minimum VOC destruction and removal efficiency (DRE) of 98.0% as given under 11.1.6., maximum emissions of uncombusted pass-through VOCs and HAPs (generated during routine maintenance events, equipment blowdowns, and from pressure relief valves) emitted at the Flare (as uncombusted pass-through emissions) shall not exceed 10,153 lbs/hour and 12.71 tons/yr of VOCs and 4.53 lbs/hour and 0.08 tons/yr of HAPs.

**[45CSR13, R13-2896, Condition 13.1.2.]**

11.1.3. The total heat input of waste gases sent to the Flare during routine pigging events, equipment blowdowns, the ethane treater flash tanks, irregular process vents, and from the closed vent system shall not exceed 83,208 MMBTU per rolling twelve-month period.  
**[45CSR13, R13-2896, Condition 13.1.3.]**

11.1.4. The Flare is subject to 45CSR6. The requirements of 45CSR6 include but are not limited to the following:

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

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

Where, the factor, F, is either 5.43 for an incinerator with a capacity of less than 15,000 lbs/hr or 2.72 for an incinerator with a capacity of 15,000 lbs/hr or greater.

**[45CSR§6-4.1]**

- b. No person shall cause, suffer, allow or permit emission of smoke into the atmosphere from any incinerator which is twenty (20%) percent opacity or greater.  
**[45CSR§6-4.3]**
- c. The provisions of paragraph (b) shall not apply to smoke which is less than forty (40%) percent opacity, for a period or periods aggregating no more than eight (8) minutes per startup.  
**[45CSR§6-4.4]**
- d. No person shall cause or allow the emission of particles of unburned or partially burned refuse or ash from any incinerator which are large enough to be individually distinguished in the open air.  
**[45CSR§6-4.5]**
- e. Incinerators, including all associated equipment and grounds, shall be designed, operated and maintained so as to prevent the emission of objectionable odors.  
**[45CSR§6-4.6]**
- f. At such reasonable times as the Secretary may designate, the operator of any incinerator shall be required to conduct or have conducted stack tests to determine the particulate matter loading, by using 40 CFR Part 60, Appendix A, Method 5 or other equivalent U.S. EPA approved method approved by the Secretary, in exhaust gases. Such tests shall be conducted in such manner as the Secretary may specify and be filed on forms and in a manner acceptable to the Secretary. The Secretary may, at the Secretary's option, witness or conduct such stack tests. Should the Secretary exercise his or her option to conduct such tests, the operator will provide all the necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment such as scaffolding, railings and ladders to comply with generally accepted good safety practices.  
**[45CSR§6-7.1]**
- g. The Secretary may conduct such other tests as the Secretary may deem necessary to evaluate air pollution emissions other than those noted above.  
**[45CSR§6-7.2]**
- h. Due to unavoidable malfunction of equipment, emissions exceeding those provided for in this rule may be permitted by the Director for periods not to exceed five (5) days upon specific application to the Director. Such application shall be made within twenty-four (24) hours of the malfunction. In cases of major equipment failure, additional time periods may be granted by the Director provided a corrective program has been submitted by the owner or operator and approved by the Director.  
**[45CSR§6-8.2]**

**[45CSR13, R13-2896, Condition 13.1.4.]**

- 11.1.5. A pilot flame must be present at all times of operation of the Flare. The presence of a pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.  
**[45CSR13, R13-2896, Condition 13.1.5.]**
- 11.1.6. The Flare shall be operated and designed in accordance with the information filed in permit application R13-2896F to achieve a VOC DRE of 98.0%.  
**[45CSR13, R13-2896, Condition 13.1.7.]**
- 11.1.7. The inlet gas flow rate of the Flare must be equal to or less than the maximum specified by the manufacturer.  
**[45CSR13, R13-2896, Condition 13.1.8.]**

- 11.1.8. The permittee will comply with the requirements of Section 2.17 of this permit during emergency operation of the Flare.  
**[45CSR13, R13-2896, Condition 13.1.9.]**

## **11.2. Monitoring Requirements**

- 11.2.1. In order to demonstrate compliance with the requirements of 11.1.2, 11.1.3 and 11.1.4(a), the permittee shall monitor the aggregate throughput and heat input of waste gases sent to the Flare on a monthly basis.  
**[45CSR13, R13-2896, Condition 13.2.1.]**
- 11.2.2. To demonstrate compliance with the flame requirements of 11.1.5, the presence of a flame shall be continuously monitored using a thermocouple or any other equivalent device to detect the presence of a flame.  
**[45CSR13, R13-2896, Condition 13.2.2.]**
- 11.2.3. The permittee shall meet the following Visible Emissions Requirements for the Ground Flare:
- a. To demonstrate compliance with the visible emissions requirements of 45CSR6, the permittee shall conduct the following visible emission checks and/or opacity monitoring and recordkeeping for the Ground Flare:
    - (1) The visible emission check shall determine the presence or absence of visible emissions. The observations shall be conducted according to Section 11 of EPA Method 22. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40CFR Part 60, Appendix A, Method 22 or from the lecture portion of the 40CFR Part 60, Appendix A, Method 9 certification course. The observation period (Section 11 of EPA Method 22) shall be a minimum of one (1) hour each calendar month during flaring operation;
    - (2) As the Ground Flare is of smokeless design, any observation of visible emissions will indicate incorrect operation of the flare. Therefore, upon the observation of visible emissions, the permittee shall, at the next available safe opportunity, cease operation of the flare and attempt to correct the problem. After an attempt to correct the problem, the permittee shall then conduct a minimum of one (1) hour of visible emissions observations according to 11.2.3(a) during the flaring operation;
    - (3) The permittee shall maintain records of all monitoring data required by 11.2.3 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);
    - (4) 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, R13-2896, Condition 13.2.3.]**

### **11.3. Testing Requirements**

11.3.1. None

### **11.4. Recordkeeping Requirements**

11.4.1. For the purpose of demonstrating compliance with section 11.1.5 and 11.2.2., the permittee shall maintain records of the times and duration of all periods which the pilot flame was absent.  
**[45CSR13, R13-2896, Condition 13.2.4.]**

### **11.5. Reporting Requirements**

11.5.1. If permittee is required by the Director to demonstrate compliance with section 11.1.4.f and 11.1.4.g, 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, R13-2896, Condition 13.2.5.]**

11.5.2. Any deviation(s) from the flare design and operation criteria in Section 11.1.6 and permit application R13-2896F, shall be reported in writing to the Director as soon as practicable, but no later than ten (10) calendar days of discovery of such deviation.  
**[45CSR13, R13-2896, Condition 13.2.6.]**

11.5.3. The permittee shall report to the Director, the time, cause of event, estimate of emissions and corrective actions taken when the Ground Flare was used for an emergency at the facility.  
**[45CSR13, R13-2896, Condition 13.2.7.]**

### **11.6. Compliance Plan**

11.6.1. None

## 12.0 Ethane Amine Units [emission unit ID(s): S011, S054]

### 12.1 Limitations and Standards

12.1.1. **Maximum Throughput Limitation.** The maximum sour ethane throughput to each individual Ethane Amine Unit shall not exceed 129 mmscf/day and 47,085 mmscf/year (or, alternatively 81,523 barrels/day and 29,755,895 barrels/year of treated ethane). 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, R13-2896, Condition 14.1.1.]**

12.1.2. Each Ethane Amine Unit (S011, S054) shall be designed and operated in accordance with the following:

- a. Carbon dioxide will be removed from the ethane product in an amine contacting system;
- b. The total ethane product shall be contacted with an amine solution in the Amine Contactor where the carbon dioxide in the ethane product is removed to less than 500 ppmw;
- c. The rich amine from the Contactor is regenerated in the Amine Regenerator where heat input is used to drive the carbon dioxide and water overhead and vented to the atmosphere; and
- d. The lean amine from the bottom of the Regenerator is recycled back to the Amine Contactor.

