

Permit Number: **R30-01700034-2023**
Permittee: **MarkWest Liberty Midstream & Resources, L.L.C.**
Facility Name: **Sherwood Gas Plant**
Permittee Mailing Address: **1515 Arapahoe Street, Tower 1, Suite 1600; Denver, CO 80202-2137**

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

Facility Location:	West Union, Doddridge County, West Virginia
Facility Mailing Address:	218 Swisher Lane; West Union, WV 26456
Telephone Number:	(304) 782-2802
Type of Business Entity:	LLC
Facility Description:	Natural Gas Gathering and Processing Plant
SIC Codes:	1311
UTM Coordinates:	526.921 km Easting • 4,346.885 km Northing • Zone 17

Permit Writer: Robert Mullins

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

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

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

1.1. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device ⁽¹⁾
CM-1001	CM-1001	Caterpillar G3616 LE Compressor Engine C-151 Compressor SN: BLB00753	2012	4,735 hp	Oxidation Catalyst
CM-1002	CM-1002	Caterpillar G3616 LE Compressor Engine C-152 Compressor SN: BLB00752	2012	4,735 hp	Oxidation Catalyst
CM-2001	CM-2001	Caterpillar G3608 LE Compressor Engine Compressor SN: BEN00765	2012	2,370 hp	Oxidation Catalyst
G-2	G-2	Generac MMG130D Emergency Generator: CI	2015	152 hp	None
DH-001	DH-001	TEG Dehydration Unit Still Vent	2012	120 MMscfd	Flare
		Flash Tank			RCRC
RB-001	RB-001	TEG Dehydration Unit Reboiler	2012	2.0 MMBTU/hr	None
FL-DH	FL-DH	Dehydration Unit Flare	2012	0.70 scf/min	NA
FS-762	FS-762	Main Process/Emergency Flare	2015	68,600 scf/min	NA
TNK-001	TNK-001	4 Storage Tanks (1-500 bbl gunbarrel tank, 3-400 bbl condensate/water tanks)	2012	See Emission Unit Description	VRU
H-751	H-751	Stabilization Heater II	2017	6.35 MMBTU/hr	None
Pressure Vessels	Pressure Vessels	4 - 70,000 gallon NGL Tanks	2012	4@70,000 gallons	Pressure Vessels
Sherwood I Extraction Train					
H-711a	H-711a	Mole Sieve Regeneration Heater	2017	8.76 MMBTU/hr	None
H-771a	H-771a	Hot Oil Heater	2022	32.76 MMBTU/hr	None
Sherwood II Extraction Train					
H-2711a	H-2711a	Mole Sieve Regeneration Heater	2017	8.76 MMBTU/hr	None
Sherwood III Extraction Train					

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device ⁽¹⁾
H-3711	H-3711	Mole Sieve Regeneration Heater	2013	15.58 MMBTU/hr	None
Sherwood IV Extraction Train					
H-4711	H-4711	Mole Sieve Regeneration Heater	2013	18.0 MMBTU/hr	IFGR w/LowNOx Burner
H-4712	H-4712	Hot Oil Heater	2014	6.60 MMBTU/hr	None
Sherwood V Extraction Train					
H-5711	H-5711	Mole Sieve Regeneration Heater	2014	18.00 MMBTU/hr	IFGR w/LowNOx Burner
Sherwood VI Extraction Train					
H-6711	H-6711	Mole Sieve Regeneration Heater	2015	18.00 MMBTU/hr	IFGR w/LowNOx Burner
H-6712	H-6712	Hot Oil Heater	2015	6.60 MMBTU/hr	None
Sherwood VII Extraction Train					
H-7711	H-7711	Mole Sieve Regeneration Heater	2015	18.00 MMBTU/hr	IFGR w/LowNOx Burner
Sherwood VIII Extraction Train					
H-8711	H-8711	Mole Sieve Regeneration Heater	2015	18.00 MMBTU/hr	IFGR w/LowNOx Burner
H-8712	H-8712	Hot Oil Heater	2015	7.20 MMBTU/hr	None
Sherwood IX Extraction Train					
H-9711	H-9711	Mole Sieve Regeneration Heater	2016	18.00 MMBTU/hr	IFGR w/LowNOx Burner
Sherwood X Extraction Train					
H-10711	H-10711	Mole Sieve Regeneration Heater	2017	10.62 MMBTU/hr	None
Sherwood XI Extraction Train					
H-11711	H-11711	Mole Sieve Regeneration Heater	2017	10.62 MMBTU/hr	None

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device ⁽¹⁾
Sherwood XII Extraction Train					
H-12711	H-12711	Mole Sieve Regeneration Heater	2019	10.62 MMBTU/hr	None
Sherwood XIII Extraction Train					
H-13711	H-13711	Mole Sieve Regeneration Heater	2019	10.62 MMBTU/hr	None
DeEthanizer I Unit					
D1-H-782	D1-H-782	DeEthanizer HMO Process Heater Configured with 8 burners w/Maximum Heat Release of 14.9 MMBtu/hr for each burner	2015	119.2 (2) MMBTU/hr	FGR w/Low NOx Burner
D1-H-741	D1-H-741	DeEthanizer Regeneration Heater	2015	12.23 MMBTU/hr	None
DeEthanizer II Unit					
H-10768	H-10768	DeEthanizer II HMO Heater	2018	65.43 MMBTU/hr	None
H-10775	H-10775	DeEthanizer II Regeneration Heater	2018	6.05 MMBTU/hr	None
DeEthanizer III Unit					
H-768	H-768	DeEthanizer III HMO Heater	2019	65.4 MMBTU/hr	None
H-775	H-775	DeEthanizer III Regeneration Heater	2019	5.94 MMBTU/hr	None
Tank Farm					
MT-1	MT-1	Methanol Tank	2012	500 gal	None
MT-2	MT-2	Methanol Tank	2012	500 gal	None
MT-3	MT-3	Methanol Tank	2012	500 gal	None
MT-4	MT-4	Methanol Tank	2012	500 gal	None
MT-5	MT-5	Methanol Tank	2012	500 gal	None
MT-6	MT-6	Methanol Tank	2012	500 gal	None
MT-7	MT-7	Methanol Tank	2012	500 gal	None
MT-8	MT-8	Methanol Tank	2012	500 gal	None
MT-9	MT-9	Methanol Tank	2018	500 gal	None
MT-10	MT-10	Methanol Tank	2018	500 gal	None
MT-11	MT-11	Methanol Tank	2018	500 gal	None

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device ⁽¹⁾
GT-1	GT-1	Gasoline Tank	2012	500 gal	None
DT-1	DT-1	Diesel Tank	2012	500 gal	None
DT-2	DT-2	Diesel Tank	2012	500 gal	None
TK-825	TK-825	Floor Drain Storage Tank	2012	4,200 gal	None
TK-826	TK-826	Lube Oil Storage Tank	2012	4,200 gal	None
TK-824	TK-824	Floor Drain Storage Tank	2012	4,200 gal	None
TK-2821	TK-2821	Methanol Storage Tank	2012	3,780 gal	None
TK-2941	TK-2941	Lube Oil Storage Tank	2012	1,000 gal	None
TK-2896	TK-2896	Floor Drain Storage Tank	2012	500 gal	None
TK-2950	TK-2950	Propane Storage Tank	2012	500 gal	None
L-1	L-1	Liquid Loadout	2012	1,514,000 (gal/yr)	Flare ⁽³⁾
L-2	L-2	Inlet Condensate Loadout	2012	929,202 (gal/yr)	Vapor Return Line to VRU or Flare
CC	CC	Crankcase Emissions	2012	NA	NA
RP	RP	Rod Packing Emissions	2012	NA	NA
FUG-001	FUG-001	Fugitive Leaks	2012-2019	NA	NA

(1) - FGR - Flue Gas Recirculation, IFGR - Integrated Flue Gas Recirculation, RCRC – Recycle or recompression, VRU – Vapor Recovery Unit

(2) - Normal Maximum Heat Release Rate of the burners

(3) - The DeEth 1 Closed Drain Tank is uncontrolled during loadout.

Emission Point ID	Control Device	Emission Unit	Pollutant	Control Efficiency
CM-1001 CM-1002	Oxidation Catalyst	Caterpillar G3616 LE Compressor Engines	Carbon Monoxide	95%
			Volatile Organic Compounds	75 %
			Formaldehyde	90 %
CM-2001	Oxidation Catalyst	Caterpillar G3608 Compressor Engine	Carbon Monoxide	95%
			Volatile Organic Compounds	75 %
			Formaldehyde	90 %
FL-DH	Dehy Flare	TEG Dehydration Unit Still Vent	Volatile Organic Compounds	98 %
			Total Hazardous Air Pollutants	98 %

Emission Point ID	Control Device	Emission Unit	Pollutant	Control Efficiency
FS-762	Flare	Main Process/Emergency Flare (Unit Blowdown & Maintenance Purposes)	Volatile Organic Compounds	98 %
			Total Hazardous Air Pollutants	98 %
TNK-001	Vapor Recovery Unit	Condensate Storage Tanks	Volatile Organic Compounds	98 %
			Total Hazardous Air Pollutants	98 %

Facility Compressors

Compressor ID	Gas Service	Type	Date of Startup
Inlet			
SH-C-7001	Inlet	Reciprocating	10/9/2012
SH-C-7002	Inlet	Reciprocating	10/9/2012
SH-C-7003	Inlet	Reciprocating	10/9/2012
Sherwood I			
SH-1-C-111	Inlet Gas	Centrifugal	Dry seal not subject to OOOO/a
SH-1-C-132	Stabilized Overheads	Reciprocating	10/9/2012
SH-1-C-141	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-1-C-142	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-1-C-151	Residue	Reciprocating	10/9/2012
SH-1-C-152	Residue	Reciprocating	10/9/2012
SH-1-C-153	Residue	Reciprocating	10/9/2012
SH-1-C-154	Residue	Reciprocating	10/9/2012
Sherwood II			
SH-2-C-2111	Inlet Gas	Centrifugal	Dry seal not subject to OOOO/a
SH-2-C-2141	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-2-C-2142	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-2-C-2151	Residue	Reciprocating	5/16/2013
SH-2-C-2152	Residue	Reciprocating	5/16/2013

Compressor ID	Gas Service	Type	Date of Startup
SH-2-C-2153	Residue	Reciprocating	5/16/2013
Sherwood III			
SH-3-C-3111	Inlet Gas	Centrifugal	Dry seal not subject to OOOO/a
SH-3-C-3140	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-3-C-3141	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-3-C-3142	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-3-C-3151	Residue	Reciprocating	11/20/2013
SH-3-C-3152	Residue	Reciprocating	11/20/2013
SH-3-C-3153	Residue	Reciprocating	11/20/2013
Sherwood IV			
SH-4-C-4111	Inlet Gas	Centrifugal	Dry seal not subject to OOOO/a
SH-4-C-4140	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-4-C-4141	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-4-C-4151	Propane Refrigerant	Reciprocating	8/14/2014
SH-4-C-4152	Residue	Reciprocating	8/14/2014
SH-4-C-4153	Residue	Reciprocating	8/14/2014
SH-4-C-4154	Residue	Reciprocating	8/14/2014
Sherwood V			
SH-5-C-5111	Inlet Gas	Centrifugal	Dry seal not subject to OOOO/a
SH-5-C-5140	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-5-C-5141	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-5-C-5151	Propane Refrigerant	Reciprocating	11/2/2014
SH-5-C-5152	Residue	Reciprocating	11/2/2014
SH-5-C-5153	Residue	Reciprocating	11/2/2014
Sherwood VI			
SH-6-C-6111	Inlet Gas	Centrifugal	Dry seal not subject to OOOO/a

Compressor ID	Gas Service	Type	Date of Startup
SH-6-C-6140	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-6-C-6141	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-6-C-6142	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-6-C-6151	Residue	Reciprocating	7/19/2015
SH-6-C-6152	Residue	Reciprocating	7/19/2015
SH-6-C-6153	Residue	Reciprocating	7/19/2015
SH-6-C-6154	Residue	Reciprocating	7/19/2015

Sherwood VII

SH-7-C-7111	Inlet Gas	Centrifugal	Dry seal not subject to OOOO/a
SH-7-C-7140	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-7-C-7141	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-7-C-7142	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-7-C-7151	Residue	Reciprocating	3/8/2017
SH-7-C-7152	Residue	Reciprocating	3/8/2017
SH-7-C-7153	Residue	Reciprocating	3/8/2017

Sherwood VIII

SH-8-C-8111	Inlet Gas	Centrifugal	Dry seal not subject to OOOO/a
SH-8-C-8140	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-8-C-8141	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-8-C-8142	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-8-C-8151	Residue	Reciprocating	7/17/2017
SH-8-C-8152	Residue	Reciprocating	7/17/2017
SH-8-C-8153	Residue	Reciprocating	7/17/2017
SH-8-C-8154	Residue	Reciprocating	7/17/2017

Sherwood IX

SH-9-C-9111	Inlet Gas	Centrifugal	Dry seal not subject to OOOO/a
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Compressor ID	Gas Service	Type	Date of Startup
SH-9-C-9140	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-9-C-9141	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-9-C-9142	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-9-C-9151	Residue	Reciprocating	12/27/2017
SH-9-C-9152	Residue	Reciprocating	12/27/2017
SH-9-C-9153	Residue	Reciprocating	12/27/2017

Sherwood X

SH-10-C-10111	Inlet Gas	Centrifugal	Dry seal not subject to OOOO/a
SH-10-C-10140	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-10-C-10141	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-10-C-10142	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-10-C-10151	Residue	Reciprocating	10/30/2018
SH-10-C-10152	Residue	Reciprocating	10/30/2018
SH-10-C-10153	Residue	Reciprocating	10/30/2018
SH-10-C-10154	Residue	Reciprocating	10/30/2018

Sherwood XI

SH-11-C-11111	Inlet Gas	Centrifugal	Dry seal not subject to OOOO/a
SH-11-C-11140	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-11-C-11141	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-11-C-11142	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-11-C-11151	Residue	Reciprocating	12/2/2018
SH-11-C-11152	Residue	Reciprocating	12/2/2018
SH-11-C-11153	Residue	Reciprocating	12/2/2018

Sherwood XII

SH-12-C-12111	Inlet Gas	Centrifugal	Dry seal not subject to OOOO/a
SH-12-C-12140	Propane Refrigerant	Screw	Not Subject to OOOO/a

Compressor ID	Gas Service	Type	Date of Startup
SH-12-C-12141	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-12-C-12142	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-12-C-12151	Residue	Reciprocating	10/1/2019
SH-12-C-12152	Residue	Reciprocating	10/1/2019
SH-12-C-12153	Residue	Reciprocating	10/1/2019

Sherwood XIII

SH-13-C-13111	Inlet Gas	Centrifugal	Dry seal not subject to OOOO/a
SH-13-C-13140	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-13-C-13141	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-13-C-13142	Propane Refrigerant	Screw	Not Subject to OOOO/a
SH-13-C-13151	Residue	Reciprocating	11/24/2019
SH-13-C-13152	Residue	Reciprocating	11/25/2019
SH-13-C-13153	Residue	Reciprocating	11/26/2019
SH-13-C-13154	Residue	Reciprocating	11/27/2019

DeEthanizer I Unit

D1-C1101	Ethane	Reciprocating	12/7/2015
D1-C1102	Ethane	Reciprocating	12/7/2015
D1-C1103	Ethane	Reciprocating	12/7/2015
D1-C1141	Ethane	Centrifugal	Dry seal not subject to OOOO/a
D1-C1161	Propane Refrigerant	Screw	Not Subject to OOOO/a
D1-C1162	Propane Refrigerant	Screw	Not Subject to OOOO/a
D1-C1163	Propane Refrigerant	Screw	Not Subject to OOOO/a
D1-C580	CO ₂	Reciprocating	12/7/2015

DeEthanizer II Unit

D2-C179	Ethane	Centrifugal	Dry seal not subject to OOOO/a
D2-C501	CO ₂	Reciprocating	11/21/2018

Compressor ID	Gas Service	Type	Date of Startup
D2-C155	Propane Refrigerant	Screw	Not Subject to OOOO/a
D2-C156	Propane Refrigerant	Screw	Not Subject to OOOO/a
D2-C157	Propane Refrigerant	Screw	Not Subject to OOOO/a
DeEthanizer III Unit			
D3-C179	Ethane	Centrifugal	Dry seal not subject to OOOO/a
D3-C501	CO ₂	Reciprocating	10/31/2019
D3-C155	Propane Refrigerant	Screw	Not Subject to OOOO/a
D3-C156	Propane Refrigerant	Screw	Not Subject to OOOO/a
D3-C157	Propane Refrigerant	Screw	Not Subject to OOOO/a
Stabilizer II			
SS2-C155	Stabilized overheads	Reciprocating	5/30/2018

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
R13-2914 LK	November 6, 2023 July 23, 2024

2.0. General Conditions

2.1. Definitions

- 2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.
- 2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.
- 2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.39.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.
- 2.1.4. Unless otherwise specified in a permit condition or underlying rule or regulation, all references to a "rolling yearly total" shall mean the sum of the monthly data, values or parameters being measured, monitored, or recorded, at any given time for the previous twelve (12) consecutive calendar months.

