west virginia department of environmental protection

Division of Air Quality
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Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
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November 20, 2015

CERTIFIED MAIL
91 7199 9991 7034 1376 2588

Ms. Leanne Meyer
Vice President EH & S
MarkWest Liberty Midstream & Resources LLC
1515 Arapahoe St., Tower 1, Suite 1600
Denver, CO 80202-2137

Re: MarkWest Liberty Midstream & Resources LLC
Sherwood Gas Plant
Permit No. R13-2914C
Plant ID No. 017-00034

Dear Ms. Meyer:

Your application for a permit as required by Section 5 of 45CSR13 - "Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permit, General Permit, and Procedures for Evaluation" has been approved. The enclosed permit R13-2914C is hereby issued pursuant to Subsection 5.7 of 45CSR13. Please be aware of the notification requirements in the permit which pertain to commencement of construction, modification, or relocation activities; startup of operations; and suspension of operations.

As a result of the granting of this permit, the source is subject to 45CSR30. The Title V (45CSR30) application will be due within twelve (12) months after the date of the commencement of the operation or activity (Flare FL-991activities) authorized by this permit, unless granted a deferral or exemption by the Director from such filing deadline pursuant to a request from the permittee.

In accordance with 45CSR30- Operating Permit Program, the permittee shall submit a certified emissions statement and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality. A receipt for the appropriate fee shall be maintained on the premises for which the receipt has been issued, and shall be made immediately available for inspection by the Secretary or his/her duly authorized representative.

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.

Should you have any questions or comments, please contact me at (304) 926-0499, extension 1214.

Sincerely,

Edward S. Andrews, P.E.
Engineer

Enclosures

c: Nathan M. Wheldon, P.E. Environmental Manager

West Virginia Department of Environmental Protection

Earl Ray Tomblin
Governor

Division of Air Quality

Randy C. Huffman
Cabinet Secretary

Permit to Modify

R13-2914C

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§22-5-1 et seq.) and 45 C.S.R. 13 – Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation. The permittee identified at the above-referenced facility is authorized to construct the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Issued to:

MarkWest Liberty Midstream & Resources LLC

Sherwood Gas Plant

017-00034

William F. Durham
Director

Issued: November 20, 2015

This permit will supercede and replace Permit R13-2914B.

Facility Location:	218 Swisher Lane West Union, Doddridge County, West Virginia
Mailing Address:	1515 Arapahoe St. Tower 1 Suite 1600 Denver, CO 80202-2137
Facility Description:	Natural Gas Processing Plant
NAICS Codes:	211112
UTM Coordinates:	526.92 km Easting • 4,346.89 km Northing • Zone 17
Permit Type:	Modification
Description of Change:	This action is the installation and operation of three addition extraction units and one de-ethanizer unit. This modification will include the replace of the existing emergency flare.

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.

As a result of the granting of this permit, the source is subject to 45CSR30. The Title V (45CSR30) application will be due within twelve (12) months after the date of the commencement of the operation or activity (Flare FL-991activities) authorized by this permit, unless granted a deferral or exemption by the Director from such filing deadline pursuant to a request from the permittee.

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1.0. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
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
DH-001		TEG Dehydration Unit Still Vent	2012	120 MMscfd	Flare
		Flash Tank			Reboiler fuel/RCRC
RB-001	RB-001	TEG Dehydration Unit Reboiler	2012	2.0 MMBTU/hr	None
FL-991	FL-991	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 Description	VRU
H-742	H-742	Stabilization Heater	2014	2.28 MMBTU/hr	None
H-2724	H-2724	Stabilization Heater	2015	2.28 MMBTU/hr	None
H-3724	H-3724	Stabilization Heater	2015	2.28 MMBTU/hr	None
Pressure Vessels	Pressure Vessels	4 - 70,000 gallon NGL Tanks	2012	4@70,000 gallons	Pressure Vessels
Sherwood 1 Extraction Train					
H-711	H-711	Mole Sieve Regeneration Heater	2012	7.86 MMBTU/hr	None
H-771	H-771	Hot Oil Heater	2012	28.25 MMBTU/hr	None
Sherwood 2 Extraction Train					
H-2711	H-2711	Mole Sieve Regeneration Heater	2013	7.86 MMBTU/hr	None
Sherwood 3 Extraction Train					
H-3711	H-3711	Mole Sieve Regeneration Heater	2013	7.86 MMBTU/hr	None
Sherwood 4 Extraction Train					