**[45CSR13, R13-2896, Condition 14.1.2.]**

12.1.3. Off gas from both Ethane Amine Units' flash tanks shall be collected and sent to the Ground Flare (S004A) for combustion.

**[45CSR13, R13-2896, Condition 14.1.3.]**

12.1.4. Maximum methanol and VOC emissions from Ethane Amine Unit S011 shall not exceed 1.82 pounds per hour and 7.99 tons per year, and 1.98 pounds per hour and 8.67 tons per year, respectively.

**[45CSR13, R13-2896, Condition 14.1.4.]**

12.1.5. The still vent emissions from S054 shall be, at a minimum of 95% of time the unit is in operation, captured by the vapor recovery unit (VRU) and routed to the residue gas discharge line. During VRU downtime, emissions from S054 still vent shall vent to atmosphere. Maximum methanol and VOC emissions from Ethane Amine Unit S054 shall not exceed 1.82 pounds per hour and 0.40 tons per year, and 1.98 pounds per hour and 0.43 tons per year, respectively.

**[45CSR13, R13-2896, Condition 14.1.5.]**

### 12.2 Monitoring Requirements

12.2.1. In order to show compliance with 12.1.1., the permittee shall either: (1) monitor and record the monthly and twelve-month total throughput of sour ethane fed to both Ethane Amine Units, or (2) monitor and record the monthly and twelve-month total throughput of total treated ethane from both Ethane Amine Units.

**[45CSR13, R13-2896, Condition 14.2.1.]**

12.2.2. The permittee shall monitor and record the monthly and twelve-month total percentage of time Ethane Amine Unit S054 is operated when the VRU is not in operation.

**[45CSR13, R13-2896, Condition 14.2.2.]**

### **12.3. Testing Requirements**

- 12.3.1. The permittee shall conduct, at a minimum of once per twelve-month period, sampling of the inlet gas stream to the Ethane Amine Units. The results of this test shall be used, with appropriate modeling techniques (such as use of ProMax software), to verify that the emissions of the unit are in compliance with those given under 12.1.4. and 12.1.5 above.

**[45CSR13, R13-2896, Condition 14.2.3.]**

### **12.4. Recordkeeping Requirements**

- 12.4.1. None

### **12.5. Reporting Requirements**

- 12.5.1. None

### **12.6. Compliance Plan**

- 12.6.1. None

**13.0 Other Storage Tanks and Liquids Loading/Unloading [emission unit ID(s): TK-906, TK-2906, TK-907, TK-2907, S008, S015, S033, S055, L-1]**

**13.1. Limitations and Standards**

13.1.1. The maximum design capacity of material loading/unloading and maximum associated emissions shall not exceed the following for the specific NGLs:

Emission Unit ID	Material Loaded/Unloaded	Truck (gpm)	Rail (gpm)	Barge (gpm)	VOC Emissions	
					lb/hr	TPY
S008	Propane	3,600 (vb)	4,000 (vb)	4,000 (vb)	4.36	2.18
	Isobutane			No		
	Butanes			No		
	NGL			No		
S033	Natural Gasoline	600 (vb) n/a	2,000 (vb) n/a	n/a 4,000	97.22	82.69
S015	Slop Oil/Produced Water	150	No	No	2.32	0.11
L-1	Gasoline Dispenser	20 (gal/hr)	No	No	0.18	0.072
S055	Pressurized NGL/Condensate (Unloading)	3,600	n/a	No	9.05	19.83

**[45CSR13, R13-2896, Condition 15.1.1.]**

13.1.2. The maximum Slop Oil/Produced Water loaded into trucks (S015) and Gasoline Dispenser Loading (L-1) shall not exceed a maximum of 2,007,070 and 12,000 gallons per year, respectively. The maximum Natural Gasoline loaded into barges (S033) shall not exceed a maximum of 408,240,000 gallons per year.

**[45CSR13, R13-2896, Condition 15.1.2.]**

13.1.3. The main Liquids Loading area (S008, S033) shall employ vapor balance (closed system) to route all displaced vapors back to the tanks when loading propane, isobutane, butanes, natural gasoline, or NGLs to truck or railcar *and* when loading propane to barge. Natural Gasoline barge loading (S033) operations, and Slop Oil/Produced Water (S015), and Gasoline Dispenser (L-1) truck loading operations are not required to use vapor balance.

**[45CSR13, R13-2896, Condition 15.1.3.]**

13.1.4. All truck loading of Slop Oil and Produced Water shall be done using the submerged-fill method. The “submerged-fill method” shall, for the purposes of this permit, mean either bottom-filling or filling by extending the pipe to near the bottom of the tank, and as soon as is practicable, below the level of liquid.

**[45CSR13, R13-2896, Condition 15.1.4.]**



- 13.1.5. The maximum annual throughput and VOC emissions for the specified tanks shall not exceed what is given in the following table:

<b>Tank</b>	<b>Material</b>	<b>Throughput (gallons)</b>	<b>Emissions (tons)</b>
TK-L-1	Gasoline <sup>(1)</sup>	12,000	0.13
TK-906	Slop Oil	248,712	0.05
TK-907	Produced Water	754,824	0.14
TK-2906	Slop Oil	248,712	0.05
TK-2907	Produced Water	754,824	0.14

- (1) This is purchased retail gasoline, not natural gasoline as produced on site.

[45CSR13, R13-2896, Condition 15.1.5.]

## 13.2. Monitoring Requirements

- 13.2.1. None

## 13.3. Testing Requirements

- 13.3.1. None

## 13.4. Recordkeeping Requirements

- 13.4.1. To demonstrate compliance with section 13.1.2. and 13.1.5., the permittee shall maintain a monthly record of the amount of liquids handled in the Liquids Loading and Unloading areas (S008, S033, S055) and in the specified storage tanks.

[45CSR13, R13-2896, Condition 15.2.1.]