2.2. Acronyms

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

2.3. Permit Expiration and Renewal

- 2.3.1. Permit duration. This permit is issued for a fixed term of five (5) years and shall expire on the date specified on the cover of this permit, except as provided in 45CSR§30-6.3.b. and 45CSR§30-6.3.c.
[45CSR§30-5.1.b.]
- 2.3.2. A permit renewal application is timely if it is submitted at least six (6) months prior to the date of permit expiration.
[45CSR§30-4.1.a.3.]
- 2.3.3. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with 45CSR§30-6.2. and 45CSR§30-4.1.a.3.
[45CSR§30-6.3.b.]
- 2.3.4. If the Secretary fails to take final action to deny or approve a timely and complete permit application before the end of the term of the previous permit, the permit shall not expire until the renewal permit has been issued or denied, and any permit shield granted for the permit shall continue in effect during that time.
[45CSR§30-6.3.c.]

2.4. Permit Actions

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

2.5. Reopening for Cause

- 2.5.1. This permit shall be reopened and revised under any of the following circumstances:
 - a. Additional applicable requirements under the Clean Air Act or the Secretary's legislative rules become applicable to a major source with a remaining permit term of three (3) or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 45CSR§§30-6.6.a.1.A. or B.
 - b. Additional requirements (including excess emissions requirements) become applicable to an affected source under Title IV of the Clean Air Act (Acid Deposition Control) or other legislative rules of the Secretary. Upon approval by U.S. EPA, excess emissions offset plans shall be incorporated into the permit.
 - c. The Secretary or U.S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

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

[45CSR§30-6.6.a.]

2.6. Administrative Permit Amendments

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

[45CSR§30-6.4.]

2.7. Minor Permit Modifications

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

[45CSR§30-6.5.a.]

2.8. Significant Permit Modification

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

[45CSR§30-6.5.b.]

2.9. Emissions Trading

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

[45CSR§30-5.1.h.]

2.10. Off-Permit Changes

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

- a. The change must meet all applicable requirements and may not violate any existing permit term or condition.
- b. The permittee must provide a written notice of the change to the Secretary and to U.S. EPA within two (2) business days following the date of the change. Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change.
- c. The change shall not qualify for the permit shield.

- d. The permittee shall keep records describing all changes made at the source that result in emissions of regulated air pollutants, but not otherwise regulated under the permit, and the emissions resulting from those changes.
- e. No permittee may make any change subject to any requirement under Title IV of the Clean Air Act (Acid Deposition Control) pursuant to the provisions of 45CSR§30-5.9.
- f. No permittee may make any changes which would require preconstruction review under any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) pursuant to the provisions of 45CSR§30-5.9.

[45CSR§30-5.9.]

2.11. Operational Flexibility

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

[45CSR§30-5.8]

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

[45CSR§30-5.8.a.]

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

- a. If subsequent changes cause the facility's operations and emissions to revert to those authorized in the permit and the permittee resumes compliance with the terms and conditions of the permit, or
- b. If the permittee obtains final approval of a significant modification to the permit to incorporate the change in the permit.

[45CSR§30-5.8.c.]

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

[45CSR§30-2.40]

2.12. Reasonably Anticipated Operating Scenarios

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

- a. Contemporaneously with making a change from one operating scenario to another, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating and to document the change in reports submitted pursuant to the terms of this permit and 45CSR30.
- b. The permit shield shall extend to all terms and conditions under each such operating scenario; and
- c. The terms and conditions of each such alternative scenario shall meet all applicable requirements and the requirements of 45CSR30.

[45CSR§30-5.1.i.]

2.13. Duty to Comply

- 2.13.1. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

[45CSR§30-5.1.f.1.]

2.14. Inspection and Entry

- 2.14.1. The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

- a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;

- d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

[45CSR§30-5.3.b.]

2.15. Schedule of Compliance

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

- a. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when such activities, milestones or compliance were achieved; and
- b. An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measure adopted.

[45CSR§30-5.3.d.]

2.16. Need to Halt or Reduce Activity not a Defense

- 2.16.1. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.

[45CSR§30-5.1.f.2.]

2.17. Reserved

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.

[45 CSR§30-5.6.a.]

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

- a. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance; or
- b. The applicable requirements of the Code of West Virginia and Title IV of the Clean Air Act (Acid Deposition Control), consistent with § 408 (a) of the Clean Air Act.
- c. The authority of the Administrator of U.S. EPA to require information under § 114 of the Clean Air Act or to issue emergency orders under § 303 of the Clean Air Act.

[45CSR§30-5.6.c.]

2.22. Credible Evidence

2.22.1. Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee including but not limited to any challenge to the credible evidence rule in the context of any future proceeding.

[45CSR§30-5.3.e.3.B.]

2.23. Severability

2.23.1. The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid by a court of competent jurisdiction, the remaining permit terms and conditions or their application to other circumstances shall remain in full force and effect.

[45CSR§30-5.1.e.]

2.24. Property Rights

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

2.25. Acid Deposition Control

- 2.25.1. Emissions shall not exceed any allowances that the source lawfully holds under Title IV of the Clean Air Act (Acid Deposition Control) or rules of the Secretary promulgated thereunder.
- a. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid deposition control program, provided that such increases do not require a permit revision under any other applicable requirement.
 - b. No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement.
 - c. Any such allowance shall be accounted for according to the procedures established in rules promulgated under Title IV of the Clean Air Act.

[45CSR§30-5.1.d.]

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

3.0. Facility-Wide Requirements

3.1. Limitations and Standards

- 3.1.1. **Open burning.** The open burning of refuse by any person is prohibited except as noted in 45CSR§6-3.1. [45CSR§6-3.1.]
- 3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause or allow any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible. [45CSR§6-3.2.]
- 3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them. [40 C.F.R. §61.145(b) and 45CSR34]
- 3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public. [45CSR§4-3.1 State-Enforceable only.]
- 3.1.5. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11. [45CSR§11-5.2]
- 3.1.6. **Emission inventory.** The permittee is responsible for submitting, on an annual basis, an emission inventory in accordance with the submittal requirements of the Division of Air Quality. [W.Va. Code § 22-5-4(a)(~~415~~)]
- 3.1.7. **Ozone-depleting substances.** For those facilities performing maintenance, service, repair or disposal of appliances, the permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 C.F.R. Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the prohibitions and required practices pursuant to 40 C.F.R. §§ 82.154 and 82.156.
 - b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 C.F.R. § 82.158.

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

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

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

[40 C.F.R. 68]

- 3.1.9. **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, R13-2914, Conditions 4.1.5., 5.1.4., and 8.1.4.]

- 3.1.10. The fuel gas (residue gas) for the facility shall not exceed the following on a rolling 12-month basis:

- a. Total VOCs content of the gas greater than 1% by weight.
- b. Hydrogen sulfide or total sulfur compounds greater than 4 grain per 100 cubic feet of gas.

[45CSR13, R13-2914, Condition 3.1.7.]

- 3.1.11. No person shall cause, suffer, allow or permit fugitive particulate matter to be discharged beyond the boundary lines of the property on which the discharge originates or at any public or residential location, which causes or contributes to statutory air pollution.

[45CSR§17-3.1 State-Enforceable only.]

3.2. Monitoring Requirements

- 3.2.1. The permittee shall analyze the fuel gas for the facility once per month. Such analysis shall determine the net heating value, percentage of VOC in the fuel gas. Such analysis shall be maintained in accordance with Condition 3.4.2.

[45CSR13, R13-2914, Condition 3.2.1.]

- 3.2.2. For the purpose of demonstrating compliance with Condition 3.1.10, the permittee shall conduct gas sampling at a point that is representative of the incoming field gas and analyze the sample to determine the hydrogen sulfide content of the sample. At the minimum, such sampling and analysis shall be conducted once per year and thereafter. Once per year shall mean between 11 months to 13 months from the previous gas sampling. Records of such monitoring shall be maintained in accordance with Condition 3.4.2. of this permit.

[45CSR§10-8.3.a.; 45CSR13, R13-2914, Condition 3.2.2.]

3.3. Testing Requirements

- 3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall

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

- a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63, if applicable, in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable.
- b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit. [If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit shall be revised in accordance with 45CSR§30-6.4 or 45CSR§30-6.5 as applicable.](#)
- c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.
- d. The permittee shall submit a report of the results of the stack test within 60 days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:
 1. The permit or rule evaluated, with the citation number and language.
 2. The result of the test for each permit or rule condition.
 3. A statement of compliance or non-compliance with each permit or rule condition.

[WV Code §§ 22-5-4(a)(~~14-15-16~~) and 45CSR13]

3.4. Recordkeeping Requirements

- 3.4.1. **Monitoring information.** The permittee shall keep records of monitoring information that include the following:
- a. The date, place as defined in this permit and time of sampling or measurements;
 - b. The date(s) analyses were performed;
 - c. The company or entity that performed the analyses;
 - d. The analytical techniques or methods used;
 - e. The results of the analyses; and
 - f. The operating conditions existing at the time of sampling or measurement.
[45CSR§30-5.1.c.2.A.; 45CSR13, R13-2914, Conditions 4.4.1. and 8.4.1.]
- 3.4.2. **Retention of records.** The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of monitoring sample, measurement, report, application, or record creation date. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Where appropriate, records may be maintained in computerized form in lieu of the above records.
[45CSR§30-5.1.c.2.B.]
- 3.4.3. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.
[45CSR§30-5.1.c. State-Enforceable only.]
- 3.4.4. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.
[45CSR13, R13-2914, Conditions 4.4.2., 5.4.1, and 8.4.2.]
- 3.4.5. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:
- a. The equipment involved.
 - b. Steps taken to minimize emissions during the event.
 - c. The duration of the event.
 - d. The estimated increase in emissions during the event.

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

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

[45CSR13, R13-2914, Conditions 4.4.3., 5.4.2., and 8.4.3.]

3.5. Reporting Requirements

- 3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.
[45CSR§§30-4.4. and 5.1.c.3.D.]
- 3.5.2. A permittee may request confidential treatment for the submission of reporting required under 45CSR§30-5.1.c.3. pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.
[45CSR§30-5.1.c.3.E.]
- 3.5.3. Except for the electronic submittal of the annual compliance certification and semi-annual monitoring reports to the DAQ and USEPA as required in 3.5.5 and 3.5.6 below, all notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class or by private carrier with postage prepaid to the address(es), or submitted in electronic format by e-mail as set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

DAQ:

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

US EPA:

Section Chief
U. S. Environmental Protection Agency, Region III
Enforcement and Compliance Assurance Division
Air, RCRA and Toxics Branch (3ED21)
Four Penn Center
1600 John F. Kennedy Boulevard
Philadelphia, PA 19103-2852

DAQ Compliance and Enforcement¹:

DEPAirQualityReports@wv.gov

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

- 3.5.4. **Fees.** The permittee shall pay fees on an annual basis in accordance with 45CSR§30-8.
[45CSR§30-8.]

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

DAQ:

DEPAirQualityReports@wv.gov

US EPA:

R3_APD_Permits@epa.gov

[45CSR§30-5.3.e.]

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

DAQ:

DEPAirQualityReports@wv.gov

[45CSR§30-5.1.c.3.A.]

- 3.5.7. **Reserved.**

- 3.5.8. **Deviations.**

- a. In addition to monitoring reports required by this permit, the permittee shall promptly submit supplemental reports and notices in accordance with the following:
1. Reserved.
 2. Any deviation that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to the Secretary immediately by telephone or email. A written report of such deviation, which shall include the probable cause of such deviation, and any corrective actions or preventative measures taken, shall be submitted by the responsible official within ten (10) days of the deviation.
 3. Deviations for which more frequent reporting is required under this permit shall be reported on the more frequent basis.
 4. All reports of deviations shall identify the probable cause of the deviation and any corrective actions or preventative measures taken.

[45CSR§30-5.1.c.3.C.]

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

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

3.6. Compliance Plan

- 3.6.1. None.

3.7. Permit Shield

- 3.7.1. The permittee is hereby granted a permit shield in accordance with 45CSR§30-5.6. The permit shield applies provided the permittee operates in accordance with the information contained within this permit.
- 3.7.2. The following requirements specifically identified are not applicable to the source based on the determinations set forth below. The permit shield shall apply to the following requirements provided the conditions of the determinations are met.
 - a. **40 C.F.R. 60 Subpart Dc** - The Mole Sieve Regeneration Heaters (H-711a, H-2711a, H-3711, H-4711, H-5711, H-6711, H-7711, H-8711, H-9711, H-10711, H-11711, H-12711, and H-13711) meet the definition of process heaters under 40 C.F.R. 60 subpart Dc. Thus, they are excluded as affected units (per definition of steam generating unit) under this regulation.

4.0. Compressors Engines [emission point ID(s): CM-1001, CM-1002, CM-2001]

4.1. Limitations and Standards

- 4.1.1. The following conditions and requirements are specific to the internal combustion engines identified as CM-1001 and CM-1002 and the connected compressors:
- a. Emissions from each engine shall not exceed the following:
 - i. NO_x emissions from the engine shall not exceed 82 ppmvd at 15 percent O₂. The mass rate of NO_x emissions from each engine shall not exceed 5.22 pounds per hour and 22.86 tpy.
 - ii. CO emissions from engine shall not exceed 270 ppmvd at 15 percent O₂. The mass rate of CO emissions from each engine shall not exceed 1.46 pounds per hour and 6.40 tpy.
 - iii. VOC emissions from the engine shall not exceed 86 ppmvd at 15 percent O₂. Formaldehyde is excluded from this VOC limit. The mass rate of VOC emissions shall not exceed 1.67 pounds per hour and 7.32 tpy.
[45CSR16; 40 CFR §60.4233(e) & Table 1 to Subpart JJJJ of Part 60—NO_x, CO, and VOC Emission Standards for Stationary Non-Emergency SI Engines ≥100 HP (Except Gasoline and Rich Burn LPG), Stationary SI Landfill/Digester Gas Engines, and Stationary Emergency Engines >25 HP]
 - iv. Formaldehyde emissions from each engine shall not exceed 0.42 pounds per hour and 1.83 tpy.
 - b. Each engine shall be equipped with an oxidation catalyst air pollution control device.
 - c. Each engine shall be equipped with an air to fuel controller. 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)]
 - d. Each engine shall be equipped with a non-resettable hour meter.
 - e. Compliance with the mass emission limits in item a of this condition is satisfied by complying with Condition 4.1.4. and not exceeding the following concentrations during performance testing:
 - i. NO_x concentration of 57.6 ppmvd at 15% O₂.
 - ii. CO concentration of 26.0 ppmvd at 15% O₂.
 - iii. VOC concentration of 18.9 ppmvd at 15% O₂.
 - f. The permittee shall replace the rod packing in each affected compressor once every 26,000 hours of operation.
[45CSR16; 40 CFR §60.5385(a)(1) and §60.5415(c)(3)]

[45CSR13, R13-2914, Condition 4.1.1.]