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
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 5 Extraction Train					
H-5711	H-5711	Mole Sieve Regeneration Heater	2014	18.00 MMBTU/hr	IFGR w/LowNOx Burner
Sherwood 6 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 7 Extraction Train					
H-7711	H-7711	Mole Sieve Regeneration Heater	2015	18.00 MMBTU/hr	IFGR w/LowNOx Burner
Sherwood 8 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	6.60 MMBTU/hr	None
Sherwood 9 Extraction Train					
H-9711	H-9711	Mole Sieve Regeneration Heater	2016	18.00 MMBTU/hr	IFGR w/LowNOx Burner
DeEthanizer 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* MMBTU/hr	FGR w/Low NOx Burner
D1-H-741	D1-H-741	DeEthanizer Regeneration Heater	2015	12.53	
Tank Farm					
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

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
TK-2896	TK-2896	Floor Drain Storage Tank	2012	500 gal	None
TK-2950	TK-2950	Propane Storage Tank	2012	500 gal	None
		Truck Loading Condensate	2012		Vapor Return line to VRU

* - Normal Maximum Heat Release Rate of the burners
FGR - Flue Gas Recirculation
IFGR - Integrated Flue Gas Recirculation
RCRC – Recycle or recompression
VRU – Vapor Recovered Unit

1.1. Control Devices

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 %
DH-001	Dehy Flare	TEG Dehydration Unit Still Vent	Volatile Organic Compounds	98 %
			Total Hazardous Air Pollutants	98 %
FL-991	Flare	Emergency Use (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 %

2.0. General Conditions

2.1. Definitions

2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.

2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.

2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.12.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.

2.2. 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	**$PM_{2.5}$**	Particulate Matter less than 2.5 μm in diameter
C.F.R. *or* CFR	Code of Federal Regulations	**PM_{10}**	Particulate Matter less than 10μm in diameter
CO	Carbon Monoxide	**Ppb**	Pounds per Batch
C.S.R. *or* CSR	Codes of State Rules	**Pph**	Pounds per Hour
DAQ	Division of Air Quality	**Ppm**	Parts per Million
DEP	Department of Environmental Protection	**Ppm_V or ppmv**	Parts per Million by Volume
dscm	Dry Standard Cubic Meter	**PSD**	Prevention of Significant Deterioration
FOIA	Freedom of Information Act	**Psi**	Pounds per Square Inch
HAP	Hazardous Air Pollutant	**SIC**	Standard Industrial Classification
HON	Hazardous Organic NESHAP	**SIP**	State Implementation Plan
HP	Horsepower	**SO_2**	Sulfur Dioxide
lbs/hr	Pounds per Hour	**TAP**	Toxic Air Pollutant
LDAR	Leak Detection and Repair	**TPY**	Tons per Year
M	Thousand	**TRS**	Total Reduced Sulfur
MACT	Maximum Achievable Control Technology	**TSP**	Total Suspended Particulate
MDHI	Maximum Design Heat Input	**USEPA**	United States Environmental Protection Agency
MM	Million	**UTM**	Universal Transverse Mercator
MMBtu/hr *or* mmbtu/hr	Million British Thermal Units per Hour	**VEE**	Visual Emissions Evaluation
MMCF/hr *or* mmcf/hr	Million Cubic Feet per Hour	**VOC**	Volatile Organic Compounds
NA	Not Applicable	**VOL**	Volatile Organic Liquids
NAAQS	National Ambient Air Quality Standards		
NESHAPS	National Emissions Standards for Hazardous Air Pollutants		