## 13.5. Reporting Requirements

- 13.5.1. None

## 13.6. Compliance Plan

- 13.6.1. None

## 14.0 Pigging Operations [emission unit ID(s): S034, S035]

### 14.1 Limitations and Standards

- 14.1.1. The permittee shall utilize a non-assisted flare, designated as S034, for control of potential emissions during all times of propane pig trap operations. The flare will have a maximum design capacity of 72,000 scf/hr and be designed and operated to achieve a minimum propane DRE of 98%.  
**[45CSR13, R13-2896, Condition 16.1.1.]**
- 14.1.2. The maximum annual combustion of waste gases in the pig trap flare (S034) shall not exceed 720,000 scf. The maximum number of pigging events per year for all pig traps shall not exceed the limits and volumes per event (scf) established in the permit application R13-2896G.  
**[45CSR13, R13-2896, Condition 16.1.2.]**
- 14.1.3. Maximum combustion exhaust emissions (not including uncombusted pass-through emissions of waste gases) from S034 shall not exceed the following:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	24.25	0.15
Carbon Monoxide	13.99	0.08
PM <sub>2.5</sub> /PM <sub>10</sub> /PM	1.31	0.01

**[45CSR13, R13-2896, Condition 16.1.3.]**

- 14.1.4. Based on the minimum VOC DRE of 98.0% as required under 14.1.1., maximum emissions of uncombusted VOCs emitted at the Pigging Flare shall not exceed 227.77 lbs/hour and 1.37 tons/yr of VOCs. The maximum emissions of VOCs and HAPs emitted from all other pigging operations with the exception of the propane pig trap shall not exceed 1,391.24 lbs/hr and 47.86 tons/yr, and 15.9 lbs/hr and 0.55 tons/yr, respectively.  
**[45CSR13, R13-2896, Condition 16.1.4.]**
- 14.1.5. The Pigging Flare shall be designed and operated in accordance with 40 CFR 60, Section 60.18.  
**[45CSR13, R13-2896, Condition 16.1.5.]**
- 14.1.6. The Pigging Flare is subject to 45CSR6. The requirements of 45CSR6 include but are not limited to those given under condition 11.1.4.  
**[45CSR13, R13-2896, Condition 16.1.6.]**

### 14.2 Monitoring Requirements

- 14.2.1. In order to show compliance with 14.1.2., the permittee shall calculate, based on the information collected under 14.2.2., the throughput (in scf) of waste gases fed to S034 on a monthly and a rolling twelve-month basis.  
**[45CSR13, R13-2896, Condition 16.2.1.]**

- 14.2.2. In order to show compliance with 14.1.2., the permittee shall monitor and record the total number and type of pigging events and the estimated volume per event (in scf) on a monthly and rolling twelve-month total for all pig traps.

**[45CSR13, R13-2896, Condition 16.2.2.]**

- 14.2.3. The permittee shall meet the following Visible Emissions Requirements for the S034:

- a. To demonstrate compliance with the visible emissions requirements of 45CSR6, the permittee shall conduct the following visible emission checks and/or opacity monitoring and recordkeeping for the Pigging Flare:

- (1) The visible emission check shall determine the presence or absence of visible emissions. The observations shall be conducted according to Section 11 of EPA Method 22. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40CFR Part 60, Appendix A, Method 22 or from the lecture portion of the 40 CFR Part 60, Appendix A, Method 9 certification course. The observation period shall be a minimum of one (1) hour at initial commissioning and at least one (1) hour thereafter each calendar year during a pig trap flaring operation;
- (2) As the Pigging Flare is of smokeless design, any observation of visible emissions will indicate incorrect operation of the flare. Therefore, upon the observation of visible emissions, the permittee shall, at the next available safe opportunity, cease operation of the flare and attempt to correct the problem. After an attempt to correct the problem, the permittee shall then conduct a minimum of one (1) hour of visible emissions observations according to 14.2.3(a)(1) during the next pig trap flaring operation; and
- (3) The permittee shall maintain records of all monitoring data required by 14.2.3 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).

**[45CSR13, R13-2896, Condition 16.2.3.]**

### **14.3. Testing Requirements**

- 14.3.1. None

### **14.4. Recordkeeping Requirements**

- 14.4.1. None

### **14.5. Reporting Requirements**

- 14.5.1. None

### **14.6. Compliance Plan**

- 14.6.1. None

**15.0 40 CFR 60 Subpart KKK, OOOO and OOOOa Requirements [emission unit ID(s): FUG AREA 1 through 7 and Compressors]**

**15.1. Limitations and Standards**

**40 CFR 60 Subpart KKK (FUG AREA 1)**

- 15.1.1. The permittee shall operate FUG AREA 1 (currently Cryo 1 (excluding Demethanizer 1) and Cryo 2) in accordance with all applicable requirements given under 40 CFR 60 Subpart KKK.  
**[45CSR13, R13-2896, Condition 17.1.1.]**
- 15.1.2. Each owner or operator subject to the provisions of 40CFR60, Subpart KKK shall comply with the requirements of 40CFR§§60.482-1 (a), (b), and (d) and 60.482-2 through 60.482-10, except as provided in 40CFR§60.633, as soon as practicable, but no later than 180 days after initial startup  
**[45CSR16; 40CFR§60.632(a)]**

**40 CFR 60 Subpart OOOO (FUG AREA 2 AND FUG AREA 3)**

- 15.1.3. The permittee shall operate FUG AREA 2 and FUG AREA 3 (currently Demethanizer 1, Frac 2, and Cryo 3) in accordance with all applicable requirements given under 40 CFR 60 Subpart OOOO.  
**[45CSR13, R13-2896, Condition 17.1.2.]**
- 15.1.4. The permittee must comply with the requirements of 40CFR§§60.482-1a(a), (b), and (d), 60.482-2a, and 60.482-4a through 60.482-11a, except as provided in 40CFR§60.5401.  
**[45CSR16; 40CFR§60.5400(a)]**

**40 CFR 60 Subpart OOOOa (FUG AREAS 4 – 7)**

- 15.1.5. The permittee shall operate FUG AREA 4 through 7 (currently Frac 1 and Cryo 4 through 7) in accordance with all applicable requirements given under 40 CFR 60 Subpart OOOOa.  
**[45CSR13, R13-2896, Condition 17.1.3.]**
- 15.1.6. The permittee must comply with the requirements of 40CFR§§60.482-1a(a), (b), and (d), 60.482-2a, and 60.482-4a through 60.482-11a, except as provided in 40CFR§60.5401a.  
**[45CSR16; 40CFR§60.5400a(a)]**

**All Fugitive Areas**

- 15.1.7. The permittee shall maintain on-site and available upon request an updated list of logical groupings of plant components and the correct applicability of each group to 40 CFR 60, Subpart KKK, OOOO, and OOOOa. This updated and revised list shall be submitted to the Director within 30 days of any applicability change. This list shall supersede the requirements given under 15.1.1, 15.1.3, and 15.1.5 and shall be considered enforceable until such time as the permit is appropriately revised.  
**[45CSR13, R13-2896, Condition 17.1.4.]**

**Compressor Requirements**

- 15.1.8. The permittee shall maintain on-site and available upon request an updated list of all reciprocating compressors and the applicability of each to 40CFR60 Subpart OOOO and OOOOa. For each compressor, the permittee shall comply with all applicable requirements given under 40CFR60 Subpart OOOO or

OOOOa, whichever is applicable dependent on the applicability determined under the requirement.  
**[45CSR13, R13-2896, Condition 17.1.5.]**

15.1.9. **Subpart OOOO Standards.** The permittee must comply with the standards in paragraphs (a) through (d) of this condition for each reciprocating compressor affected facility.

- a. The permittee must replace the reciprocating compressor rod packing according to either paragraph (a)(1) or (2) of this condition or the permittee must comply with paragraph (a)(3) 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 the 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.
  3. Collect the emissions from the rod packing using a rod packing emissions collection system which operates under negative pressure and route the rod packing emissions to a process through a closed vent system that meets the requirements of §60.5411(a).
- b. The permittee must demonstrate initial compliance with standards that apply to reciprocating compressor affected facilities as required by §60.5410.
- c. The permittee must demonstrate continuous compliance with standards that apply to reciprocating compressor affected facilities as required by §60.5415.
- d. The permittee must perform the required notification, recordkeeping, and reporting as required by §60.5420.