4.1.2. The following conditions and requirements are specific to the internal combustion engines identified as CM-2001:

- a. Emissions from each engine shall not exceed the following:
 - i. NO_x emissions from the engine shall not exceed 82 ppmvd at 15 percent O₂. The mass rate of NO_x emissions from each engine shall not exceed 2.61 pounds per hour and 11.44 tpy.
 - ii. CO emissions from engine shall not exceed 270 ppmvd at 15 percent O₂. The mass rate of CO emissions from each engine shall not exceed 0.73 pounds per hour and 3.20 tpy.
 - iii. VOC emissions from the engine shall not exceed 86 ppmvd at 15 percent O₂. Formaldehyde is excluded from this VOC limit. The mass rate of VOC emissions shall not exceed 1.46 pounds per hour and 6.41 tpy.
[45CSR16; 40 CFR §60.4233(e) & Table 1 to Subpart JJJJ of Part 60—NO_x, CO, and VOC Emission Standards for Stationary Non-Emergency SI Engines ≥100 HP (Except Gasoline and Rich Burn LPG), Stationary SI Landfill/Digester Gas Engines, and Stationary Emergency Engines >25 HP]
 - iv. Formaldehyde emissions from each engine shall not exceed 0.16 pounds per hour and 0.69 tpy.
- b. Each engine shall be equipped with an oxidation catalyst air pollution control device.
- c. Each engine shall be equipped with an air to fuel controller. 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)]
- d. Each engine shall be equipped with a non-resettable hour meter.
- e. Compliance with the mass emission limits in item a of this condition is satisfied by complying with Condition 4.1.4. and not exceeding the following concentrations during performance testing:
 - i. NO_x concentration of 56.5 ppmvd at 15% O₂.
 - ii. CO concentration of 26.0 ppmvd at 15% O₂.
 - iii. VOC concentration of 33.0 ppmvd at 15% O₂.
- f. The permittee shall replace the rod packing in each affected compressor once every 26,000 hours of operation.
[45CSR16; 40 CFR §60.5385(a)(1) and §60.5415(c)(3)]

[45CSR13, R13-2914, Condition 4.1.2.]

4.1.3. The permittee shall only operate these engines using fuel gas, except during emergency operation at which the permittee may operate them using propane for a maximum of 100 hours per year.
[45CSR16; 40CFR§60.4243(e); 45CSR13, R13-2914, Condition 4.1.3.]

4.1.4. Requirements for Use of Oxidization Catalysts

- a. The automatic air/fuel ratio controller or closed-loop automatic feedback controller shall provide a warning or indication to the operator and/or be interlocked with the engine ignition system to cease engine operation in case of a masking, poisoning or overrich air/fuel ratio situation which results in performance degradation or failure of the catalyst element;
- b. The permittee shall check the air/fuel ratio and adjust in accordance to the manufacturer's specifications. The permittee shall maintain these records for five (5) years. The permittee shall monitor the temperature to the inlet of the catalyst and in accordance with manufacturer's specifications a high temperature alarm shall shut off the engine before thermal deactivation of the catalyst occurs. The permittee shall also inspect for thermal deactivation of the catalyst before restarting the engine;
- c. No person shall knowingly:
 - i. Remove or render inoperative any air pollution or auxiliary air pollution control device installed subject to the requirements of this permit;
 - ii. Install any part or component when the principal effect of the part or component is to bypass, defeat or render inoperative any air pollution control device or auxiliary air pollution control device installed subject to the requirements of this permit; or
 - iii. Cause or allow engine exhaust gases to bypass any catalytic reduction device.

[45CSR13, R13-2914, Condition 4.1.4.]

4.2. Monitoring Requirements

- 4.2.1. The permittee shall maintain a maintenance plan of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions.
[45CSR16; 40 CFR §60.4243(b)(2)(ii); 45CSR13, R13-2914, Condition 4.2.1.]
- 4.2.2. The permittee shall monitor and record the hours of operation through the non-resettable hour meter for each engine on a monthly basis and record the number of hours the engine operated using propane. Records of such monitoring shall be maintained in accordance with Condition 3.4.2.
[45CSR13, R13-2914, Condition 4.2.2.]

4.3. Testing Requirements

- 4.3.1. The permittee must conduct performance testing on engines CM-1001, CM-1002, and CM-2001 once every 8,760 hours of operation or once every three years, whichever comes first. Such testing shall be conducted in accordance with the applicable procedures in 40 CFR §60.4244 and Condition 3.3.1. Records of such testing shall be maintained in accordance with Condition 3.4.2.
[45CSR16; 40 CFR §60.4243(b); 45CSR13, R13-2914, Condition 4.3.1.]

4.4. Recordkeeping Requirements

4.4.1. For each compressor connected to Engines CM-1001, CM-1002, and CM-2001, the permittee shall maintain records of the following in accordance with Condition 3.4.2.

- a. Record the cumulative number of hours of operation since initial startup or the previous replacement of the reciprocating compressor rod packing, whichever is later.
- b. Record of the date of the most recent replacement of the rod packing.

[45CSR16; 40 CFR §60.5385(a)(1), §60.5410(c)(1), §§60.5415(c)(1) and (2), and §§60.5420(c)(3)(i) and (ii); 45CSR13, R13-2914, Condition 4.4.4.]

4.4.2. The permittee shall maintain records of the monitoring as required in Condition 4.1.4. for each engine in accordance with Condition 3.4.2.

[45CSR13, R13-2914, Condition 4.4.5.]

4.4.3. The permittee must meet the following notification, reporting and recordkeeping requirements.

- a. Owners and operators of all stationary SI ICE must keep records of the following information:
 - i. All notifications submitted to comply with this subpart and all documentation supporting any notification.
 - ii. Maintenance conducted on the engine.
 - iii. If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to 40 CFR§60.4243(a)(2), documentation that the engine meets the emission standards.
- b. Owners and operators of stationary SI ICE greater than or equal to 500 HP that have not been certified by an engine manufacturer to meet the emission standards in 40 CFR§60.4231 must submit an initial notification as required in 40 CFR§60.7(a)(1). The notification must include the following information:
 - i. Name and address of the owner or operator;
 - ii. The address of the affected source;
 - iii. Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;
 - iv. Emission control equipment; and
 - v. Fuel used.
- c. Owners and operators of stationary SI ICE that are subject to performance testing must submit a copy of each performance test as conducted in 40 CFR§60.4244 within 60 days after the test has been completed. Performance test reports using EPA Method 18, EPA Method 320, or ASTM D6348-03 (incorporated by reference—see 40 CFR 60.17) to measure VOC require reporting of all QA/QC data.

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

[45CSR16; 40 CFR §§60.4245(a)(1), (2), and (4), 40 CFR §§60.4245(c), and (d)]

- 4.4.4. **Recordkeeping requirements.** The permittee must maintain records of deviations in cases where the reciprocating compressor was not operated in compliance with the requirements specified in 40 CFR§60.5385. All records required by this subpart must be maintained either onsite or at the nearest local field office for at least 5 years.

[45CSR16; 40 CFR §60.5420(c)(3)(iii)]

4.5. Reporting Requirements

- 4.5.1. The permittee shall submit annual compliance reports that indicate compliance with Conditions 4.1.1.f. and 4.1.2.f. and 40 CFR §60.5385(a)(1) from the compressors connected to engines to the Director and Administrator in accordance with Conditions 3.5.1. and 3.5.3. The reporting period of such reports shall begin on October 15 and ends on October 14. Submission of reports must be made within 90 days from the end of the reporting period. The permittee may submit one report for multiple affected facilities under Subpart OOOO to Part 60. Such reports shall include the following information:

- a. The company name and address of the affected facility
- b. An identification of each affected facility being included in the annual report.
- c. Beginning and ending dates of the reporting period.
- d. A certification by a certifying official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- e. The records as required in Condition 4.4.1. for each affected compressor.
- f. Records of deviations specified in condition 4.4.4 that occurred during the reporting period.

[45CSR16; 40 CFR §§60.5420(b)(1) and (b)(4)(i) and (ii), §60.5415(c)(2) ; 45CSR13, R13-2914, Condition 4.5.1.]

4.6. Compliance Plan

- 4.6.1. None.

5.0. Production Gas Dehydration Unit [emission point ID(s): DH-001, RB-001]

5.1. Limitations and Standards

5.1.1. The permittee shall install, operate and maintain the production gas dehydration unit in accordance with the following requirements:

- a. For the purposes of limiting emissions of benzene from the still vent of the regenerator to less than 1.0 ton per year, the permittee shall limit throughput of gas through the unit as stated in 5.1.1.b and route the still vent into a closed vent system to a control device. The maximum aggregate controlled emissions generated from the Glycol Dehydration Unit still vent shall not exceed the limits given in the following table:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
VOCs	1.81	7.92
n-Hexane	0.03	0.13
Benzene	0.03	0.11
Toluene	0.14	0.60
Xylene	0.25	1.09
Total HAPs	0.44	1.93

(1) Emissions based on GLYCalc Version 4.0 using wet gas throughputs as limited under 5.1.1.b

[45CSR34; 40 CFR§63.764(e)(1)(ii)]

- b. The maximum amount of wet natural gas processed through the dehydration unit shall not exceed 120 MMscf per day. Compliance with this limit shall be determined using the daily throughput averaged on a monthly basis. The maximum glycol recirculation rate in the Glycol Dehydration Unit shall not exceed 7.5 gallons per minute limit.
- c. The flash tank off gas of the dehydration unit shall be recycled for recompression at all times while the dehydration unit is in operation.
- d. Vapors from the regenerator still vent shall be vented into a closed vent system which is routed to either the Dehydration Unit Flare (FL-DH) or plant flare. Such control vent system shall be maintained in such a manner to be free of leaks. A leaking component is defined as a measured instrument reading greater than 500 ppm above background or by visual inspection. Monitoring of the closed vent system shall be conducted in accordance with 40 CFR §60.482-10a(f)(1).

[45CSR16; 40 CFR §60.5400a(a), 40 CFR §60.482-10a(g)]

[45CSR13, R13-2914, Condition 5.1.1.]

5.1.2. The permittee shall operate and maintain the reboiler for the dehydration unit in accordance with the following emission limitations and operating parameters.

a. Maximum emissions from the 2.0 MMBTU/hr reboiler shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
NO _x	0.20	0.86
CO	0.17	0.72

b. The permittee shall operate and maintain the reboiler in a manner to minimize emissions. Such operation of the flare shall constitute the following:

- i. The pilot light for the reboiler shall be lit at all times when glycol is circulating in the dehydration unit. The fuel source for the pilot light shall be the flash tank off gas of the dehydrator or fuel (residue) gas.
- ii. Visible emissions from emission point RB-001 shall not exceed 10% opacity on a 6-minute block average. Compliance with this requirement is satisfied by complying with the fuel type restriction in Condition 5.1.2.d.3.
[45 CSR §2-3.1]
- iii. The reboiler shall only be fueled with natural gas.

[45CSR13, R13-2914, Condition 5.1.2.]

5.1.3. The Dehydration Unit Flare shall be designed and operated in accordance with the following:

- a. The flare shall be a non-assisted flare.
- b. The flare shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.
[45 CSR §6-4.3]
- c. The flare shall be operated, with a flame present at all times whenever emissions may be vented to them.
- d. The net heating value of the effluent going to the flare shall be 7.45 MJ/scm (300 Btu/scf) or greater.
- e. The flare tip exit velocity shall not exceed 60 feet per second.
- f. The total emissions from the flare shall not exceed the following limits:
 - i. Emissions of NO_x shall not exceed 0.50 pounds per hour and 2.17 tpy.
 - ii. Emissions of CO shall not exceed 2.19 pounds per hour and 9.58 tpy.

[45CSR13, R13-2914, Condition 5.1.3.]

5.2. Monitoring Requirements

- 5.2.1. The permittee shall monitor and record the following parameters for the purpose of demonstrating compliance with Conditions 5.1.1., and 5.1.3.:
- The throughput of wet natural gas processed through the dehydration unit on a daily basis, days the dehydration unit operated, and annual natural gas flowrate.
[45CSR34; 40 CFR §63.774(d)(1)(i)]
 - Determine actual annual average natural gas throughput (in terms of natural gas flowrate to the glycol dehydration unit per day) by converting the annual natural gas flowrate to a daily average by dividing the annual flowrate by the number of days per year the glycol dehydration unit processed natural gas.
[45CSR34; 40 CFR §63.772(b)(1)(i)]
 - Identify any periods there was no flame present for the pilot of the flare when the dehydration unit was in operation. The presence of the pilot light shall be monitored continuously via thermocouple. Should the thermocouple sense a loss of flame, the flame front generator shall initiate a re-light cycle and send a common trouble alarm to the plant control system.
[45CSR§30-5.1.c., 40 C.F.R. §64.6(c)]
 - Determination of the actual average benzene emissions from the dehydration unit shall be made 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).
[45CSR34; 40 CFR §§63.772(b)(2)(i) & 63.774(d)(1)(ii)]
 - Records of such monitoring shall be maintained in accordance with Condition 3.4.2.

[45CSR13, R13-2914, Condition 5.2.1.]

- 5.2.2. For the purpose of demonstrating proper operation of the Dehydration Unit Flare (FL-DH) as stated in Condition 5.1.3.b., the permittee shall conduct a visible emission observation using Section 11 of Method 22 for one hour once every calendar quarter in which the flare was in service. If during the first 30 minutes of the observation there were no visible emissions observed, the permittee may stop the observation.

If at the end of the observation, visible emissions were observed for more than 2 minutes, then the permittee shall follow the manufacturer’s repair instructions, if available, or best combustion engineering practice as outlined in the unit inspection and maintenance plan. To return the flare to compliant operation, the permittee shall repeat the visible emission observation. Records of such monitoring and repair activities shall be maintained in accordance with Condition 3.4.2.

[45CSR13, R13-2914, Condition 5.2.2.]

- 5.2.3. **Commencement of operation.** The permittee shall conduct the monitoring required under 40 CFR Part 64 upon issuance of this permit that includes such monitoring, or by the initial start-up date of the dehydration unit that requires such monitoring, whichever is later.
[40 CFR §§ 64.7(a) and 64.6(d); 45CSR§30-5.1.c.]