2.3. Authority

This permit is issued in accordance with West Virginia Air Pollution Control Act W.Va. Code §§ 22-5-1. et seq. and the following Legislative Rules promulgated thereunder:

2.3.1. 45CSR13 – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation*;

2.4. Term and Renewal

2.4.1. This permit supersedes and replaces previously issued Permit R13-2914B. This Permit shall remain valid, continuous and in effect unless it is revised, suspended, revoked or otherwise changed under an applicable provision of 45CSR13 or any other applicable legislative rule;

2.5. Duty to Comply

2.5.1. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Application R13-2914, R13-2914A, R13-2914B, R13-2914C and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to;
[45CSR§§13-5.11 and 10.3.]

2.5.2. 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;

2.5.3. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7;

2.5.4. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses, and/or approvals from other agencies; i.e., local, state, and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

2.6. Duty to Provide Information

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 administratively updating, modifying, revoking, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records 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.

2.7. Duty to Supplement and Correct Information

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.

2.8. Administrative Update

The permittee may request an administrative update to this permit as defined in and according to the procedures specified in 45CSR13.
[45CSR§13-4.]

2.9. Permit Modification

The permittee may request a minor modification to this permit as defined in and according to the procedures specified in 45CSR13.
[45CSR§13-5.4.]

2.10 Major Permit Modification

The permittee may request a major modification as defined in and according to the procedures specified in 45CSR14 or 45CSR19, as appropriate.
[45CSR§13-5.1]

2.11. Inspection and Entry

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; and

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.

2.12. Emergency

2.12.1. An "emergency" means any situation arising from sudden and reasonable unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

2.12.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of Section 2.12.3 are met.

2.12.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;

b. The permitted facility was at the time being properly operated;

c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and

d. The permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

2.12.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.

2.12.5 The provisions of this section are in addition to any emergency or upset provision contained in any applicable requirement.

2.13. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it should 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.

2.14. Suspension of Activities

In the event the permittee should deem it necessary to suspend, for a period in excess of sixty (60) consecutive calendar days, the operations authorized by this permit, the permittee shall notify the Secretary, in writing, within two (2) calendar weeks of the passing of the sixtieth (60) day of the suspension period.

2.15. Property Rights

This permit does not convey any property rights of any sort or any exclusive privilege.

2.16. Severability

The provisions of this permit are severable and should any provision(s) be declared by a court of competent jurisdiction to be invalid or unenforceable, all other provisions shall remain in full force and effect.

2.17. Transferability

This permit is transferable in accordance with the requirements outlined in Section 10.1 of 45CSR13. **[45CSR§13-10.1.]**

2.18. Notification Requirements

The permittee shall notify the Secretary, in writing, no later than thirty (30) calendar days after the actual startup of the operations authorized under this permit.

2.19. Credible Evidence

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 defense otherwise available to the permittee including, but not limited to, any challenge to the credible evidence rule in the context of any future proceeding.

3.0. Facility-Wide Requirements

3.1. Limitations and Standards

3.1.1. **Open burning.** The open burning of refuse by any person, firm, corporation, association or public agency 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, suffer, allow or permit 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.
[40CFR§61.145(b) and 45CSR§34]

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. **Permanent shutdown.** A source which has not operated at least 500 hours in one 12-month period within the previous five (5) year time period may be considered permanently shutdown, unless such source can provide to the Secretary, with reasonable specificity, information to the contrary. All permits may be modified or revoked and/or reapplication or application for new permits may be required for any source determined to be permanently shutdown.
[45CSR§13-10.5.]

3.1.6. **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.]

3.1.7. 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.

3.2. Monitoring Requirements

3.2.1. The permittee shall analysis 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 3.4.1.

3.2.2. For the purpose of demonstrating compliance with Conditions 3.1.7., 5.1.2.c., and 5.1.3.h.vi., the permittee shall conduct gas sampling at a point that is representative of the incoming field gas and analyzing 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 3.4.1. of this permit. **[45 CSR §10-8.3.a.]**

3.3. Testing Requirements

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

a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63 in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4. or 45CSR§13-5.4 as 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 may be revised in accordance with 45CSR§13-4. or 45CSR§13-5.4 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 sixty (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; and,
3. A statement of compliance or noncompliance with each permit or rule condition.