**[45CSR16; 40CFR§60.5385]**

15.1.10. **Closed vent system requirements for reciprocating compressors under Subpart OOOO.**

- a. Closed vent system requirements for reciprocating compressors complying with condition 15.1.9.a.3.
  1. The permittee must design the closed vent system to route all gases, vapors, and fumes emitted from the material in the reciprocating compressor rod packing emissions collection system or the wet seal fluid degassing system to a control device or to a process that meets the requirements specified in §60.5412(a) through (c).
  2. The permittee must design and operate the closed vent system with no detectable emissions as demonstrated by §60.5416(b).
  3. The permittee must meet the requirements specified in paragraphs (a)(3)(i) and (ii) of this section if the closed vent system contains one or more bypass devices that could be used to divert all or a portion of the gases, vapors, or fumes from entering the control device.

- i. Except as provided in paragraph (a)(3)(ii) of this section, the permittee must comply with either paragraph (a)(3)(i)(A) or (B) of this section for each bypass device.
  - A. The permittee must properly install, calibrate, maintain, and operate a flow indicator at the inlet to the bypass device that could divert the stream away from the control device or process to the atmosphere that is capable of taking periodic readings as specified in §60.5416(a)(4) and either sounds an alarm, or initiates notification via remote alarm to the nearest field office, when the bypass device is open such that the stream is being, or could be, diverted away from the control device or process to the atmosphere. The permittee must maintain records of each time the alarm is activated according to §60.5420(c)(8).
  - B. The permittee must secure the bypass device valve installed at the inlet to the bypass device in the non-diverting position using a car-seal or a lock-and-key type configuration.
- ii. Low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and safety devices are not subject to the requirements of paragraph (a)(3)(i) of this section.

**[45CSR16; 40CFR§§60.5411 and 60.5411(a)]**

15.1.11. **Subpart OOOOa Standards.** The permittee must reduce GHG (in the form of a limitation on emissions of methane) and VOC emissions by complying with the standards in paragraphs (a) through (d) of this condition for each reciprocating compressor affected facility.

- a. The permittee must replace the reciprocating compressor rod packing according to either paragraph (a)(1) or (2) of this condition, or the permittee must comply with paragraph (a)(3) of this condition.
  1. On or before the compressor has operated for 26,000 hours. The number of hours of operation must be continuously monitored beginning upon initial startup of the reciprocating compressor affected facility, or the date of the most recent reciprocating compressor rod packing replacement, whichever is later.
  2. Prior to 36 months from the date of the most recent rod packing replacement, or 36 months from the date of startup for a new reciprocating compressor for which the rod packing has not yet been replaced.
  3. Collect the methane and VOC emissions from the rod packing using a rod packing emissions collection system that operates under negative pressure and route the rod packing emissions to a process through a closed vent system that meets the requirements of §60.5411a(a) and (d).
- b. The permittee must demonstrate initial compliance with standards that apply to reciprocating compressor affected facilities as required by §60.5410a(c).
- c. The permittee must demonstrate continuous compliance with standards that apply to reciprocating compressor affected facilities as required by §60.5415a(c).
- d. The permittee must perform the reporting as required by §60.5420a(b)(1) and (4) and the recordkeeping as required by §60.5420a(c)(3), (6) through (9), and (17), as applicable.

**[45CSRR16; 40CFR§60.5385a]**

15.1.12. **Closed vent system requirements for reciprocating compressors under Subpart OOOOa.** The permittee must meet the applicable requirements of this section for each cover and closed vent system used to comply with the emission standards for the reciprocating compressors complying with condition 15.1.11.a.3.

- a. Closed vent system requirements for reciprocating compressors, centrifugal compressor wet seal degassing systems and pneumatic pumps.
  1. The permittee must design the closed vent system to route all gases, vapors, and fumes emitted from the reciprocating compressor rod packing emissions collection system, the wet seal fluid degassing system or pneumatic pump to a control device or to a process. For reciprocating and centrifugal compressors, the closed vent system must route all gases, vapors, and fumes to a control device that meets the requirements specified in §60.5412a(a) through (c).
  2. The permittee must design and operate the closed vent system with no detectable emissions as demonstrated by §60.5416a(b).
  3. The permittee must meet the requirements specified in paragraphs (a)(3)(i) and (ii) of this section if the closed vent system contains one or more bypass devices that could be used to divert all or a portion of the gases, vapors, or fumes from entering the control device.
    - i. Except as provided in paragraph (a)(3)(ii) of this section, the permittee must comply with either paragraph (a)(3)(i)(A) or (B) of this section for each bypass device.
      - A. The permittee must properly install, calibrate, maintain, and operate a flow indicator at the inlet to the bypass device that could divert the stream away from the control device or process to the atmosphere that is capable of taking periodic readings as specified in §60.5416a(a)(4)(i) and sounds an alarm, or initiates notification via remote alarm to the nearest field office, when the bypass device is open such that the stream is being, or could be, diverted away from the control device or process to the atmosphere. The permittee must maintain records of each time the alarm is activated according to §60.5420a(c)(8).
      - B. The permittee must secure the bypass device valve installed at the inlet to the bypass device in the non-diverting position using a car-seal or a lock-and-key type configuration.
    - ii. Low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and safety devices are not subject to the requirements of paragraph (a)(3)(i) of this section.
- b. Closed vent systems requirements for centrifugal compressor wet seal fluid degassing systems, reciprocating compressors, pneumatic pumps and storage vessels using a control device or routing emissions to a process.
  1. The permittee must conduct an assessment that the closed vent system is of sufficient design and capacity to ensure that all emissions from the storage vessel are routed to the control device and that the control device is of sufficient design and capacity to accommodate all emissions from the affected facility and have it certified by a qualified professional engineer in accordance with paragraphs (b)(1)(i) and (ii) of this section.
    - i. The permittee must provide the following certification, signed and dated by the qualified professional engineer: "I certify that the closed vent system design and capacity assessment was

prepared under my direction or supervision. I further certify that the closed vent system design and capacity assessment was conducted and this report was prepared pursuant to the requirements of subpart OOOOa of 40 CFR part 60. Based on my professional knowledge and experience, and inquiry of personnel involved in the assessment, the certification submitted herein is true, accurate, and complete. I am aware that there are penalties for knowingly submitting false information.”

- ii. The assessment shall be prepared under the direction or supervision of the qualified professional engineer who signs the certification in paragraph (b)(1)(i) of this section.

**[45CSR16; 40CFR§§60.5411a, 60.5411a(a), and 60.5411a(d)]**

15.1.13. The permittee is deemed to be in compliance with 40CFR60, Subpart OOOO if they are in compliance with all applicable provisions of 40CFR60, Subpart OOOOa.