- 5.2.4. **Proper Maintenance** – At all times, the permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.
[40 CFR § 64.7(b); 45CSR§30-5.1.c.]
- 5.2.5. **Continued Operation** – Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permittee shall conduct all monitoring in continuous operation at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of 40 CFR Part 64, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.
[40 CFR § 64.7(c); 45CSR§30-5.1.c.]
- 5.2.6. **Documentation of Need for Improved Monitoring** – After approval of monitoring under 40 CFR Part 64, if the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the Director and, if necessary, submit a proposed modification to the permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.
[40 CFR § 64.7(e); 45CSR§30-5.1.c.]
- 5.2.7. **Quality Improvement Plan (QIP)** – Based on the results of a determination made under 40 CFR §64.7(d)(2) (permit condition 5.2.9.b), the Administrator or the Director may require the permittee to develop and implement a QIP. If a QIP is required, then it shall be developed, implemented, and modified as required according to 40 CFR §§ 64.8(b) through (e). Refer to permit condition 5.5.1.c for the reporting required when a QIP is implemented.
[40 CFR § 64.8; 45CSR§30-5.1.c.]
- 5.2.8. **Excursions** – Pilot flame absence while the dehydration unit is in operation indicates an excursion.
[40 CFR § 64.6(c)(2); 45CSR§30-5.1.c.]
- 5.2.9. Response to Excursions or Exceedances:
- a. Upon detecting an excursion or exceedance, the permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions

to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

- b. Determination of whether the permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

[40 CFR § 64.7(d); 45CSR§30-5.1.c.]

5.3. Testing Requirements

- 5.3.1. In order to demonstrate compliance with the flare opacity requirements of 5.1.3.b., the permittee shall conduct a Method 22 opacity test for at least two hours within 180 days after issuance of this permit. This test shall demonstrate no visible emissions are observed for more than a total of 5 minutes during any 2 consecutive hour period using 40CFR60, Appendix A, Method 22. The permittee shall conduct this test within one (1) year of permit issuance or initial startup whichever is later. The visible emission checks shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40 CFR Part 60, Appendix A, Method 22 or from the lecture portion of 40 CFR part 60, Appendix A, Method 9 certification course. Such testing shall be conducted in accordance with Condition 3.3.1.
[45CSR13, R13-2914, Condition 5.3.1.]

5.4. Recordkeeping Requirements

- 5.4.1. The permittee shall maintain records of the analysis that is used to indicate compliance is in accordance with items a. and b. of Conditions 5.1.1. Such records shall include the source of data used in the analysis and be maintained in accordance with Condition 3.4.2.
[45CSR34; 40 CFR §63.774(d)(1)(ii); 45CSR13, R13-2914, Condition 5.4.3.]
- 5.4.2. **General recordkeeping requirements for CAM:**
 - a. The owner or operator shall comply with the recordkeeping requirements of Sections 3.4.1 and 3.4.2. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. § 64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40 C.F.R. Part 64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).
 - b. Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review and does not conflict with other applicable recordkeeping requirements.

[40 C.F.R. §64.9 (b); 45CSR§30-5.1.c]

5.5. Reporting Requirements

- 5.5.1. **General reporting requirements for CAM.** A report for monitoring under 40 C.F.R. Part 64 shall include, at a minimum, the information required in Sections 3.5.6 and 3.5.8 and the following information as applicable:
- a. Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;
 - b. Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and
 - c. A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R. § 64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 C.F.R. § 64.9 (a) (2); 45CSR§30-5.1.c]

5.6. Compliance Plan

- 5.6.1. None.

6.0. Process Heaters [emission point ID(s): H-751, H-711a, H-771a, H-2711a, H-3711, H-4711, H-4712, H-5711, H-6711, H-6712, H-7711, H-8711, H-8712, H-9711, H-10711, H-11711, H-12711, H-13711, D1-H-782, D1-H-741, H-10768, H-10775, H-768, H-775]

6.1. Limitations and Standards

6.1.1. Maximum Design Heat Input. The maximum design heat input (MDHI) for each of the heaters shall not exceed the following:

Emission Unit ID #	Heater Description	MDHI (MMBTU/hr)
H-711a	Mole Sieve Regeneration Heater ¹	8.76
H-2711a	Mole Sieve Regeneration Heater ¹	8.76
H-3711	Mole Sieve Regeneration Heater ²	15.58
H-771a	Hot Oil Heater	32.76
H-4711	Mole Sieve Regeneration Heater ²	18.00
H-5711	Mole Sieve Regeneration Heater ²	18.00
H-6711	Mole Sieve Regeneration Heater ²	18.00
H-7711	Mole Sieve Regeneration Heater ²	18.00
H-8711	Mole Sieve Regeneration Heater ²	18.00
H-9711	Mole Sieve Regeneration Heater ²	18.00
H-10711	Mole Sieve Regeneration Heater ²	10.62
H-11711	Mole Sieve Regeneration Heater ²	10.62
H-12711	Mole Sieve Regeneration Heater ²	10.62
H-13711	Mole Sieve Regeneration Heater ²	10.62
H-6712	Hot Oil Heater	6.60
H-4712	Hot Oil Heater	6.60
H-8712	Hot Oil Heater	7.20
H-751	Stabilization Heater	6.35
D1-H-782	DeEthanizer I HMO Heater	119.2

Emission Unit ID #	Heater Description	MDHI (MMBTU/hr)
H-10768	DeEthanizer II HMO Heater	65.43
H-768	DeEthanizer III HMO Heater	65.4
D1-H-741	DeEthanizer I Regen Heater ²	12.23
H-10775	DeEthanizer II Regen Heater ¹	6.05
H-775	DeEthanizer III Regen Heater ¹	5.94
Total Maximum Design Heat Input		517.29

1 - Denotes the heater is a process heater per 45 CSR §2-2.26.

2 - Denotes the heater is a process heater per 45 CSR §2-2.26 and 40 CFR §60.41c.

[45CSR13, R13-2914, Condition 6.1.1.]

6.1.2. The following heaters shall not exhibit visible emissions greater than 10 percent opacity on a six-minute block average: H-751, H-771a, H-4712, H-6712, H-8712, D1-H-782, H-10768 and H-768.

[45CSR§2-3.1.; 45CSR13, R13-2914, Condition 6.1.2.]

6.1.3. The permittee shall not exceed the following limits of annual emissions from combined heaters listed in Table 6.1.1:

- a. Emissions of NOx shall not exceed 87.79 tpy;
- b. Emissions of CO shall not exceed 96.50 tpy; and
- c. Emissions of VOCs shall not exceed 12.14 tpy.

Compliance with these emissions limits shall be satisfied by complying with Conditions 6.1.4., 6.1.5., and 6.1.6.

[45CSR13, R13-2914, Condition 6.1.3.]

6.1.4. All of the fuel burning units listed in Table 6.1.1. shall be limited to using residue gas that complies with the requirements of Condition 3.1.10. Complying with this condition satisfies compliance with Condition 6.1.2. the use of residue gas in these emission units satisfies compliance with the limitations of 45CSR§2-3.1., 45CSR§2-4.1.b., and 45CSR§10-3.3.f.

[45CSR§2-8.4.b.; 45CSR§2A-3.1.a., 45CSR§10-10.3., and 45CSR§10A-3.1.b.; 45CSR13, R13-2914, Condition 6.1.4.] (H-751, H-771a, H-4712, H-6712, H-8712, D1-H-782, H-10768, H-768)

6.1.5. The permittee shall conduct tune-up of all the heaters that are listed in Condition 6.1.1. that have a MDHI of 5.0 MMBtu/hr or greater once every three years in accordance with the following:

- a. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (permittee may delay the burner inspection until the next scheduled unit shutdown). At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up

inspections, inspections are required only during planned entries into the storage vessel or process equipment;

- b. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
- c. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the permittee may delay the inspection until the next scheduled unit shutdown);
- d. Optimize total emissions of CO to a concentration not to exceed 50 ppm. This optimization should be consistent with the manufacturer's specifications, which includes the manufacturer's NO_x concentration specification of not to exceed 30 ppm, except for Heaters H-6712 H-4712, H-8712, which is not to exceed a NO_x concentration of 33 ppm.
- e. Measure the concentrations in the effluent stream of NO_x and CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.

[45CSR13, R13-2914, Condition 6.1.5.]

- 6.1.6. As all the annual emissions are based on 8,760 hours of operation, there are no annual limits on hours of operation or gas combusted for the units under Table 6.1.1.

[45CSR13, R13-2914, Condition 6.1.6.]

- 6.1.7. No person shall cause, suffer, allow or permit the emission into the open air from any source operation an in-stack sulfur dioxide concentration exceeding 2,000 parts per million by volume from existing source operations.

[45CSR§10-4.1.]

6.2. Monitoring Requirements

- 6.2.1. For each month, the permittee shall record the hours of operation and amount of fuel gas consumed by heaters listed in Condition 6.1.1., and shall calculate the rolling yearly total of total heat input from the heaters. The permittee may record the total amount of fuel gas consumed by the heaters and other emission units on a combined basis. For other emission units not listed but fuel usage included on the fuel meter, the permittee shall monitor the hours of operation of these sources to account for their fuel usage as well. Such records shall be maintained in accordance with Condition 3.4.2. of this permit.

[45CSR16; 40 CFR §60.48c(g)(2), 45CSR§2A-7.1.a.1., 45CSR§2-8.3.c; 45CSR13, R13-2914, Condition 6.2.1.]

6.3. Testing Requirements

- 6.3.1. Reserved.

6.4. Recordkeeping Requirements

- 6.4.1. The permittee shall keep the following records in accordance with Condition 3.4.2. This includes but is not limited to the following information during the tune-up as required in Condition 6.1.5.:
- a. The concentrations of CO and NO_x in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater; and
 - b. A description of any corrective actions taken as a part of the tune-up.

[45CSR13, R13-2914, Condition 6.4.1.]

6.5. Reporting Requirements

- 6.5.1. Reserved.

6.6. Compliance Plan

- 6.6.1. None.

7.0. Storage Tanks [emission point ID(s): TNK-001]

7.1. Limitations and Standards

7.1.1. Combined total VOC emissions from the storage tanks (4 Storage Tanks (1-500 bbl gunbarrel tank, 3-400 bbl condensate/water tanks)) shall not exceed 2.99 tpy. Compliance with this limit shall be satisfied by compliance with Condition 7.1.2.

[45CSR13, R13-2914, Condition 7.1.1.]

7.1.2. The permittee shall install either and operate prior to start-up of the condensate/water storage tanks a vapor recovery unit (VRU) system while any of the respective vessels (1-500 bbl gunbarrel tank & 3-400 bbl condensate/water tanks) are in service, which include vessels that are empty but not degassed, and recompress the vapors back into a pipeline segment or route said vapors from the condensate/water storage tanks to the Plant Flare. Such Flare or VRU system, which includes the closed vent system and storage vessels, shall meet the following requirements:

[40 CFR §60.5365(e)(3)]

a. The cover and all openings on the cover (e.g., access hatches, sampling ports, pressure relief valves and gauge wells) shall form a continuous impermeable barrier over the entire surface area of the liquid in the storage vessel or wet seal fluid degassing system.

[40 CFR §60.5411(b)(1)]

b. Each cover opening shall be secured in a closed, sealed position (e.g., covered by a gasketed lid or cap) whenever material is in the unit on which the cover is installed except during those times when it is necessary to use an opening as follows:

i. To add material to, or remove material from the unit (this includes openings necessary to equalize or balance the internal pressure of the unit following changes in the level of the material in the unit);

ii. To inspect or sample the material in the unit;

iii. To inspect, maintain, repair, or replace equipment located inside the unit; or

iv. To vent liquids, gases, or fumes from the unit through a closed-vent system designed and operated in accordance with the requirements of 40 CFR §60.5411(a) or (c) to a control device or to a process.

[40 CFR §60.5411(b)(2)]

c. Each storage vessel thief hatch shall be equipped, maintained and operated with a weighted mechanism or equivalent, to ensure that the lid remains properly seated. The permittee must select gasket material for the hatch based on composition of the fluid in the storage vessel and weather conditions.

[40 CFR §60.5411(b)(3)]

d. The closed vent system shall be designed to route all gases, vapors, and fumes emitted from the material in the storage vessels to a control device that meets the requirements specified in §60.5412(c) and (d), or to a process.

[40 CFR §60.5411(c)(1)]

- e. The permittee must design and operate a closed vent system with no detectable emissions, as determined using olfactory, visual and auditory inspections. Each closed vent system that routes emissions to a process must be operational 98 percent of the year or greater. Such system shall meet the requirements of Condition 8.1.2.
[40 CFR §§60.5411(c) & (c)(2)]
- f. The permittee must meet the requirements specified in 40 CFR §60.5411(c)(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 or to a process.
[40 CFR §60.5411(c)(3)]
 - i. 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 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 40 CFR §60.5420(c)(8); or
[40 CFR §60.5411(c)(3)(i)(A)]
 - ii. 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.
[40 CFR §60.5411(c)(3)(i)(B)]
- g. Low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and safety devices are not subject to the requirements of 40 CFR §60.5411(c)(3)(i).
[40 CFR §60.5411(c)(3)(ii)]

[45CSR16; 45CSR13, R13-2914, Condition 7.1.2.]

7.2. Monitoring Requirements

- 7.2.1. The permittee shall monitor any by-pass device of the closed vent system by installing a continuous monitoring system that indicates opening a by-pass device and records date and length of time the device was open. Such records shall be maintained in accordance with Condition 3.4.2.
[45CSR13, R13-2914, Condition 7.2.1.]
- 7.2.2. The permittee shall monitor and record monthly and rolling twelve month totals of liquid throughput during truck loading operations and the hours the compressor for the VRU system operated. Compliance with the 98% operational time in Condition 7.1.2.e. is based on the time the VRU system was operational divided by the number of hours that any of the vessels were in service over a 12-month rolling period. Such records shall be maintained in accordance with Condition 3.4.2.
[45CSR13, R13-2914, Condition 7.2.2.]

7.3. Testing Requirements

- 7.3.1. Reserved.

7.4. Recordkeeping Requirements

- 7.4.1. The permittee shall maintain a record of the amount of liquid unloaded from the vessels on a monthly basis. Such records shall be maintained in accordance with Condition 3.4.2.
[45CSR13, R13-2914, Condition 7.4.1.]
- 7.4.2. The vapor recovery system will comply with the recordkeeping requirements of 40 CFR §§60.486 and 60.635(b). Such records shall be maintained in accordance with Condition 3.4.2.
[45CSR13, R13-2914, Condition 7.4.2.]
- 7.4.3. The permittee must maintain records that document compliance with:
- a. You meet the cover requirements specified in 40 CFR §60.5411(b).
 - b. You meet the closed vent system requirements specified in 40 CFR §60.5411(c).
- [45CSR16; 40 CFR §60.5365(e)(3)(iii)]**

7.5. Reporting Requirements

- 7.5.1. Reserved.

7.6. Compliance Plan

- 7.6.1. None.

8.0. Gas Processing Units & LDAR Program

8.1. Limitations and Standards

8.1.1. LDAR requirements are given in the following:

- a. All groups of equipment located within Plants I through XIII; the inlet station; and the DeEthanizer I, II, and III units that are in VOC service are subject to the applicable LDAR requirements as given in 40 CFR 60, Subpart OOOOa;
- b. In addition to applicable Subpart OOOOa requirements, to enforce the LDAR control percentages used to calculate potential fugitive VOC/HAP emissions from the process and piping components, the permittee shall meet the LDAR requirements as given in the attached (Appendix A) Texas Commission on Environmental Quality (TCEQ) document that sets specific requirements for the TCEQ 28VHP program; and
- c. Non-control valves that are identified as "chronic leaker" shall be replaced with a Certified Low-leaking Valve or repack with Low-leaking Packing that is commercially available during the next schedule process turnaround once the valve has been identified as a "chronic leaker". A "chronic leaker" is defined as any non-control valve which leaks above 10,000 ppm or any visible emission that may otherwise be invisible to the naked eye using an OGI after three attempts at repair.

[45CSR13, R13-2914, Condition 8.1.1.]

8.1.2. The closed vent system that is used to route any pressure relief devices in VOC service at the facility to control device Flare FS-762 or back to a process shall be installed, maintained and operated in accordance with the closed vent requirements under 40 CFR 60, Subpart OOOOa.