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

3.4. Recordkeeping Requirements

3.4.1. **Retention of records.** The permittee shall maintain records of all information (including monitoring data, support information, reports, and notifications) required by this permit recorded in a form suitable and readily available for expeditious inspection and review. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation. The files shall be maintained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. Where appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.

3.4.2. **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§4. *State Enforceable Only.*]

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.

3.5.2. **Confidential information.** A permittee may request confidential treatment for the submission of reporting required by this permit pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.

3.5.3. **Correspondence.** 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 with

postage prepaid to the address(es) set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

If to the DAQ:
Director
WVDEP
Division of Air Quality
601 57th Street
Charleston, WV 25304-2345

If to the US EPA:
Associate Director
Office of Air Enforcement and Compliance Assistance
(3AP20)
U.S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

3.5.4. Operating Fee

3.5.4.1. In accordance with 45CSR30 – Operating Permit Program, the permittee shall submit a certified emissions statement and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality. A receipt for the appropriate fee shall be maintained on the premises for which the receipt has been issued, and shall be made immediately available for inspection by the Secretary or his/her duly authorized representative.

3.5.5. **Emission inventory.** At such time(s) as the Secretary may designate, the permittee herein shall prepare and submit an emission inventory for the previous year, addressing the emissions from the facility and/or process(es) authorized herein, in accordance with the emission inventory submittal requirements of the Division of Air Quality. After the initial submittal, the Secretary may, based upon the type and quantity of the pollutants emitted, establish a frequency other than on an annual basis.

4.0. Specific Requirements for the Compressor Engines

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 O_2. 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 O_2. 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 O_2. 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.
[40 CFR §60.4333(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.
[40 CFR §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 compiling with Condition 4.1.4. and not exceeding the following concentrations during performance testing:

i. NO_x concentration of 57.6 ppmvd at 15% O_2.

ii. CO concentration of 26.0 ppmvd at 15% O_2.

iii. VOC concentration of 18.9 ppmvd at 15% O_2

f. The permittee shall replace the rod packing in each affected compressor once every 26,000 hours of operation.
[40 CFR §60.5385(a)(1)]

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

a. Emissions from the engine shall not exceed the following:

i. NO_x emissions from the engine shall not exceed 82 ppmvd at 15 percent O_2. The mass rate of NO_x emissions 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 O_2. The mass rate of CO emissions 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 O_2. 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.
[40 CFR §60.4333(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.
[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 compiling with Condition 4.1.4. and not exceeding the following concentrations during performance testing:

i. NO_x concentration of 56.5 ppmvd at 15% O_2.

ii. CO concentration of 26.0 ppmvd at 15% O_2.

iii. VOC concentration of 33.0 ppmvd at 15% O_2

f. The permittee shall replace the rod packing in each affected compressor once every 26,000 hours of operation.
[40 CFR §60.5385(a)(1)]

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.
[40CFR§60.4243(e)]

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;

d. The permittee shall check the air/fuel ratio every 1,500 service hours 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:

1. Remove or render inoperative any air pollution or auxiliary air pollution control device installed subject to the requirements of this permit;

2. Install any part or component when the principal effect of the part or component is to bypass, defeat or render inoperative any air pollution control device or auxiliary air pollution control device installed subject to the requirements of this permit; or

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

4.1.5. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.
[45CSR§13-5.11.]

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.
[40 CFR §60.4243(b)(2)(ii)]

4.2.2. The permittee shall monitored 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 3.4.1.
[40CFR§60.4245(b)]

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 3.4.1.
[40CFR§60.4243(b)]

4.4. Recordkeeping Requirements

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

a. The date, place as defined in this permit, and time of sampling or measurements;

b. The date(s) analyses were performed;

c. The company or entity that performed the analyses;

d. The analytical techniques or methods used;

e. The results of the analyses; and

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

4.4.2. **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.