**[45CSR16; 40CFR§60.5370(d)]**

## **15.2. Monitoring Requirements**

### **40 CFR 60 Subpart KKK (FUG AREA 1)**

15.2.1. Leak Detection:

- a. Each owner or operator subject to the provisions of 40CFR60, Subpart KKK may comply with the following exceptions to the provisions of subpart VV.
- b. 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.
- c. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.
- d. Leak Repair:
  1. 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 40CFR§60.482-9.
  2. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

**[45CSR16; 40CFR§§60.633(a) and (b)]**

### **40 CFR 60 Subpart OOOO (FUG AREA 2 AND FUG AREA 3)**

15.2.2. Leak Detection:

- a. The permittee may comply with the following exceptions to the provisions of 40CFR§§60.5400(a) and (b).
- b. 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 40CFR§60.485a(b) except as provided in



40CFR§60.5400(c) and in paragraphs (d) and (e) of 15.2.2, and CFR§§60.482-4a(a) through (c) of 40CFR60, subpart VVa.

- c. If an instrument reading of 500 ppm or greater is measured, a leak is detected.
- d. Leak Repair:
  - 1. 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 40CFR§60.482-9a.
  - 2. A first attempt at repair must be made no later than 5 calendar days after each leak is detected.

**[45CSR16; 40CFR§§60.5401(a) and (b)]**

**40 CFR 60 Subpart OOOOa (FUG AREAS 4 – 7)**

15.2.3. Leak Detection:

- a. The permittee may comply with the following exceptions to the provisions of 40CFR§§60.5400a(a) and (b).
- b. 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 40CFR§60.485a(b) except as provided in 40CFR§60.5400a(c) and in paragraphs (d) and (e) of 15.2.3, and 40CFR§§60.482-4a(a) through (c) of subpart VVa.
- c. If an instrument reading of 500 ppm or greater is measured, a leak is detected.
- d. Leak Repair:
  - 15.2.1. 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 40CFR§60.482-9a.
  - 15.2.2. A first attempt at repair must be made no later than 5 calendar days after each leak is detected.

**[45CSR16; 40CFR§§60.5401a(a) and (b)]**

**Compressors**

15.2.4. **Initial Compliance Demonstration for 40 C.F.R. 60 Subpart OOOO.** To achieve initial compliance with the standards for each reciprocating compressor affected facility the permittee must comply with paragraphs (a) through (d) of this condition.

- a. If complying with §60.5385(a)(1) or (2), during the initial compliance period, the permittee must continuously monitor the number of hours of operation or track the number of months since the last rod packing replacement.

- b. If complying with §60.5385(a)(3), the permittee must operate the rod packing emissions collection system under negative pressure and route emissions to a process through a closed vent system that meets the requirements of §60.5411(a).
- c. The permittee must submit the initial annual report for the reciprocating compressor as required in §60.5420(b).
- d. The permittee must maintain the records as specified in §60.5420(c)(3) for each reciprocating compressor affected facility.

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

15.2.5. **Continuous Compliance Demonstration for 40 C.F.R. 60 Subpart OOOO.** For each reciprocating compressor affected facility complying with §60.5385(a)(1) or (2), the permittee must demonstrate continuous compliance according to paragraphs (a) through (c) of this condition. For each reciprocating compressor affected facility complying with §60.5385(a)(3), the permittee must demonstrate continuous compliance according to paragraph (d) of this condition.

- a. The permittee must continuously monitor the number of hours of operation for each reciprocating compressor affected facility or track the number of months since initial startup, or October 15, 2012, or the date of the most recent reciprocating compressor rod packing replacement, whichever is later.
- b. The permittee must submit the annual report as required in §60.5420(b) and maintain records as required in §60.5420(c)(3).
- c. The permittee 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.
- d. The permittee must operate the rod packing emissions collection system under negative pressure and continuously comply with the closed vent requirements in §60.5416(a) and (b).

**[45CSR16; 40CFR§60.5415(c)]**

15.2.6. **Initial Compliance Demonstration for 40 C.F.R. 60 Subpart OOOOa.** To achieve initial compliance with the standards for each reciprocating compressor affected facility the permittee must comply with paragraphs (a) through (d) of this condition.

- a. If complying with §60.5385a(a)(1) or (2), during the initial compliance period, the permittee must continuously monitor the number of hours of operation or track the number of months since the last rod packing replacement.
- b. If complying with §60.5385a(a)(3), the permittee must operate the rod packing emissions collection system under negative pressure and route emissions to a process through a closed vent system that meets the requirements of §60.5411a(a) and (d).
- c. The permittee must submit the initial annual report for the reciprocating compressor as required in §60.5420a(b)(1) and (4).

- d. The permittee must maintain the records as specified in §60.5420a(c)(3) for each reciprocating compressor affected facility.

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

15.2.7. **Continuous Compliance Demonstration for 40 C.F.R. 60 Subpart OOOOa.** For each reciprocating compressor affected facility complying with §60.5385a(a)(1) or (2), the permittee must demonstrate continuous compliance according to paragraphs (a) through (c) of this condition. For each reciprocating compressor affected facility complying with §60.5385a(a)(3), the permittee must demonstrate continuous compliance according to paragraph (d) of this condition.

- a. The permittee must continuously monitor the number of hours of operation for each reciprocating compressor affected facility or track the number of months since initial startup or the date of the most recent reciprocating compressor rod packing replacement, whichever is later.
- b. The permittee must submit the annual reports as required in §60.5420a(b)(1) and (4) and maintain records as required in §60.5420a(c)(3).
- c. The permittee must replace the reciprocating compressor rod packing on or before the total number of hours of operation reaches 26,000 hours or the number of months since the most recent rod packing replacement reaches 36 months.
- d. The permittee must operate the rod packing emissions collection system under negative pressure and continuously comply with the cover and closed vent requirements in §60.5416a(a) and (b).

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

### 15.3. Testing Requirements

15.3.1. **Inspections for closed vent systems installed on each reciprocating compressor affected facility under Subpart OOOO.** Except as provided in paragraphs (b)(11) and (12) of §60.5416, the permittee must inspect each closed vent system according to the procedures and schedule specified in paragraphs (a) and (b) of this condition, and inspect each bypass device according to the procedures of paragraph (d) of this condition for reciprocating compressors complying with permit condition 15.1.9.a.3.

- a. For each closed vent system joint, seam, or other connection that is permanently or semi-permanently sealed (e.g., a welded joint between two sections of hard piping or a bolted and gasketed ducting flange), the permittee must meet the requirements specified in paragraphs (a)(1) and (2) of this condition.
  - 1. Conduct an initial inspection according to the test methods and procedures specified in paragraph (b) of §60.5416 to demonstrate that the closed vent system operates with no detectable emissions. The permittee must maintain records of the inspection results as specified in §60.5420(c)(6).
  - 2. Conduct annual visual inspections for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in piping; loose connections; liquid leaks; or broken or missing caps or other closure devices. The permittee must monitor a component or connection using the test methods and procedures in condition 15.3.2. to demonstrate that it operates with no detectable emissions following any time the component is repaired or replaced or the connection is

unsealed. The permittee must maintain records of the inspection results as specified in §60.5420(c)(6).