[45CSR13, R13-2914, Condition 8.1.2.]

8.1.3. Flare FS-762 shall be designed and operated in accordance with the following:

- a. The main flare shall be an air-assisted flare with a piggy-back to a non-assisted flare. **[40 CFR §60.18(c)(6) & §60.482-10a(d)]**
- b. Both flares shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. **[40 CFR §60.18(c)(1)]**
- c. Both flares shall be operated with a flame present at all times whenever emissions may be vented to them. **[40 CFR §60.18(c)(2)]**
- d. The net heating value of the effluent going to the flare shall be 1,000 Btu per scf or greater. **[40 CFR §§60.18(c)(3)(ii) & (c)(4)(ii)]**
- e. The main flare tip exit velocity shall not exceed 253.5 feet per second. **[40 CFR §60.18(c)(5)]**
- f. The piggy-back flare tip exit velocity shall not fall below 60 feet per second and not exceed 144 feet per second. **[40 CFR §60.18(c)(4)(ii)]**

- g. The maximum flow rate to the flare system shall not exceed 1.674 MMscf per hour and ~~258.65~~ 350.00 MMscf per year.
- h. The total emissions from the flare shall not exceed the following limits:
 - i. Emissions of NO_x shall not exceed 140.81 pounds per hour and ~~40.88~~ 14.72 tpy.
 - ii. Emissions of CO shall not exceed 641.93 pounds per hour and ~~49.59~~ 67.11 tpy; and
 - iii. Emissions of VOC and HAPs, identified as uncombusted VOC or HAP vapors from facility blowdowns and other sources connected to the flare, shall not exceed ~~22.62~~ 29.61 tpy and ~~0.44~~ 0.57 tpy, respectively.

[45CSR13, R13-2914, Condition 8.1.3.]

- 8.1.4. What equipment leak standards apply to affected facilities at an onshore natural gas processing plant?

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

The following requirements apply to equipment located within Plants I through XIII and the DeEthanizer I, II, and III units that are in VOC service:

- a. **GHG Standards:** The permittee must comply with the requirements of 40 CFR §§60.482-1a(a), (b), and (d), 60.482-2a, and 60.482-4a through 60.482-11a, except as provided in 40 CFR §60.5401a.
VOC Standards: The permittee must comply with the requirements of 40 CFR §§60.482-1a(a), (b), (d), and (e), 60.482-2a, and 60.482-4a through 60.482-11a, except as provided in §60.5401a, as soon as practicable but no later than 180 days after the initial startup of the process unit.
- b. The permittee may elect to comply with the requirements of 40 CFR §§60.483-1a and 60.483-2a, as an alternative.
- c. The permittee may apply to the Administrator for permission to use an alternative means of emission limitation that achieves a reduction in emissions of methane and VOC at least equivalent to that achieved by the controls required in this subpart according to the requirements of 40 CFR §60.5402a.
- d. The permittee must comply with the provisions of 40 CFR §60.485a except as provided in paragraph (f) of this section.
- e. The permittee must comply with the provisions of 40 CFR §§60.486a and 60.487a except as provided in 40 CFR §§60.5401a, 60.5421a, and 60.5422a.
- f. The permittee must use the following provision instead of 40 CFR §60.485a(d)(1): Each piece of equipment is presumed to be in VOC service or in wet gas service unless an owner or operator demonstrates that the piece of equipment is not in VOC service or in wet gas service. For a piece of equipment to be considered not in VOC service, it must be determined that the VOC content can be reasonably expected never to exceed 10.0 percent by weight. For a piece of equipment to be considered in wet gas service, it must be determined that it contains or contacts the field gas before the extraction step in the process. For purposes of determining the percent VOC content of the process fluid that is

contained in or contacts a piece of equipment, procedures that conform to the methods described in ASTM E169-93, E168-92, or E260-96 (incorporated by reference as specified in 40CFR§60.17) must be used.

[45CSR16; 40 CFR§60.5400a]

- 8.1.5. What are the exceptions to the equipment leak standards for affected facilities at onshore natural gas processing plants?

The following requirements apply to equipment located within Plants I through XIII and the DeEthanizer I, II, and III units that are in VOC service:

- a. The permittee may comply with the following exceptions to the provisions of §60.5400a(a) and (b).
- b.
 1. Each pressure relief device in gas/vapor service may be monitored quarterly and within 5 days after each pressure release to detect leaks by the methods specified in §60.485a(b) except as provided in §60.5400a(c) and in paragraph (b)(4) of this section, and §60.482-4a(a) through (c) of subpart VVa of this part.
 2. If an instrument reading of 500 ppm or greater is measured, a leak is detected.
 3.
 - i. When a leak is detected, it must be repaired as soon as practicable, but no later than 15 calendar days after it is detected, except as provided in §60.482-9a.
 - ii. A first attempt at repair must be made no later than 5 calendar days after each leak is detected.
 4.
 - i. Any pressure relief device that is located in a nonfractionating plant that is monitored only by non-plant personnel may be monitored after a pressure release the next time the monitoring personnel are onsite, instead of within 5 days as specified in paragraph (b)(1) of this section and §60.482-4a(b)(1).
 - ii. No pressure relief device described in paragraph (b)(4)(i) of this section may be allowed to operate for more than 30 days after a pressure release without monitoring.
- c. Sampling connection systems are exempt from the requirements of §60.482-5a.
- d. Pumps in light liquid service, valves in gas/vapor and light liquid service, pressure relief devices in gas/vapor service, and connectors in gas/vapor service and in light liquid service that are located at a nonfractionating plant that does not have the design capacity to process 283,200 standard cubic meters per day (scmd) (10 million standard cubic feet per day) or more of field gas are exempt from the routine monitoring requirements of §§60.482-2a(a)(1), 60.482-7a(a), 60.482-11a(a), and paragraph (b)(1) of this section.
- e. Pumps in light liquid service, valves in gas/vapor and light liquid service, pressure relief devices in gas/vapor service, and connectors in gas/vapor service and in light liquid service within a process unit that is located in the Alaskan North Slope are exempt from the routine monitoring requirements of §§60.482-2a(a)(1), 60.482-7a(a), 60.482-11a(a), and paragraph (b)(1) of this section.
- f. An owner or operator may use the following provisions instead of §60.485a(e):

1. Equipment is in heavy liquid service if the weight percent evaporated is 10 percent or less at 150° Celsius (302° Fahrenheit) as determined by ASTM Method D86-96 (incorporated by reference as specified in §60.17).
 2. Equipment is in light liquid service if the weight percent evaporated is greater than 10 percent at 150° Celsius (302° Fahrenheit) as determined by ASTM Method D86-96 (incorporated by reference as specified in §60.17).
- g. An owner or operator may use the following provisions instead of §60.485a(b)(2): A calibration drift assessment shall be performed, at a minimum, at the end of each monitoring day. Check the instrument using the same calibration gas(es) that were used to calibrate the instrument before use. Follow the procedures specified in Method 21 of appendix A-7 of this part, Section 10.1, except do not adjust the meter readout to correspond to the calibration gas value. Record the instrument reading for each scale used as specified in §60.486a(e)(8).

GHG Standards: Divide these readings by the initial calibration values for each scale and multiply by 100 to express the calibration drift as a percentage. If any calibration drift assessment shows a negative drift of more than 10 percent from the initial calibration value, then all equipment monitored since the last calibration with instrument readings below the appropriate leak definition and above the leak definition multiplied by (100 minus the percent of negative drift/divided by 100) must be re-monitored. If any calibration drift assessment shows a positive drift of more than 10 percent from the initial calibration value, then, at the owner/operator's discretion, all equipment since the last calibration with instrument readings above the appropriate leak definition and below the leak definition multiplied by (100 plus the percent of positive drift/divided by 100) may be re-monitored.

VOC Standards: For each scale, divide the arithmetic difference of the most recent calibration and the post-test calibration response by the corresponding calibration gas value, and multiply by 100 to express the calibration drift as a percentage. If any calibration drift assessment shows a negative drift more than 10 percent from the most recent calibration response, then all equipment monitored since the last calibration with instrument readings below the appropriate leak definition and above the leak definition multiplied by (100 minus the percent of negative drift/divided by 100) must be re-monitored. If any calibration drift assessment shows a positive drift of more than 10 percent from the most recent calibration response, then, at the owner/operator's discretion, all equipment since the last calibration with instrument readings above the appropriate leak definition and below the leak definition multiplied by (100 plus the percent of positive drift/divided by 100) may be re-monitored.

[45CSR16; 40 CFR§60.5401a]

- 8.1.6. What are the alternative emission limitations for equipment leaks from onshore natural gas processing plants?

The following requirements apply to equipment located within Plants I through XIII and the DeEthanizer I, II, and III units that are in VOC service:

- a. If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in GHG and VOC emissions at least equivalent to the reduction in GHG and VOC emissions achieved under any design, equipment, work practice or operational standard, the Administrator will publish, in the Federal Register, a notice permitting the use of that alternative means for the purpose of

compliance with that standard. The notice may condition permission on requirements related to the operation and maintenance of the alternative means.

- b. Any notice under paragraph (a) of this section must be published only after notice and an opportunity for a public hearing.
- c. The Administrator will consider applications under this section from either owners or operators of affected facilities, or manufacturers of control equipment.
- d. An application submitted under paragraph (c) of this section must meet the following criteria:
 1. The applicant must collect, verify and submit test data, covering a period of at least 12 months, necessary to support the finding in paragraph (a) of this section.
 2. The application must include operation, maintenance, and other provisions necessary to assure reduction in methane and VOC emissions at least equivalent to the reduction in methane and VOC emissions achieved under the design, equipment, work practice or operational standard in paragraph (a) of this section by including the information specified in paragraphs (d)(2)(i) through (x) of this section.
 - i. A description of the technology or process.
 - ii. The monitoring instrument and measurement technology or process.
 - iii. A description of performance based procedures (i.e. method) and data quality indicators for precision and bias; the method detection limit of the technology or process.
 - iv. The action criteria and level at which a fugitive emission exists.
 - v. Any initial and ongoing quality assurance/quality control measures.
 - vi. Timeframes for conducting ongoing quality assurance/quality control.
 - vii. Field data verifying viability and detection capabilities of the technology or process.
 - viii. Frequency of measurements.
 - ix. Minimum data availability.
 - x. Any restrictions for using the technology or process.
 3. The application must include initial and continuous compliance procedures including recordkeeping and reporting.

[45CSR16; 40 CFR§60.5402a]

- 8.1.7. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable

operating and maintenance procedures are being used will be based on information available to the Administrator which may include but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

[45CSR16; 40 CFR§60.5370a(b)]

8.2. Monitoring Requirements

8.2.1. The permittee shall monitor and record the volumetric amount of effluent, which includes the purge gas, routed to Flare FS-762. Such records shall be maintained in accordance with Condition 3.4.2.

[45CSR13, R13-2914, Condition 8.2.3.]

8.2.2. In order to demonstrate compliance with the requirements of 8.1.3.c, the permittee shall monitor the presence or absence of a flare pilot flame using a thermocouple or any other equivalent device.

[45CSR16; 40 CFR §60.18(f)(2); 45CSR13, R13-2914, Condition 8.2.4.]

8.2.3. For the purpose of demonstrating proper operation of the flare (FS-762), the permittee shall conduct a visible emission observation using Section 11 of Method 22 for one hour once every calendar quarter. If during the first 30 minutes of the observation there were no visible emissions observed, the permittee may stop the observation. If at the end of the observation, visible emissions were observed for more than 2.5 minutes, then the permittee shall follow the manufacturer's repair instruction, if available, or best combustion engineering practice as outlined in the unit inspection and maintenance plan. To return the flare to compliant operation, the permittee shall repeat the visible emission observation. Records of such monitoring and repair activities shall be maintained in accordance with Condition 3.4.2.

[45CSR13, R13-2914, Condition 8.2.5.]

8.2.4. For affected facilities at onshore natural gas processing plants, continuous compliance with methane and VOC requirements is demonstrated if the permittee is in compliance with the requirements of 40 CFR§60.5400a (condition 8.1.4.).

[45CSR16; 40 CFR§60.5415a(f)]

8.3. Testing Requirements

8.3.1. In order to demonstrate compliance with the flare opacity requirements of 8.1.3.b the permittee shall conduct a Method 22 opacity test for at least two hours. This test shall demonstrate no visible emissions are observed for more than a total of 5 minutes during any 2 consecutive hour period using 40CFR60, Appendix A, Method 22. The permittee shall conduct this test within 180 days after initial startup. The visible emission checks shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40 CFR part 60, Appendix A, Method 22 or from the lecture portion of 40 CFR part 60, Appendix A, Method 9 certification course.

[45CSR16; 40 CFR §60.18(f)(1); 45CSR13, R13-2914, Condition 8.3.1.]

8.4. Recordkeeping Requirements

8.4.1. For demonstrating compliance with non-control valves that have been identified as a “chronic leaker” and replaced or repacked with “Certified Low-Leaking Valves or Packing” in Condition 8.1.1.c., the permittee shall record the date the “chronic leaker” was replaced and documentation that the valve or packing is

“Certified Low-Leaking Valves or Packing”. If the packing was replaced, the bolt torque specification applied to the packing nut or packing flange shall be recorded. Such documentation shall be one of the following:

- a. A written guarantee that the valve or packing will not leak above 500 parts per million (ppm) for five (5) years;
- b. A written guarantee, certification, or equivalent documentation that the valve or packing has been tested pursuant to generally-accepted good engineering practices and has been found to be leaking at no greater than 500 ppm; or
- c. A written guarantee, certification, or equivalent documentation that the valve or packing has been designed not to leak, above 500 ppm.

The permittee shall maintain such records in accordance with Condition 3.4.2 except the retention of the records. The records shall be retained for five years past the life of the valve.

[45CSR13, R13-2914, Condition 8.4.4.]

- 8.4.2. What are the additional recordkeeping requirements for an affected facility subject to GHG and VOC requirements for onshore natural gas processing plants?
 - a. The permittee must comply with the requirements of paragraph (b) of this section in addition to the requirements of 40 CFR§60.486a.
 - b. The following recordkeeping requirements apply to pressure relief devices subject to the requirements of condition 40 CFR§60.5401a(b)(1).
 1. When each leak is detected as specified in condition 40 CFR§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.
 2. When each leak is detected as specified in condition 40 CFR§60.5401a(b)(2), the following information must be recorded in a log and shall be kept for 2 years in a readily accessible location:
 - i. The instrument and operator identification numbers and the equipment identification number.
 - ii. The date the leak was detected and the dates of each attempt to repair the leak.
 - iii. Repair methods applied in each attempt to repair the leak.
 - iv. “Above 500 ppm” if the maximum instrument reading measured by the methods specified in 40 C.F.R. §60.5400a(d) after each repair attempt is 500 ppm or greater.
 - v. “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.
 - vi. The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.

- vii. The expected date of successful repair of the leak if a leak is not repaired within 15 days.
- viii. Dates of process unit shutdowns that occur while the equipment is unrepaired.
- ix. The date of successful repair of the leak.
- x. A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of 40 CFR§60.482-4a(a). The designation of equipment subject to the provisions of 40 CFR§60.482-4a(a) must be signed by the owner or operator.