4.4.3. **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.

4.4.4. For each compressor connected to Engines CM-1001 and CM1002, the permittee shall maintain records of the following in accordance with Condition 3.4.1.

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

ii. Record of the date of the most recent replacement of the rod packing.
[40 CFR §60.5385(c)(3)]

4.4.5. The permittee shall maintain records of the monitoring as required in Condition 4.1.4. for each engine in accordance with Condition 3.4.1.

4.5. Reporting Requirements

4.5.1. The permittee shall submit annual compliance reports that indicates compliance with Condition 4.1.1.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:

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.

v. The records as required in Condition 4.4.4. for each affected compressor.

[40 CFR §60.5420(b) and (b)(4)(ii)]

5.0. Specific Requirements for Production Gas Dehydration Unit

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 item b of this condition and route the still vent into a closed vent system to a control device.

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.

c. The flash tank off gas of the dehydration unit shall either be routed into a closed vent system to the pilot light and burner of the reboiler as fuel gas or recycled for recompression 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 a control device that is identified as Dehy 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. Monitor of the closed vent system shall be conducted in accordance with Condition 8.2.2
[40 CFR §60.5400(a), §60.482-11a(g)]

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. Emissions of VOC from the emission point RB-001shall not exceed 0.66 pounds per hour. Annual VOC emissions shall not exceed 2.89 tons per year on a 12-month rolling total.

b. Total hazardous air pollutants (HAPs), which include BTEX, from emission point RB-001shall not exceed 0.02 pounds per hour. Annual Total HAP emissions from RB-001shall not exceed 0.1 tons per year on a 12-month rolling total.

c. Sulfur dioxide emissions from RB-001 shall not exceed 0.19 pounds per hour. Compliance with this emission limit is satisfied by limiting the hydrogen sulfide (H_2S) loading of the incoming natural gas to the facility to be no greater than 4.0 grains of H2S per 100 cubic feet of natural gas or 65 ppm of H_2S by volume.
[45 CSR §10-5.1.]

d. 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-001shall 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 4.1.3.c.iii.
[45 CSR §2-3.1]

iii. The reboiler shall only be fueled with fuel gas that meets the requirements of Condition 3.1.7., flash tank off gas, or any combination of these two fuels.

5.1.3. The Dehy 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 0.44 pounds per hour and 1.96 tpy.

ii. Emissions of CO shall not exceed 3.85 pounds per hour and 16.85 tpy.

iii. Emissions of VOC shall not exceed 2.02 pounds per hour and 8.84 tpy.

iv. Emissions of SO_2 shall not exceed 0.19 pounds per hour. Compliance with this emission limit is satisfied by limiting the hydrogen sulfide (H2S) loading of the incoming natural gas to the dehydration unit to be no greater than 4.0 grains of H2S per 100 cubic feet of natural gas or 65 ppm of H2S by volume.
[45 CSR §10-5.1.]

v. Total HAPs shall not exceed 0.33 pounds per hour and 1.47 tpy.

5.1.4. **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§13-5.11.]

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.:

a. The throughput of wet natural gas processed through the dehydration unit on a daily basis, days the dehydration unit operated, and annual natural gas flowrate.
[40 CFR §63.774(d)(1)]

b. Determine actual annual average natural gas throughput (in terms of natural gas flowrate to the glycol dehydration unit per day) by converting the annual natural gas flowrate to a daily

average by dividing the annual flowrate by the number of days per year the glycol dehydration unit processed natural gas.
[40 CFR §63.772(b)(1)(i)]

c. Identify any periods there was no flame present for the pilot of the flare when the dehydration unit was in operation.

d. Determination of the actual average benzene emissions from the dehydration unit shall be made using the model GRIGLYCalc™, 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).
[40 CFR §63.772(b)(2)(i) & 63.774(d)(1)(ii)]

e. Records of such monitoring shall be maintained in accordance with Condition 3.4.1.

5.2.2. For the purpose of demonstrating proper operation of the Dehy Flare 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 outline 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 3.4.1.