- b. For closed vent system components other than those specified in paragraph (a) of this condition, the permittee must meet the requirements of paragraphs (b)(1) through (3) of this condition.
  1. Conduct an initial inspection according to the test methods and procedures specified in paragraph (b) of §60.5416 to demonstrate that the closed vent system operates with no detectable emissions. The permittee must maintain records of the inspection results as specified in §60.5420(c)(6).
  2. Conduct annual inspections according to the test methods and procedures specified in paragraph (b) of §60.5416 to demonstrate that the components or connections operate with no detectable emissions. The permittee must maintain records of the inspection results as specified in §60.5420(c)(6).
  3. Conduct annual visual inspections for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in ductwork; loose connections; liquid leaks; or broken or missing caps or other closure devices. The permittee must maintain records of the inspection results as specified in §60.5420(c)(6).
- c. For each cover, the permittee must meet the following requirements:
  1. Conduct visual inspections for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the cover, or between the cover and the separator wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices. In the case where the storage vessel is buried partially or entirely underground, the permittee must inspect only those portions of the cover that extend to or above the ground surface, and those connections that are on such portions of the cover (e.g., fill ports, access hatches, gauge wells, etc.) and can be opened to the atmosphere.
  2. The permittee must initially conduct the inspections specified in paragraph (c)(1) of this condition following the installation of the cover. Thereafter, the permittee must perform the inspection at least once every calendar year, except as provided in paragraphs (b)(11) and (12) of §60.5416. The permittee must maintain records of the inspection results as specified in §60.5420(c)(7).
- d. For each bypass device, except as provided for in §60.5411, the permittee must meet the following requirements:
  1. Set the flow indicator to take a reading at least once every 15 minutes at the inlet to the bypass device that could divert the steam away from the control device to the atmosphere.
  2. If the bypass device valve installed at the inlet to the bypass device is secured in the non-diverting position using a car-seal or a lock-and-key type configuration, visually inspect the seal or closure mechanism at least once every month to verify that the valve is maintained in the non-diverting position and the vent stream is not diverted through the bypass device. The permittee must maintain records of the inspections according to §60.5420(c)(8).

**[45CSR16; 40CFR§§60.5416, 60.5416(a), 60.5416(a)(1), (2), (3), and (4)]**

- 15.3.2. **No detectable emissions test methods and procedures under Subpart OOOO.** If the permittee is required to conduct an inspection of a closed vent system at the reciprocating compressor affected facility as specified in paragraphs (a)(1) or (2) of §60.5416 (permit condition 15.3.1.a. or 15.3.1.b.), the permittee must meet the requirements of paragraphs (b)(1) through (13) of §60.5416.  
**[45CSR16; 40CFR§§60.5416 and 60.5416(b)]**
- 15.3.3. **Inspections for closed vent systems installed on each reciprocating compressor affected facility under Subpart OOOOa.** Except as provided in paragraphs (b)(11) and (12) of §60.5416a, the permittee must inspect each closed vent system according to the procedures and schedule specified in paragraphs (a) and (b) of this condition, inspect each cover according to the procedures and schedule specified in paragraph (c) of this condition, and inspect each bypass device according to the procedures of paragraph (d) of this condition for reciprocating compressors complying with condition 15.1.11.a.3.
- a. For each closed vent system joint, seam, or other connection that is permanently or semi-permanently sealed (e.g., a welded joint between two sections of hard piping or a bolted and gasketed ducting flange), the permittee must meet the requirements specified in paragraphs (a)(1) and (2) of this section..
- (i) Conduct an initial inspection according to the test methods and procedures specified in condition 15.3.4. to demonstrate that the closed vent system operates with no detectable emissions. The permittee must maintain records of the inspection results as specified in §60.5420a(c)(6).
- (ii) Conduct annual visual inspections for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in piping; loose connections; liquid leaks; or broken or missing caps or other closure devices. The permittee must monitor a component or connection using the test methods and procedures in condition 15.3.4. to demonstrate that it operates with no detectable emissions following any time the component is repaired or replaced or the connection is unsealed. The permittee must maintain records of the inspection results as specified in §60.5420a(c)(6).
- b. For closed vent system components other than those specified in paragraph (a)(1) of this section, the permittee must meet the requirements of paragraphs (b)(1) through (3) of this section.
1. Conduct an initial inspection according to the test methods and procedures specified in condition 15.3.4. to demonstrate that the closed vent system operates with no detectable emissions. The permittee must maintain records of the inspection results as specified in §60.5420a(c)(6).
2. Conduct annual inspections according to the test methods and procedures specified in condition 15.3.4. to demonstrate that the components or connections operate with no detectable emissions. The permittee must maintain records of the inspection results as specified in §60.5420a(c)(6).
3. Conduct annual visual inspections for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in ductwork; loose connections; liquid leaks; or broken or missing caps or other closure devices. The permittee must maintain records of the inspection results as specified in §60.5420a(c)(6).
- c. For each cover, the permittee must meet the requirements in paragraphs (c)(1) and (2) of this condition.

1. Conduct visual inspections for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the cover, or between the cover and the separator wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices. In the case where the storage vessel is buried partially or entirely underground, the permittee must inspect only those portions of the cover that extend to or above the ground surface, and those connections that are on such portions of the cover (*e.g.*, fill ports, access hatches, gauge wells, etc.) and can be opened to the atmosphere.
  2. The permittee must initially conduct the inspections specified in paragraph (c)(1) of this condition following the installation of the cover. Thereafter, the permittee must perform the inspection at least once every calendar year, except as provided in paragraphs (b)(11) and (12) of §60.5416a. The permittee must maintain records of the inspection results as specified in §60.5420a(c)(7).
- d. For each bypass device, except as provided for in §60.5411a(c)(3)(ii), the permittee must meet the requirements of paragraphs (d)(1) or (2) of this section.
1. Set the flow indicator to take a reading at least once every 15 minutes at the inlet to the bypass device that could divert the steam away from the control device to the atmosphere.
  2. If the bypass device valve installed at the inlet to the bypass device is secured in the non-diverting position using a car-seal or a lock-and-key type configuration, visually inspect the seal or closure mechanism at least once every month to verify that the valve is maintained in the non-diverting position and the vent stream is not diverted through the bypass device. The permittee must maintain records of the inspections according to §60.5420a(c)(8).

**[45CSR16; 40 C.F.R. §§ 60.5416a, 60.5416a(a), 60.5416a(a)(1), (2), and (4)]**

- 15.3.4. **No detectable emissions test methods and procedures under Subpart OOOOa.** If the permittee is required to conduct an inspection of a closed vent system at the reciprocating compressor affected facility as specified in condition 15.3.3.a. or 15.3.3.b., the permittee must meet the requirements of paragraphs (b)(1) through (13) of §60.5416a.

**[45CSR16; 40CFR§§60.5416a and 60.5416a(b)]**

## **15.4. Recordkeeping Requirements**

### **40 CFR 60 Subpart KKK (FUG AREA1)**

- 15.4.1. Each owner or operator subject to the provisions of this subpart shall comply with the requirements of condition 15.4.2 in addition to the requirements of 40CFR§60.486.  
**[45CSR16; 40CFR§60.635(a)]**
- 15.4.2. The following recordkeeping requirements shall apply to pressure relief devices subject to the requirements of 40CFR§60.633(b)(1).
- a. When each leak is detected as specified in 40CFR§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.

- b. When each leak is detected as specified in 40CFR§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:
  1. The instrument and operator identification numbers and the equipment identification number.
  2. The date the leak was detected and the dates of each attempt to repair the leak.
  3. Repair methods applied in each attempt to repair the leak.
  4. “Above 10,000 ppm” if the maximum instrument reading measured by the methods specified in 40CFR§60.635(a) after each repair attempt is 10,000 ppm or greater.
  5. “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.
  6. The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.
  7. The expected date of successful repair of the leak if a leak is not repaired within 15 days.
  8. Dates of process unit shutdowns that occur while the equipment is unrepaired.
  9. The date of successful repair of the leak.
  10. A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of 40CFR§60.482-4(a). The designation of equipment subject to the provisions of 40CFR§60.482-4(a) shall be signed by the owner or operator.