[45CSR16; 40 CFR§60.5421a]

8.5. Reporting Requirements

- 8.5.1. **Reporting requirements (Plants I through XIII and the DeEthanizer I, II, and III Units).** The permittee must submit annual reports containing the information specified in paragraph (a) of this section and performance test reports as specified in paragraph (b) of this section. The permittee must submit annual reports following the procedure specified in 40 CFR§60.5420a(b)(11). The initial annual report is due no later than 90 days after the end of the initial compliance period as determined according to 40 CFR§60.5410a. Subsequent annual reports are due no later than same date each year as the initial annual report. If 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 40 CFR§§60.5420a (b)(1) through (8) and (12) [40 CFR§60.5420a(b)(12) does not apply to GHG Standards]. 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 section for all reports.
 - 1. The company name, facility site name associated with the affected facility, U.S. Well ID or U.S. 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. 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 EPA will make all the information submitted through CEDRI available to the public without further notice to you. Do not use CEDRI to submit information you claim as CBI. Anything submitted using CEDRI cannot later be claimed CBI. 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 website (<https://www.epa.gov/electronic-reporting-air-emissions/cedri/>). If the reporting form specific to 40CFR60, Subpart OOOOa is not available in CEDRI at the time that the report is due, you 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, you must begin submitting all subsequent reports via CEDRI. The reports must be submitted by the deadlines specified in this subpart, regardless of the method in which the reports are submitted.

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

8.5.2. What are my additional reporting requirements for my affected facility subject to GHG and VOC requirements for onshore natural gas processing plants?

- a. The permittee must comply with the requirements of paragraphs (b) and (c) of this section in addition to the requirements of 40 CFR §§60.487a(a), (b), (c)(2)(i) through (iv), and (c)(2)(vii) through (viii). [40 CFR §§60.487a (b)(4) does not apply to an affected facility subject to VOC requirements.]
- b. An owner or operator must include the following information in the initial semiannual report in addition to the information required in 40 CFR §§60.487a(b)(1) through (4) for affected facilities subject to methane requirements and 40 CFR §§60.487a(b)(1) through (3) and (5) for affected facilities subject to VOC requirements: Number of pressure relief devices subject to the requirements of 40 CFR §60.5401a(b) except for those pressure relief devices designated for no detectable emissions under the provisions of 40 CFR §60.482-4a(a) and those pressure relief devices complying with 40 CFR §60.482-4a(c).
- c. An owner or operator must include the following information in all semiannual reports in addition to the information required in 40 CFR §§60.487a(c)(2)(i) through (vi) for affected facilities subject to methane requirements and 40 CFR §§60.487a(c)(2)(i) through (iv) and (vii) through (viii) for affected facilities subject to VOC requirements:
 1. Number of pressure relief devices for which leaks were detected as required in 40 CFR §60.5401a(b)(2); and
 2. Number of pressure relief devices for which leaks were not repaired as required in 40 CFR §60.5401a(b)(3).

[45CSR16; 40 CFR §60.5422a]

8.6. Compliance Plan

8.6.1. None.

9.0. Emergency Generators [emission point ID(s): G-2]

9.1. Limitations and Standards

- 9.1.1. Maximum emissions from the 152 hp diesel-fired emergency generator, a John Deere PE404HFG93 (G-2) shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/yr)
Nitrogen Oxide	2.31	0.58
Carbon Monoxide	1.19	0.30
PM _{2.5} /PM ₁₀ /PM	0.02	0.01
SO ₂	0.31	0.08
VOCs	1.01	0.25

[45CSR13, R13-2914, 9.1.1.]

- 9.1.2. **Maximum Yearly Operation Limitation.** The maximum non-emergency yearly hours of operation for the emergency generator shall not exceed 500 hours per year. Compliance with the Maximum Yearly Operation Limitation shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the hours of operation at any given time during the previous twelve consecutive calendar months.

[45CSR13, R13-2914, 9.1.2.]

- 9.1.3. The permittee shall meet all applicable requirements of 40 CFR 60, Subpart IIII with respect to the emergency generators.

[45CSR13, R13-2914, 9.1.3.]

- 9.1.4. Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified below:

- a. For engines with a rated power greater than or equal to 37 KW (50 HP), the Tier 2 or Tier 3 emission standards for new nonroad CI engines for the same rated power as described in 40 CFR part 1039, appendix I, for all pollutants and the smoke standards as specified in 40 CFR 1039.105 beginning in model year 2007.

[45CSR16; 40 CFR §60.4202(a)(2) and 40 CFR §60.4205(b)]

- 9.1.5. Beginning October 1, 2010, owners and operators of stationary CI ICE subject to 40 CFR 60, Subpart IIII with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 1090.305 for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted.

[45CSR16; 40 CFR §60.4207(b)]

9.1.6. Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in 40 CFR §§60.4204 and 60.4205 over the entire life of the engine.
[45CSR16; 40 CFR §60.4206]

9.1.7. If the permittee is an owner or operator and must comply with the emission standards specified in 40CFR60, Subpart IIII, the permittee must do all of the following, except as permitted under condition 9.1.10:

- a. Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;
- b. Change only those emission-related settings that are permitted by the manufacturer; and
- c. Meet the requirements of 40 CFR part 1068, as they apply.

[45CSR16; 40 CFR §60.4211(a)]

9.1.8. If the permittee is owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(b) or §60.4205(b), the permittee must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in condition 9.1.10.

[45CSR16; 40 CFR §60.4211(c)]

9.1.9. If the permittee owns or operates an emergency stationary ICE, the permittee 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, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (a) through (c) of this condition, is prohibited. If the permittee does 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 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. The permittee may operate the emergency stationary ICE for the purpose specified in paragraph (b)(1) 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.

- 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 provided in paragraph (b) of this condition. Except as provided in paragraph (c)(1) 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.
 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; 40 CFR §60.4211(f)]

- 9.1.10. If the permittee does not install, configure, operate, and maintain the 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:
 - a. If the permittee is owner or operator of a stationary CI internal combustion engine greater than or equal to 100 HP and less than or equal to 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, the permittee 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 the permittee changes emission-related settings in a way that is not permitted by the manufacturer.

[45CSR16; 40 CFR §60.4211(g)(2)]

9.1.11. What General Provisions and confidential information provisions apply to me?

- a. Table 8 to this subpart shows which parts of the General Provisions in §§ 60.1 through 60.19 apply to you.
- b. The provisions of 40 CFR 1068.10 and 1068.11 apply for engine manufacturers. For others, the general confidential business information (CBI) provisions apply as described in 40 CFR part 2.

[45CSR16; 40 CFR §60.4218; Table 8 of 40 CFR 60, Subpart IIII]

9.2. Monitoring Requirements

9.2.1. If the permittee is an owner or operator, the permittee must meet the monitoring requirements of this section. In addition, the permittee must also meet the monitoring requirements specified in 40 CFR §60.4211.

- a. If the permittee is an owner or operator of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines, the permittee must install a non-resettable hour meter prior to startup of the engine.
- b. If the permittee is an owner or operator of a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in 40 CFR §60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached.

[45CSR16; 40 CFR §60.4209]

9.3. Testing Requirements

9.3.1. Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests pursuant to this subpart must do so according to paragraphs (a) through (e) of this condition.

- a. The performance test must be conducted according to the in-use testing procedures in 40 CFR part 1039, subpart F, for stationary CI ICE with a displacement of less than 10 liters per cylinder, and according to 40 CFR part 1042, subpart F, for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder. Alternatively, stationary CI ICE that are complying with Tier 2 or Tier 3 emission standards as described in 40 CFR part 1039, appendix I, or with Tier 2 emission standards as described in 40 CFR part 1042, appendix I, may follow the testing procedures specified in § 60.4213, as appropriate.
- b. Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1039 must not exceed the not-to-exceed (NTE) standards for the same model year and maximum engine power as required in 40 CFR 1039.101(e) and 40 CFR 1039.102(g)(1), except as specified in 40 CFR 1039.104(d). This requirement starts when NTE requirements take effect for nonroad diesel engines under 40 CFR part 1039.
- c. Exhaust emissions from stationary CI ICE subject to Tier 2 or Tier 3 emission standards as described in 40 CFR part 1039, appendix I, or Tier 2 emission standards as described in 40 CFR part 1042,

appendix I, must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard determined from the following equation:

$$\text{NTE Requirement for Each Pollutant} = (1.25) \times (\text{STD})$$

Where:

STD = The standard specified for that pollutant in 40 CFR part 1039 or 1042, as applicable.

- d. Exhaust emissions from stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in §60.4204(a), §60.4205(a), or §60.4205(c), determined from the equation in paragraph (c) of this section.

Where:

STD = The standard specified for that pollutant in §60.4204(a), §60.4205(a), or §60.4205(c).

Alternatively, stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) may follow the testing procedures specified in §60.4213, as appropriate.

- e. Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1042 must not exceed the NTE standards for the same model year and maximum engine power as required in 40 CFR 1042.101(c)

[45CSR16; 40 CFR §60.4212]

9.4. Recordkeeping Requirements

- 9.4.1. To demonstrate compliance with condition 9.1.2., the permittee shall maintain records of the hours of operation of the engine (G-2). Said records shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

[45CSR13, R13-2914, 9.2.1.]

- 9.4.2. If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in Table 5 to 40 CFR 60, Subpart IIII, 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; 40 CFR §60.4214(b)]

- 9.4.3. If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached.

[45CSR16; 40 CFR §60.4214(c)]

9.5. Reporting Requirements

- 9.5.1. If the permittee owns or operates an emergency stationary CI ICE with a maximum engine power more than 100 HP that operates for the purpose specified in 40 CFR §60.4211(f)(3)(i), the permittee must submit an annual report according to the requirements in paragraphs (a) through (c) of this condition.
- a. The report must contain the following information:
 1. Company name and address where the engine is located.
 2. Date of the report and beginning and ending dates of the reporting period.
 3. Engine site rating and model year.
 4. Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.
 5. Hours spent for operation for the purposes specified in 40 CFR §60.4211(f)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in 40 CFR §60.4211(f)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.
 - b. The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.
 - c. The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in 40 CFR §60.4.

[45CSR16; 40 CFR §60.4214(d)]

9.6. Compliance Plan

- 9.6.1. None.

10.0. Additional Requirements

10.1. Limitations and Standards

10.1.1. All subject process units at the facility shall comply with Subpart OOOOa.
[45CSR13, R13-2914, 10.1.1]

10.1.2. PORV Requirements

- a. Any new Pilot-Operated Modulating Pressure Relief Valves (PORVs) shall have an operated Bottom Dome Vent Piping with the exception of the following:
 - i. Atmospheric PORVs that are not otherwise required to be routed through a closed-vent system, or
 - ii. Snap-action PORVs.
- b. The permittee shall conduct Method 21 monitoring on all active PORVs on a quarterly basis unless the process unit has been permanently shut down. Leaks discovered from Method 21 monitoring shall be repaired as follows:
 - i. By no later than five days after detecting a leak, the permittee shall perform a first attempt at repair of the PORV. By no later than 15 days after detection, the permittee shall perform a final attempt at repair of the PORV or place it on the DOR list. Repair Verification Monitoring shall be conducted after the repair of any leaks. If an instrument reading of 500 ppm or greater is measured, a leak is detected.
 - ii. For all PORVs placed on the DOR list, the permittee shall:
 1. Require sign-off from the relevant process unit supervisor or person of similar authority that the PORV is technically infeasible to repair without a process unit shutdown;
 2. Undertake monthly Method 21 monitoring of PORVs place on the DOR list; and
 3. Repair the PORV within the time frame required by NSPS Subpart OOOOa.
- c. For each leak identified, the permittee shall record the following information:
 - i. The date the leak was identified and the screening value,
 - ii. The date of all repair attempts,
 - iii. The repair method used during each repair attempt,
 - iv. The date, time, and screening values for all re-monitoring events,
 - v. Documentation of compliance with PORVs placed on the DOR list.

[45CSR13, R13-2914, 10.1.2]

10.1.3. Hose connections to Railcar/Truck Loading Operations

- a. The permittee shall use either of the following options to monitor for leaks at any truck loading hose connections in VOC service during truck loading operations, or representative of loading conditions, at each truck loading bay at the facility:
 - i. Conduct OGI monitoring in accordance with 40 CFR §§60.18(g)-(i) of such hose connections during truck loading operations, or representative of loading conditions, at least once within each 60-day period at any truck loading bay that operates at least once during such 60-day period, and annually conduct Method 21 monitoring of such hose connections for any leaks above 500 ppm, or
 - ii. Conduct Method 21 monitoring for any leaks above 500 ppm quarterly to identify leaks at any hose connections during truck loading operations, or representative of loading conditions, at each truck loading bay at the facility.
- b. The permittee shall repair all leaks of truck loading hose connections identified during monitoring, in accordance with the following requirements:
 - i. By no later than five days after detecting a leak, the permittee shall perform a first attempt at repair;
 - ii. By no later than 15 days after detection, the permittee shall perform a final attempt at repair; and
 - iii. By no later than the end of the next maintenance shutdown.

[45CSR13, R13-2914, 10.1.3]

- 10.1.4. The permittee shall continuously comply with the NO_x limit of 0.10 lb/MMBtu for all Large Hot Oil Heaters as required by 40 CFR §60.44b(a)

[40 CFR §60.44b(a), 45CSR16, 45CSR13, R13-2914, 10.1.4.c] [D1-H-782]

10.2. Monitoring Requirements

- 10.2.1. To demonstrate compliance with the 0.10 lb/MMBtu limit, the permittee shall monitor steam generating unit operating conditions and predict NO_x emission rates, on an annual basis, as specified in a plan submitted pursuant to 40 CFR §60.49b(c).

- a. As required by 40 CFR §60.46b(j)(12), the permittee shall conduct an annual relative accuracy test audit (RATA) to confirm the PEMS model performance within 365 days of the most recent PEMS approval and once every four quarters as required by Performance Specification 16.
- b. The permittee shall monitor the following predictive emissions monitoring system (PEMS) parameters: Stack O₂; Ambient Dewpoint Temperature; and Stack Temperature. This system will serve as an excess emissions PEMS.
- c. Pursuant to Performance Specification 16 Section 6.1.4, the Dewpoint (relative humidity) correlations may be extrapolated to values outside those experienced during the testing.

[45 CFR §60.48b(g)(2) and §60.49b(c), 45CSR16, 45CSR13, R13-2194, 10.1.4.d.2] [D1-H-782]

- 10.2.2. The permittee shall calculate a 30-day rolling average from average daily NO_x emissions calculated by PEMS on an hourly basis.
- a. Each daily NO_x average must have 75% of the hourly average PEMS parameters within the specified ranges for the daily average to be considered valid.
 - b. The 30-day averaging period must also have a minimum of 22 days per period.

[45CSR13, R13-2914, 10.1.4.j] [D1-H-782]

10.3. Testing Requirements

- 10.3.1. The permittee shall perform any additional testing to ensure PEMS parameter ranges are sufficient for this emission unit by no later than 365 days after 01/08/2019.
[45CSR13, R13-2914, 10.1.4.e] [D1-H-782]
- 10.3.2. If the permittee conducts additional testing, the permittee shall conduct a RATA, by no later than 730 days after 01/08/2019, to confirm PEMS model performance as required by Performance Specification 16.
[45CSR13, R13-2914, 10.1.4.f] [D1-H-782]
- 10.3.3. The permittee shall submit the results of any additional testing conducted, including expanded PEMS parameter ranges or modified PEMS models in the next Annual PEMS Report.
[45CSR13, R13-2914, 10.1.4.g] [D1-H-782]
- 10.3.4. If major operational changes occur, on in the case of a failed RATA, the permittee shall retest the emission unit within 60 days at new or changed parameters following the procedure outlined in Performance Specification 16.
[45CSR13, R13-2914, 10.1.4.h] [D1-H-782]
- 10.3.5. All PEMS model development or parameter updating resulting RATA testing conducted shall follow the procedures set forth in Performance Specification 16, and the following general procedures, as applicable:
- a. Collect data. Collected NO_x and O₂ emission data over the desired range of the operating parameter of interest. In accordance with EPA Reference Method 7E Section 8.5, the permittee may use an appropriate time interval between the bias or calibration checks completed during testing. As specified in Method 7E, if the post-test bias check fails, data is invalid from the time of the last successful bias check to the time of the next successful bias check. In accordance with Method 7E Section 8.5(2), each post-test bias check may serve as the pre-test bias check for the next period of data collection. When the analyzers are operated in the manner described in this permit, and initial RATA is not required since the reference method itself is being used. In accordance with Method 7E Section 8.4(3), a multi-hole probe may be used with the analyzer system to meet the sampling point requirements of Method 7E.
 - b. Divide the data. Once the data are collected, such data shall be divided into two groups: Group 1 data is used to build or modify the model; and Group 2 data is used to validate the model. Once the model is built or modified, the Group 2 data, which consists of valid EPA reference method (Method 7E) runs, is used to conduct a RATA on the new or modified model.