**[45CSR16; 40CFR§60.635(b)]**

**40 CFR 60 Subpart OOOO (FUG AREA 2 AND FUG AREA 3)**

- 15.4.3. The permittee must comply with the requirements of condition 15.4.4 in addition to the requirements of 40CFR§60.486a.

**[45CSR16; 40CFR§60.5421(a)]**

- 15.4.4. The following recordkeeping requirements apply to pressure relief devices subject to the requirements of 40CFR§60.5401(b)(1).

- a. When each leak is detected as specified in 40CFR§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.
- b. When each leak is detected as specified in 40CFR§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:
  1. The instrument and operator identification numbers and the equipment identification number.
  2. The date the leak was detected and the dates of each attempt to repair the leak.

3. Repair methods applied in each attempt to repair the leak.
4. “Above 500 ppm” if the maximum instrument reading measured by the methods specified in 15.4.3 after each repair attempt is 500 ppm or greater.
5. “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.
6. The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.
7. The expected date of successful repair of the leak if a leak is not repaired within 15 days.
8. Dates of process unit shutdowns that occur while the equipment is unrepaired.
9. The date of successful repair of the leak.
10. A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of 40CFR§60.482-4a(a). The designation of equipment subject to the provisions of 40CFR§60.482-4a(a) must be signed by the owner or operator.

**[45CSR16; 40CFR§60.5421(b)]**

**40CFR 60 Subpart OOOOa (FUG AREAS 4 – 7)**

- 15.4.5. The permittee must comply with the requirements of condition 15.4.6. in addition to the requirements of 40CFR§60.486a.

**[45CSR16; 40CFR§60.5421a(a)]**

- 15.4.6. The following recordkeeping requirements apply to pressure relief devices subject to the requirements of 40CFR§60.5401a(b)(1).
- a. When each leak is detected as specified in 40CFR§60.5401a(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.
  - b. When each leak is detected as specified in 40CFR§60.5401a(b)(2), the information specified in paragraphs (b)(1) through (10) of this condition must be recorded in a log and shall be kept for 2 years in a readily accessible location:
    1. The instrument and operator identification numbers and the equipment identification number.
    2. The date the leak was detected and the dates of each attempt to repair the leak.
    3. Repair methods applied in each attempt to repair the leak.
    4. “Above 500 ppm” if the maximum instrument reading measured by the methods specified in §60.5400a(d) after each repair attempt is 500 ppm or greater.



5. “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.
6. The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.
7. The expected date of successful repair of the leak if a leak is not repaired within 15 days.
8. Dates of process unit shutdowns that occur while the equipment is unrepaired.
9. The date of successful repair of the leak.
10. A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of 40CFR§60.482-4a(a). The designation of equipment subject to the provisions of 40CFR§60.482-4a(a) must be signed by the owner or operator.

**[45CSR16; 40CFR§60.5421a(b)]**

**Compressors**

- 15.4.7. **Recordkeeping requirements under Subpart OOOO.** The permittee must maintain the records identified as specified in §60.7(f) and in paragraphs (a) for compressors complying with §60.5385(a)(1) or (2), and (b), (c), (d), and (e) of this condition for compressors complying with §60.5385(a)(3). All records required by this subpart must be maintained either onsite or at the nearest local field office for at least 5 years.
- a. For each reciprocating compressor affected facility, the permittee must maintain the following records:
    1. 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.
    2. 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).
    3. Records of deviations in cases where the reciprocating compressor was not operated in compliance with the requirements specified in §60.5385.
  - b. Records of each closed vent system inspection required under §60.5416(a)(1) and (2) for reciprocating compressors.
  - c. A record of each cover inspection required under §60.5416(a)(3) for reciprocating compressors.
  - d. If the permittee is subject to the bypass requirements of §60.5416(a)(4) for reciprocating compressors, a record of each inspection or a record each time the key is checked out or a record of each time the alarm is sounded.

- e. If the permittee is subject to the closed vent system no detectable emissions requirements of §60.5416(b) for reciprocating compressors, a record of the monitoring conducted in accordance with §60.5416(b).

**[45CSR16; 40CFR§§60.5420(c), (c)(3), (c)(6), (c)(7), (c)(8), and (c)(9)]**

15.4.8. **Recordkeeping requirements under Subpart OOOOa.** The permittee must maintain the records identified as specified in §60.7(f) and in paragraphs (a) for compressors complying with §60.5385a(a)(1) or (2), and (b) through (f) of this condition for compressors complying with §60.5385a(a)(3). All records required by this subpart must be maintained either onsite or at the nearest local field office for at least 5 years. Any records required to be maintained by 40 C.F.R. 60 Subpart OOOOa that are submitted electronically via the EPA's CDX may be maintained in electronic format.

- a. For each reciprocating compressor affected facility, the permittee must maintain the records in paragraphs (a)(1) through (3) of this condition.
  - 1. Records of the cumulative number of hours of operation or number of months since initial startup or the previous replacement of the reciprocating compressor rod packing, whichever is later. Alternatively, a statement that emissions from the rod packing are being routed to a process through a closed vent system under negative pressure.
  - 2. 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 §60.5385a(a)(3).
  - 3. Records of deviations in cases where the reciprocating compressor was not operated in compliance with the requirements specified in §60.5385a.
- b. Records of each closed vent system inspection required under §60.5416a(a)(1) and (2) for reciprocating compressors.
- c. A record of each cover inspection required under §60.5416a(a)(3) for reciprocating compressors.
- d. If the permittee is subject to the bypass requirements of §60.5416a(a)(4) for reciprocating compressors, a record of each inspection or a record of each time the key is checked out or a record of each time the alarm is sounded.
- e. If the permittee is subject to the closed vent system no detectable emissions requirements of §60.5416a(b) for reciprocating compressors, a record of the monitoring conducted in accordance with §60.5416a(b).
- f. For each closed vent system routing to a control device or process, the records of the assessment conducted according to §60.5411a(d):
  - 1. A copy of the assessment conducted according to §60.5411a(d)(1);
  - 2. A copy of the certification according to §60.5411a(d)(1)(i); and

3. The owner or operator shall retain copies of all certifications, assessments and any related records for a period of five years and make them available if directed by the delegated authority.

**[45CSR16; 40CFR§§60.5420a(c), (c)(3), (c)(6), (c)(7), (c)(8), (c)(9), and (c)(17)]**

## **15.5. Reporting Requirements**

### **40 CFR 60 Subpart KKK (FUG AREA 1)**

- 15.5.1. Each owner or operator subject to the provisions of this subpart shall comply with the requirements of conditions 15.5.2. and 15.5.3. in addition to the requirements of 40CFR§60.487.

**[45CSR16; 40CFR§60.636(a)]**

- 15.5.2. An owner or operator shall include the following information in the initial semiannual report in addition to the information required in 40CFR§§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 40CFR§60.482-4(c).

**[45CSR16; 40CFR§60.636(b)]**

- 15.5.3. An owner or operator shall include the following information in all semiannual reports in addition to the information required in 40CFR§§60.487(c)(2) (i) through (vi):

- a. Number of pressure relief devices for which leaks were detected as required in 40CFR§60.633(b)(2) and

- b. Number of pressure relief devices for which leaks were not repaired as required in 40CFR§60.633(b)(3).

**[45CSR16; 40CFR§60.636(c)]**

### **40 CFR 60 Subpart OOOO (FUG AREA 2 AND FUG AREA 3)**

- 15.5.4. The permittee must comply with the requirements of conditions 15.5.5. and 15.5.6. in addition to the requirements of 40CFR§§60.487a(a), (b), (c)(2)(i) through (iv), and (c)(2)(vii) through (viii).

**[45CSR16; 40CFR§60.5422(a)]**

- 15.5.5. An owner or operator must include the following information in the initial semiannual report in addition to the information required in 40CFR§§60.487a(b)(1) through (4): Number of pressure relief devices subject to the requirements of 40CFR§60.5401(b) except for those pressure relief devices designated for no detectable emissions under the provisions of 40CFR§60.482-4a(a) and those pressure relief devices complying with 40CFR§60.482-4a(c).

**[45CSR16; 40CFR§60.5422(b)]**

- 15.5.6. An owner or operator must include the following information in all semiannual reports in addition to the information required in 40CFR§§60.487a(c)(2)(i) through (vi):

- a. Number of pressure relief devices for which leaks were detected as required in 40CFR§60.5401(b)(2); and

- b. Number of pressure relief devices for which leaks were not repaired as required in 40CFR§60.5401(b)(3).

**[45CSR16; 40CFR§60.5422(c)]**

**40CFR 60 Subpart OOOOa (FUG AREAS 4 – 7)**

- 15.5.7. The permittee must comply with the requirements of conditions 15.5.8. and 15.5.9. in addition to the requirements of 40CFR§§60.487a(a), (b), (c)(2)(i) through (iv), and (c)(2)(vii) through (viii). The permittee must submit semiannual reports to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>).) Use the appropriate electronic report in CEDRI for this subpart or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the CEDRI Web site (<https://www3.epa.gov/ttn/chief/cedri/>). If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, submit the report to the Administrator at the appropriate address listed in §60.4. Once the form has been available in CEDRI for at least 90 days, the permittee must begin submitting all subsequent reports via CEDRI. The report must be submitted by the deadline specified in this subpart, regardless of the method in which the report is submitted.

**[45CSR16; 40CFR§60.5422a(a)]**

- 15.5.8. An owner or operator must include the following information in the initial semiannual report in addition to the information required in 40CFR§§60.487a(b)(1) through (4): Number of pressure relief devices subject to the requirements of 40CFR§60.5401a(b) except for those pressure relief devices designated for no detectable emissions under the provisions of 40CFR§60.482-4a(a) and those pressure relief devices complying with 40CFR§60.482-4a(c).

**[45CSR16; 40CFR§60.5422a(b)]**

- 15.5.9. An owner or operator must include the information specified in paragraphs (a) and (b) of 15.5.9 in all semiannual reports in addition to the information required in 40CFR§§60.487a(c)(2)(i) through (vi):

- a. Number of pressure relief devices for which leaks were detected as required in 40CFR§60.5401a(b)(2); and
- b. Number of pressure relief devices for which leaks were not repaired as required in 40CFR§60.5401a(b)(3).

**[45CSR16; 40CFR§60.5422a(c)]**

**Compressors**

- 15.5.10. **Reporting requirements under Subpart OOOO.** The permittee must submit annual reports containing the information specified in paragraphs (a) and (b) of this condition to the Administrator and performance test reports as specified in paragraph (7) 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 the permittee owns or operates more than one affected facility, the permittee may submit one report for multiple affected facilities provided the report contains all of the information required as specified in paragraphs (a) and (b) of this condition, and paragraph (7) of §60.5420(b). Annual reports may coincide with title V reports as long as all the required elements of the annual report are included. The permittee may arrange with the Administrator a common

schedule on which reports required by this part may be submitted as long as the schedule does not extend the reporting period.

- a. The general information specified in paragraphs (a)(1) through (4) of this condition.
  1. The company name and address of the affected facility.
  2. An identification of each affected facility being included in the annual report.
  3. Beginning and ending dates of the reporting period.
  4. A certification by a certifying official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- b. For each reciprocating compressor affected facility, the information specified in paragraphs (b)(1) through (2) of this condition.
  1. The cumulative number of hours of operation or the number of months since initial startup, since October 15, 2012, or since the previous reciprocating compressor rod packing replacement, whichever is later.
  2. Records of deviations specified in paragraph (c)(3)(iii) of §60.5420 that occurred during the reporting period.

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

15.5.11. **Reporting requirements under Subpart OOOOa.** The permittee must submit annual reports containing the information specified in paragraphs (b)(1) and (b)(4) of §60.5420a. The permittee must submit annual reports following the procedure specified in paragraph (b)(11) of §60.5420a. The initial annual report is due no later than 90 days after the end of the initial compliance period as determined according to §60.5410a. Subsequent annual reports are due no later than same date each year as the initial annual report. If the permittee owns or operates more than one affected facility, the permittee may submit one report for multiple affected facilities provided the report contains all of the information required as specified in paragraphs (b)(1) through (8) of §60.5420a, except as provided in paragraph (b)(13) of §60.5420a. Annual reports may coincide with title V reports as long as all the required elements of the annual report are included. The permittee may arrange with the Administrator a common schedule on which reports required by this part may be submitted as long as the schedule does not extend the reporting period.

- a. The general information specified in paragraphs (a)(1) through (4) of this condition for all reports.
  1. The company name, facility site name associated with the affected facility, US Well ID or US Well ID associated with the affected facility, if applicable, and address of the affected facility. If an address is not available for the site, include a description of the site location and provide the latitude and longitude coordinates of the site in decimal degrees to an accuracy and precision of five (5) decimals of a degree using the North American Datum of 1983.
  2. An identification of each affected facility being included in the annual report.
  3. Beginning and ending dates of the reporting period.

4. A certification by a certifying official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- b. For each reciprocating compressor affected facility, the information specified in paragraphs (b)(1) and (2) of this condition.
    1. The cumulative number of hours of operation or the number of months since initial startup or since the previous reciprocating compressor rod packing replacement, whichever is later. Alternatively, a statement that emissions from the rod packing are being routed to a process through a closed vent system under negative pressure.
    2. Records of deviations specified in paragraph (c)(3)(iii) of §60.5420a that occurred during the reporting period.
  - c. The permittee must submit reports to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX (<https://cdx.epa.gov/>.) The permittee must use the appropriate electronic report in CEDRI for this subpart or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the CEDRI Web site (<https://www3.epa.gov/ttn/chief/cedri/>). If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the permittee must submit the report to the Administrator at the appropriate address listed in §60.4. Once the form has been available in CEDRI for at least 90 calendar days, the permittee must begin submitting all subsequent reports via CEDRI. The reports must be submitted by the deadlines specified in this subpart, regardless of the method in which the reports are submitted.

**[45CSR16; 40CFR§§60.5420a(b), (b)(1), (b)(4) and (b)(11)]**

## **15.6. Compliance Plan**

- 15.6.1. None