- c. Validate model. Once an acceptable model has been developed using the Group 1 data, the model shall be validated with a RATA in accordance with Performance Specification 16 Section 8.2. The Group 2 data collected earlier may be used for the reference method runs for model validation. Model validation procedures in Performance Specification 16 for an excess emission PEMS shall be used. In no case shall Group 1 data used to build or modify the model also be used to validate the model.

[45CSR13, R13-2914, 10.1.4.i] [D1-H-782]

10.4. Recordkeeping Requirements

10.4.1. Except as provided under 40 CFR §60.49b(p), the owner or operator of an affected facility subject to the NO_x standards under 40 CFR §60.44b shall maintain records of the following information for each steam generating unit operating day:

- a. Calendar date;
- b. The average hourly NO_x emission rates (expressed as NO₂)(ng/J or lb/MMBtu heat input) measured or predicted;
- c. The 30-day average NO_x 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;
- d. Identification of the steam generating unit operating days when the calculated 30-day average NO_x emission rates are in excess of the NO_x emissions standards under 40 CFR §60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken;
- e. 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;
- f. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data;
- g. Identification of “F” factor used for calculations, method of determination, and type of fuel combusted;
- h. Identification of the times when the pollutant concentration exceeded full span of the CEMS;
- i. Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and
- j. Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of 40 CFR 60 Subpart Db.

[40 CFR §60.49b(g), 45CSR16, 45CSR13, R13-2914, 10.1.4.a] [D1-H-782]

10.4.2. Except as provided under paragraph (b), the owner or operator of an affected facility shall record and maintain records as specified in paragraph (a).

- 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 month.
- b. As an alternative to meeting the requirements of paragraph (a), the owner or operator of an affected facility that is subject to a federally enforceable permit restricting fuel use to a single fuel such that the facility is not required to continuously monitor any emissions (excluding opacity) or parameters indicative of emissions may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

[40 CFR §60.49b(d), 45CSR16, 45CSR13, R13-2914, 10.1.4.a] [D1-H-782]

- 10.4.3.
- a. Except as provided under paragraphs (b) and (c), the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.
 - b. As an alternative to meeting the requirements of paragraph (a), the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in 40 CFR §60.48c(f) to demonstrate compliance with the SO₂ standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.
 - c. As an alternative to meeting the requirements of paragraph (a), 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 40 CFR §60.42C to use fuel certification to demonstrate compliance with the SO₂ standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.

[40 CFR §60.48c(g), 45CSR16, 45CSR13, R13-2914, 10.1.5.a] [H-771a, H-10768, H-768]

10.5. Reporting Requirements

- 10.5.1. The owner or operator of each affected facility shall submit notification of the date of initial startup, as provided by 40 CFR §60.7. This notification shall include:
- a. The design heat input capacity of the affected facility and identification of the fuels to be combusted in the affected facility;
 - b. If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under 40 CFR §§60.42b(d)(1), 60.43b(a)(2), (a)(3)(iii), (c)(2)(ii), (d)(2)(iii), 60.44b(c), (d), (e), (i), (j), (k), 60.45b(d), (g), 60.46b(h), or 60.48b(i);
 - c. The annual capacity factor at which the owner or operator anticipates operating the facility based on all fuels fired and based on each individual fuel fired

[40 CFR §§60.49b(a)(1-3), 45CSR16, 45CSR13, R13-2914, 10.1.4.b] [D1-H-782]

10.5.2. The owner or operator is required to submit excess emission reports for any excess emissions that occurred during the reporting period.

[40 CFR §§60.49b(h) and (h)(2)(ii), 45CSR16, 45CSR13, R13-2914, 10.1.4.a] [D1-H-782]

10.5.3. The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by 40 CFR §60.7. This notification shall include:

- a. The design heat capacity of the affected facility and identification of fuels to be combusted in the facility
- b. If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under 40 CFR §60.42c, or 40 CFR §60.43c.
- c. The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

[40 CFR §§60.48c(a)(1-3), 45CSR16, 45CSR13, R13-2914, 10.1.5.b] [H-771a, H-10768, H-768]

10.6. Compliance Plan

10.6.1. None.

11.0. 40 C.F.R. 60 Subparts OOOO and OOOOa – Reciprocating Compressor Requirements

11.1. Limitations and Standards

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

- a. You must replace the reciprocating compressor rod packing according to either paragraph (a)(1) or (2) of this section or you must comply with paragraph (a)(3) of this section.
 1. Before the compressor has operated for 26,000 hours. The number of hours of operation must be continuously monitored beginning upon initial startup of your reciprocating compressor affected facility, or October 15, 2012, or the date of the most recent reciprocating compressor rod packing replacement, whichever is later.
 2. Prior to 36 months from the date of the most recent rod packing replacement, or 36 months from the date of startup for a new reciprocating compressor for which the rod packing has not yet been replaced.
 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. You must demonstrate initial compliance with standards that apply to reciprocating compressor affected facilities as required by § 60.5410.
- c. You must demonstrate continuous compliance with standards that apply to reciprocating compressor affected facilities as required by § 60.5415.
- d. You must perform the required notification, recordkeeping, and reporting as required by § 60.5420.

[40 C.F.R. §60.5385; 45CSR16](Inlet, Sherwood I - VI)

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

- a. Closed vent system requirements for reciprocating compressors and for centrifugal compressor wet seal degassing systems.
 1. You 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. You must design and operate the closed vent system with no detectable emissions as demonstrated by § 60.5416(b).
 3. You 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, you must comply with either paragraph (a)(3)(i)(A) or (B) of this section for each bypass device.
 - A. You must properly install, calibrate, maintain, and operate a flow indicator at the inlet to the bypass device that could divert the stream away from the control device or process to the atmosphere that 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. You must maintain records of each time the alarm is activated according to § 60.5420(c)(8).
 - B. You must secure the bypass device valve installed at the inlet to the bypass device in the non-diverting position using a car-seal or a lock-and-key type configuration.
- ii. Low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and safety devices are not subject to the requirements of paragraph (a)(3)(i) of this section.

[40 C.F.R. §§ 60.5411 and 60.5411(a); 45CSR16](Inlet, Sherwood I - VI)

11.1.3. **Subpart OOOOa Standards.** You must reduce VOC emissions by complying with the standards in paragraphs (a) through (d) of this section for each reciprocating compressor affected facility.

- a. You must replace the reciprocating compressor rod packing according to either paragraph (a)(1) or (2) of this section, or you must comply with paragraph (a)(3) of this section.
 1. On or before the compressor has operated for 26,000 hours. The number of hours of operation must be continuously monitored beginning upon initial startup of your reciprocating compressor affected facility, August 2, 2016, or the date of the most recent reciprocating compressor rod packing replacement, whichever is latest.
 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 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. You must demonstrate initial compliance with standards that apply to reciprocating compressor affected facilities as required by § 60.5410a(c).
- c. You must demonstrate continuous compliance with standards that apply to reciprocating compressor affected facilities as required by § 60.5415a(c).
- d. You 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.

[40 C.F.R. §60.5385a; 45CSR16](Sherwood VII - XIII, DeEthanizer Units I - III, Stabilizer II)

- 11.1.4. **Closed vent system requirements for reciprocating compressors under Subpart OOOOa.** You must meet the applicable requirements of this section for each cover and closed vent system used to comply with the emission standards for your centrifugal compressor wet seal degassing systems, reciprocating compressors, pneumatic pumps, and storage vessels.
- a. Closed vent system requirements for reciprocating compressors and centrifugal compressor wet seal degassing systems.
 1. You must design the closed vent system to route all gases, vapors, and fumes emitted from the reciprocating compressor rod packing emissions collection system to a process. You must design the closed vent system to route all gases, vapors, and fumes emitted from the centrifugal compressor wet seal fluid degassing system to a process or a control device that meets the requirements specified in § 60.5412a(a) through (c).
 2. You must design and operate the closed vent system with no detectable emissions as demonstrated by § 60.5416a(b).
 3. You 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, you must comply with either paragraph (a)(3)(i)(A) or (B) of this section for each bypass device.
 - A. You must properly install, calibrate, maintain, and operate a flow indicator at the inlet to the bypass device that could divert the stream away from the control device or process to the atmosphere that 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. You must maintain records of each time the alarm is activated according to § 60.5420a(c)(8).
 - B. You must secure the bypass device valve installed at the inlet to the bypass device in the non-diverting position using a car-seal or a lock-and-key type configuration.
 - ii. Low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and safety devices are not subject to the requirements of paragraph (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. You must conduct an assessment that the closed vent system is of sufficient design and capacity to ensure that all emissions from the affected facility 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 or an in-house engineer with expertise on the design and operation of the closed vent system in accordance with paragraphs (d)(1)(i) and (ii) of 40 C.F.R. §60.5411a.

- i. You must provide the following certification, signed and dated by a qualified professional engineer or an in-house 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.”
- ii. The assessment shall be prepared under the direction or supervision of a qualified professional engineer or an in-house engineer who signs the certification in paragraph (d)(1)(i) of 40 C.F.R. §60.5411a.

[40 C.F.R. §§ 60.5411a, 60.5411a(a), and 60.5411a(d); 45CSR16](Sherwood VII - XIII, DeEthanizer Units I - III, Stabilizer II)

11.2. Monitoring Requirements

11.2.1. **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), you 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), you must demonstrate continuous compliance according to paragraph (d) of this condition.

- a. You must continuously monitor the number of hours of operation for each reciprocating compressor affected facility or track the number of months since initial startup, or October 15, 2012, or the date of the most recent reciprocating compressor rod packing replacement, whichever is later.
- b. You must submit the annual report as required in § 60.5420(b) and maintain records as required in § 60.5420(c)(3).
- c. You must replace the reciprocating compressor rod packing before the total number of hours of operation reaches 26,000 hours or the number of months since the most recent rod packing replacement reaches 36 months.
- d. You 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).

[40 C.F.R. §60.5415(c); 45CSR16](Inlet, Sherwood I - VI)

11.2.2. **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), you 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), you must demonstrate continuous compliance according to paragraph (d) of this condition.

- a. You must continuously monitor the number of hours of operation for each reciprocating compressor affected facility or track the number of months since initial startup, since August 2, 2016, or since the date of the most recent reciprocating compressor rod packing replacement, whichever is latest.

- b. You 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. You 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. You 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).

[40 C.F.R. §§60.5415a and 60.5415a(c); 45CSR16](Sherwood VII - XIII, DeEthanizer Units I - III, Stabilizer II)

11.3. Testing Requirements

- 11.3.1. **Inspections for closed vent systems installed on each reciprocating compressor affected facility under Subpart OOOO.** Except as provided in 40 C.F.R. §§60.5416(b)(11) and (12), you must inspect each closed vent system according to the procedures and schedule specified in paragraphs (1) and (2) of this condition, inspect each cover according to the procedures and schedule specified in paragraph (3) of this condition, and inspect each bypass device according to the procedures of paragraph (4) of this condition.
 1. 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), you must meet the requirements specified in paragraphs (1)(i) and (ii) of this condition.
 - i. Conduct an initial inspection according to the test methods and procedures specified in 40 C.F.R. §60.5416(b) to demonstrate that the closed vent system operates with no detectable emissions. You must maintain records of the inspection results as specified in § 60.5420(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. You must monitor a component or connection using the test methods and procedures in 40 C.F.R. §60.5416(b) to demonstrate that it operates with no detectable emissions following any time the component is repaired or replaced or the connection is unsealed. You must maintain records of the inspection results as specified in § 60.5420(c)(6).
 2. For closed vent system components other than those specified in paragraph (1) of this condition, you must meet the requirements of paragraphs (2)(i) through (iii) of this condition.
 - i. Conduct an initial inspection according to the test methods and procedures specified in 40 C.F.R. §60.5416(b) to demonstrate that the closed vent system operates with no detectable emissions. You must maintain records of the inspection results as specified in § 60.5420(c)(6).
 - ii. Conduct annual inspections according to the test methods and procedures specified in 40 C.F.R. §60.5416(b) to demonstrate that the components or connections operate with no detectable emissions. You must maintain records of the inspection results as specified in § 60.5420(c)(6).

- iii. 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. You must maintain records of the inspection results as specified in § 60.5420(c)(6).
3. For each cover, you must meet the requirements in paragraphs (3)(i) and (ii) of this condition.
 - i. 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, you 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.
 - ii. You must initially conduct the inspections specified in paragraph (3)(i) of this condition following the installation of the cover. Thereafter, you must perform the inspection at least once every calendar year, except as provided in 40 C.F.R. §§60.5416(b)(11) and (12). You must maintain records of the inspection results as specified in § 60.5420(c)(7).
 4. For each bypass device, except as provided for in § 60.5411, you must meet the requirements of paragraphs (4)(i) or (ii) of this condition.
 - i. 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.
 - ii. 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. You must maintain records of the inspections according to § 60.5420(c)(8).

[40 C.F.R. § 60.5416(a); 45CSR16](Inlet, Sherwood I - VI)

- 11.3.2. **No detectable emissions test methods and procedures under Subpart OOOO.** If you are required to conduct an inspection of a closed vent system or cover at your centrifugal compressor or reciprocating compressor affected facility as specified in 40 C.F.R. §§60.5416(a)(1), (2), or (3), you must meet the requirements of 40 C.F.R. §§60.5416(b)(1) through (13).

[40 C.F.R. §§ 60.5416 and 60.5416(b); 45CSR16](Inlet, Sherwood I - VI)

- 11.3.3. **Inspections for closed vent systems and covers installed on each centrifugal compressor or reciprocating compressor affected facility under Subpart OOOOa.** Except as provided in 40 C.F.R. §§60.5416a(b)(11) and (12), you must inspect each closed vent system according to the procedures and schedule specified in paragraphs 40 C.F.R. §§60.5416a(a)(1) and (2), inspect each cover according to the procedures and schedule specified in 40 C.F.R. §60.5416a(a)(3) of this section, and inspect each bypass device according to the procedures of 40 C.F.R. §60.5416a(a)(4) of this section.

1. 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), you must meet the requirements specified in paragraphs (1)(i) and (ii) of this condition.
 - i. Conduct an initial inspection according to the test methods and procedures specified in 40 C.F.R. §60.5416a(b) to demonstrate that the closed vent system operates with no detectable emissions. You 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. You must monitor a component or connection using the test methods and procedures in 40 C.F.R. §60.5416a(b) to demonstrate that it operates with no detectable emissions following any time the component is repaired or replaced or the connection is unsealed. You must maintain records of the inspection results as specified in § 60.5420a(c)(6).
2. For closed vent system components other than those specified in paragraph (1) of this condition, you must meet the requirements of paragraphs (2)(i) through (iii) of this condition.
 - i. Conduct an initial inspection according to the test methods and procedures specified in 40 C.F.R. §60.5416a (b) to demonstrate that the closed vent system operates with no detectable emissions. You must maintain records of the inspection results as specified in § 60.5420a(c)(6).
 - ii. Conduct annual inspections according to the test methods and procedures specified in 40 C.F.R. §60.5416a (b) to demonstrate that the components or connections operate with no detectable emissions. You must maintain records of the inspection results as specified in § 60.5420a(c)(6).
 - iii. 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. You must maintain records of the inspection results as specified in § 60.5420a(c)(6).
3. For each cover, you must meet the requirements in paragraphs (3)(i) and (ii) of this condition.
 - i. 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, you 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.
 - ii. You must initially conduct the inspections specified in paragraph (3)(i) of this condition following the installation of the cover. Thereafter, you must perform the inspection at least once every calendar year, except as provided in paragraphs (b)(11) and (12) of this section. You must maintain records of the inspection results as specified in § 60.5420a(c)(7).
4. For each bypass device, except as provided for in § 60.5411a(a)(3)(ii), you must meet the requirements of paragraph (4)(i) or (ii) of this condition.

- i. 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.
- ii. 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. You must maintain records of the inspections according to § 60.5420a(c)(8).
[40 C.F.R. §60.5416a(a); 45CSR16](Sherwood VII - XIII, DeEthanizer Units I - III, Stabilizer II)

- 11.3.4. **No detectable emissions test methods and procedures under Subpart OOOOa.** If you are required to conduct an inspection of a closed vent system or cover at your centrifugal compressor or reciprocating compressor affected facility as specified in paragraph (a)(1), (2), or (3) of 40 C.F.R. §60.5416a, you must meet the requirements of paragraphs (b)(1) through (13) of 40 C.F.R. §60.5416a.
[40 C.F.R. §60.5416a(b); 45CSR16](Sherwood VII - XIII, DeEthanizer Units I - III, Stabilizer II)

11.4. Recordkeeping Requirements

- 11.4.1. **Recordkeeping requirements under Subpart OOOO.** You must maintain the records identified as specified in § 60.7(f) and in paragraphs (1) through (5) of this condition. All records required by this subpart must be maintained either onsite or at the nearest local field office for at least 5 years.
1. For each reciprocating compressor affected facility, you must maintain the records in 40 CFR §60.5420(c)(3)(i) through (iii).
 - i. Records of the cumulative number of hours of operation or number of months since initial startup or October 15, 2012, or the previous replacement of the reciprocating compressor rod packing, whichever is later.
 - ii. Records of the date and time of each reciprocating compressor rod packing replacement, or date of installation of a rod packing emissions collection system and closed vent system as specified in § 60.5385(a)(3).
 - iii. Records of deviations in cases where the reciprocating compressor was not operated in compliance with the requirements specified in § 60.5385.
 2. Records of each closed vent system inspection required under § 60.5416(a)(1) and (2) for centrifugal or reciprocating compressors.
 3. A record of each cover inspection required under § 60.5416(a)(3) for centrifugal or reciprocating compressors.
 4. If you are subject to the bypass requirements of § 60.5416(a)(4) for centrifugal or 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.

5. If you are subject to the closed vent system no detectable emissions requirements of § 60.5416(b) for centrifugal or reciprocating compressors, a record of the monitoring conducted in accordance with § 60.5416(b).

[40 C.F.R. §§60.5420(c), (c)(3), (c)(6), (c)(7), (c)(8), and (c)(9); 45CSR16](Inlet, Sherwood I - VI)

11.4.2. **Recordkeeping requirements under Subpart OOOOa.** You must maintain the records identified as specified in § 60.7(f) and in paragraphs (c)(1) through (18) of 40 C.F.R. §60.5420a. 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 this subpart that are submitted electronically via the EPA's CDX may be maintained in electronic format.

1. For each reciprocating compressor affected facility, you must maintain the records in 40 CFR §60.5420a(c)(3)(i) through (iii).
 - i. Records of the cumulative number of hours of operation or number of months since initial startup, since August 2, 2016, or since the previous replacement of the reciprocating compressor rod packing, whichever is latest. Alternatively, a statement that emissions from the rod packing are being routed to a process through a closed vent system under negative pressure.
 - ii. Records of the date and time of each reciprocating compressor rod packing replacement, or date of installation of a rod packing emissions collection system and closed vent system as specified in § 60.5385a(a)(3).
 - iii. Records of deviations in cases where the reciprocating compressor was not operated in compliance with the requirements specified in § 60.5385a, including the date and time the deviation began, duration of the deviation, and a description of the deviation.
2. Records of each closed vent system inspection required under §60.5416a(a)(1) and (2) and (b) for reciprocating compressors.
3. A record of each cover inspection required under §60.5416a(a)(3) for reciprocating compressors.
4. If you are subject to the bypass requirements of §60.5416a(a)(4) for reciprocating compressors, you must prepare and maintain 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.
5. For each closed vent system routing to a control device or process, the records of the assessment conducted according to § 60.5411a(d)
 - i. A copy of the assessment conducted according to § 60.5411a(d)(1);
 - ii. A copy of the certification according to § 60.5411a(d)(1)(i); and
 - iii. The owner or operator shall retain copies of all certifications, assessments, and any related records for a period of 5 years, and make them available if directed by the delegated authority.

[40 C.F.R. §§60.5420a(c), (c)(3), (c)(6), (c)(7), (c)(8), and (c)(17); 45CSR16](Sherwood VII - XIII, DeEthanizer Units I - III, Stabilizer II)

11.5. Reporting Requirements

11.5.1. **Reporting requirements under Subpart OOOO.** You must submit annual reports containing the information specified in paragraphs (b)(1) through (6) of 40 C.F.R. §60.5420 to the Administrator and performance test reports as specified in 40 C.F.R. §§60.5420(b)(7) or (8). The initial annual report is due no later than 90 days after the end of the initial compliance period as determined according to § 60.5410. Subsequent annual reports are due no later than same date each year as the initial annual report. If you own or operate more than one affected facility, you may submit one report for multiple affected facilities provided the report contains all of the information required as specified in paragraphs (b)(1) through (6) of 40 C.F.R. §60.5420. Annual reports may coincide with title V reports as long as all the required elements of the annual report are included. You may arrange with the Administrator a common schedule on which reports required by this part may be submitted as long as the schedule does not extend the reporting period.

1. The general information specified in 40 C.F.R. §§60.5420(b)(1)(i) through (iv).
 - i. The company name and address of the affected facility.
 - ii. An identification of each affected facility being included in the annual report.
 - iii. Beginning and ending dates of the reporting period.
 - iv. A certification by a certifying official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
2. For each reciprocating compressor affected facility, the information specified in 40 C.F.R. §§60.5420(b)(4)(i) through (ii).
 - i. The cumulative number of hours of operation or the number of months since initial startup, since October 15, 2012, or since the previous reciprocating compressor rod packing replacement, whichever is later.
 - ii. Records of deviations specified in 40 C.F.R. §60.5420(c)(3)(iii) that occurred during the reporting period.

[40 C.F.R. §§60.5420(b), (b)(1), and (b)(4); 45CSR16](Inlet, Sherwood I - VI)

11.5.2. **Reporting requirements under Subpart OOOOa.** You must submit annual reports containing the information specified in paragraphs (b)(1) through (8) and (12) of 40 C.F.R. §60.5420a and performance test reports as specified in paragraph (b)(9) or (10) of 40 C.F.R. §60.5420, if applicable. You must submit annual reports following the procedure specified in paragraph (b)(11) of 40 C.F.R. §60.5420. 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 you own or operate more than one affected facility, you may submit one report for multiple affected facilities provided the report contains all of the information required as specified in paragraphs (b)(1) through (8) and (12) of 40 C.F.R. §60.5420. Annual reports may coincide with title V reports as long as all the required elements of the annual report are included. You may arrange with the Administrator a common schedule on which reports required by this part may be submitted as long as the schedule does not extend the reporting period.

1. The general information specified in paragraphs (b)(1)(i) through (iv) of 40 C.F.R. §60.5420a is required for all reports.
 - i. The company name, facility site name associated with the affected facility, U.S. Well ID or U.S. 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.
 - ii. An identification of each affected facility being included in the annual report.
 - iii. Beginning and ending dates of the reporting period.
 - iv. A certification by a certifying official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
2. For each reciprocating compressor affected facility, the information specified in paragraphs (b)(4)(i) through (iii) of 40 C.F.R. §60.5420a.
 - i. The cumulative number of hours of operation or the number of months since initial startup, since August 2, 2016, or since the previous reciprocating compressor rod packing replacement, whichever is latest. Alternatively, a statement that emissions from the rod packing are being routed to a process through a closed vent system under negative pressure.
 - ii. If applicable, for each deviation that occurred during the reporting period and recorded as specified in paragraph (c)(3)(iii) of 40 C.F.R. §60.5420a, the date and time the deviation began, duration of the deviation and a description of the deviation.
3. In addition to submitting reports as required in Condition 3.5.3, you must submit reports to the EPA via CEDRI, except as outlined in this paragraph (b)(11) of 40 C.F.R. §60.5420a . (CEDRI can be accessed through the EPA's CDX (<https://cdx.epa.gov/>)). You 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 website (<https://www.epa.gov/electronic-reporting-air-emissions/cedri/>). If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you 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, you 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.

[40 C.F.R. §§60.5420a(b), (b)(1), (b)(4) and (b)(11); 45CSR16](Sherwood VII - XIII, DeEthanizer Units I - III, Stabilizer II)

11.6. Compliance Plan

- 11.6.1. None.

APPENDIX A — TCEQ 28VHP PROGRAM REQUIREMENTS

Piping, Valves, Connectors, Pumps, Agitators, and Compressors - 28VHP

1. Except as may be provided for in the Special Conditions of this permit, the following requirements apply:
 - A. The requirements of paragraphs F and G shall not apply (1) where the Volatile Organic Compound (VOC) has an aggregate partial pressure or vapor pressure of less than 0.044 pounds per square inch, absolute (psia) at 68°F or (2) operating pressure is at least 5 kilopascals (0.725 psi) below ambient pressure. Equipment excluded from this condition shall be identified in a list or by one of the methods described below to be made readily available upon request.

The exempted components may be identified by one or more of the following methods:

1. piping and instrumentation diagram (PID);
 2. a written or electronic database or electronic file;
 3. color coding;
 4. a form of weatherproof identification; or
 5. designation of exempted process unit boundaries.
- B. Construction of new and reworked piping, valves, pump systems, and compressor systems shall conform to applicable American National Standards Institute (ANSI), American Petroleum Institute (API), American Society of Mechanical Engineers (ASME), or equivalent codes.
 - C. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical. New and reworked buried connectors shall be welded.
 - D. To the extent that good engineering practice will permit, new and reworked valves and piping connections shall be so located to be reasonably accessible for leak-checking during plant operation. Difficult-to-monitor and unsafe-to-monitor valves, as defined by Title 30 Texas Administrative Code Chapter 115 (30 TAC Chapter 115), shall be identified in a list to be made readily available upon request.

The difficult-to-monitor and unsafe-to-monitor valves may be identified by one or more of the methods described in subparagraph A above. If an unsafe to monitor component is not considered safe to monitor within a calendar year, then it shall be monitored as soon as possible during safe to monitor times. A difficult to monitor component for which quarterly monitoring is specified may instead be monitored annually.

- E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. Gas or hydraulic testing of the new and reworked piping connections at no less than operating pressure shall be performed prior to returning the components to service or they shall be monitored for leaks using an approved gas analyzer within 15 days of the components being returned to service. Adjustments shall be made as necessary to obtain leak-free performance.

Connectors shall be inspected by visual, audible, and/or olfactory means at least weekly by operating personnel walk-through.

Each open-ended valve or line shall be equipped with an appropriately sized cap, blind flange, plug, or a second valve to seal the line. Except during sampling, both valves shall be closed. If the isolation of equipment for hot work or the removal of a component for repair or replacement results in an open ended line or valve, it is exempt from the requirement to install a cap, blind flange, plug, or second valve for 72 hours. If the repair or replacement is

not completed within 72 hours, the permit holder must complete either of the following actions within that time period;

6. a cap, blind flange, plug, or second valve must be installed on the line or valve; or
 7. the open-ended valve or line shall be monitored once for leaks above background for a plant or unit turnaround lasting up to 45 days with an approved gas analyzer and the results recorded. For all other situations, the open-ended valve or line shall be monitored once within the 72 hour period following the creation of the open ended line and monthly thereafter with an approved gas analyzer and the results recorded. For turnarounds and all other situations, leaks are indicated by readings of 500 ppmv and must be repaired within 24 hours or a cap, blind flange, plug, or second valve must be installed on the line or valve.
- F. Accessible valves shall be monitored by leak checking for fugitive emissions at least quarterly using an approved gas analyzer. Sealless/leakless valves (including, but not limited to, welded bonnet bellows and diaphragm valves) and relief valves equipped with a rupture disc upstream or venting to a control device are not required to be monitored. If a relief valve is equipped with rupture disc, a pressure-sensing device shall be installed between the relief valve and rupture disc to monitor disc integrity.

A check of the reading of the pressure-sensing device to verify disc integrity shall be performed at least quarterly and recorded in the unit log or equivalent. Pressure-sensing devices that are continuously monitored with alarms are exempt from recordkeeping requirements specified in this paragraph. All leaking discs shall be replaced at the earliest opportunity but no later than the next process shutdown.

The gas analyzer shall conform to requirements listed in Method 21 of 40 CFR part 60, appendix A. The gas analyzer shall be calibrated with methane. In addition, the response factor of the instrument for a specific VOC of interest shall be determined and meet the requirements of Section 8 of Method 21. If a mixture of VOCs is being monitored, the response factor shall be calculated for the average composition of the process fluid. A calculated average is not required when all of the compounds in the mixture have a response factor less than 10 using methane. If a response factor less than 10 cannot be achieved using methane, then the instrument may be calibrated with one of the VOC to be measured or any other VOC so long as the instrument has a response factor of less than 10 for each of the VOC to be measured.

Replacements for leaking components shall be re-monitored within 15 days of being placed back into VOC service.

- G. Except as may be provided for in the special conditions of this permit, all pump, compressor, and agitator seals shall be monitored with an approved gas analyzer at least quarterly or be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal. Seal systems designed and operated to prevent emissions or seals equipped with an automatic seal failure detection and alarm system need not be monitored. These seal systems may include (but are not limited to) dual pump seals with barrier fluid at higher pressure than process pressure, seals degassing to vent control systems kept in good working order, or seals equipped with an automatic seal failure detection and alarm system. Submerged pumps or sealless pumps (including, but not limited to, diaphragm, canned, or magnetic-driven pumps) may be used to satisfy the requirements of this condition and need not be monitored.
- H. Damaged or leaking valves or connectors found to be emitting VOC in excess of 500 parts per million by volume (ppmv) or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. Damaged or leaking pump, compressor, and agitator seals found to be emitting VOC in excess of 2,000 ppmv or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. A first attempt to repair the leak must be made within 5 days and a record of the attempt shall be maintained.

- I. A leaking component shall be repaired as soon as practicable, but no later than 15 days after the leak is found. If the repair of a component would require a unit shutdown that would create more emissions than the repair would eliminate, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair by tagging within 15 days of the detection of the leak. A listing of all components that qualify for delay of repair shall be maintained on a delay of repair list.

- J. Records of repairs shall include date of repairs, repair results, justification for delay of repairs, and corrective actions taken for all components. Records of instrument monitoring shall indicate dates and times, test methods, and instrument readings. The instrument monitoring record shall include the time that monitoring took place for no less than 95% of the instrument readings recorded. Records of physical inspections shall be noted in the operator's log or equivalent.