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.

5.4. Recordkeeping Requirements

5.4.1. **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.

5.4.2. **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.

5.4.3. The permittee shall maintain records of the analysis that is used to indicate compliance is in accordance with items a. and b. of Conditions 4.1.1. Such records shall include the source of data used in the analysis and be maintained in accordance with Condition 3.4.1. **[40 CFR 63.774(d)(2)(ii)]**

6.0. Specific Requirements Process Heaters

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:

Table 6.1.1. – List Heaters

Emission Unit ID#	Heater Description	MDHI (MMBTU/hr)	Annual Heat Input (MMBtu/yr)
H-711	Mole Sieve Regeneration Heater[1]	7.86	68,853.60
H-2711	Mole Sieve Regeneration Heater[1]	7.86	68,853.60
H-3711	Mole Sieve Regeneration Heater[1]	7.86	68,853.60
H-771	Hot Oil Heater	28.25	247,470.00
H-4711	Mole Sieve Regeneration Heater[2]	18.00	157,680.00
H-5711	Mole Sieve Regeneration Heater[2]	18.00	157,680.00
H-6711	Mole Sieve Regeneration Heater[2]	18.00	157,680.00
H-7711	Mole Sieve Regeneration Heater[2]	18.00	157,680.00
H-8711	Mole Sieve Regeneration Heater[2]	18.00	157,680.00
H-9711	Mole Sieve Regeneration Heater[2]	18.00	157,680.00
H-6712	Hot Oil Heater	6.60	57,816.00
H-4712	Hot Oil Heater	6.60	57,816.00
H-8712	Hot Oil Heater	6.60	57,816.00
H-742	Stabilization Heater	2.28	19,972.80
H-2742	Stabilization Heater	2.28	19,972.80
H-3742	Stabilization Heater	2.28	19,972.80
D1-H-782	DeEthanizer HMO Heater[3]	113.36	993,033.60
D1-H-741	DeEthanizer Regen Heater[2]	12.23	107,134.80
Total Maximum Design Heat Input		312.06	2,733,645.60

1 - Denotes the heater is a process heater per 45 CSR §2-26.
2 - Denotes the heater is a process heater per 45 CSR §2-26 and 40 CFR §60.41c.
3 - Denotes the unit is a process heater per 45 CSR §2-26 and 40 CFR §60.41c and 40 CFR §60.41b.

6.1.2. The following heaters shall not exhibit visible emissions greater than 10 percent opacity on a six minute block average: H-742, H-771, H-2742, H-3742, H-4712, H-6712 and H-8712. **[45CSR§2-3.1.]**

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 51.5 tpy.

b. Emissions of CO shall not exceed 62.4 tpy.

c. Emissions of VOCs shall not exceed 23.3 tpy.

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

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 3.1.7. 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§10-3.1.e. **[45CSR§2A-3.1.a., 45CSR§10-10.3., and 45CSR§10A-3.1.b.]**

6.1.5. The permittee shall conduct tune-up of all of the heaters that are listed in Table 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 (you 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 NOx concentration specification of not to exceed 30 ppm, expect for Heaters H-6712 H-4712, H-8712, which is not 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.

6.1.6. The annual heat input of each heater listed in Table 6.1.1. shall not exceed the value as listed in the table for the corresponding heater. Compliance with this limit shall be conducted on 12 month rolling total.

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 Table 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 consume by the heaters and other emission units on a combined basis. For other emission units not listed but fuel usage include on the fuel meter, the permittee shall monitor the hour of operation of these sources to account for their fuel usage as well. Such records shall be maintained in accordance with Condition 3.4.1. of this permit.
[40 CFR §60.48c(g)(2) and 45CSR§2A-7.1.a.1.]

6.3. Testing Requirements

[Reserved]

6.4. Recordkeeping Requirements

6.4.1. The permittee shall keep the following records in accordance Condition 3.4.1.. 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.

6.5. Reporting Requirements

[Reserved]

7.0. Specific Requirements for the Storage Tanks

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 9.6 tpy. Compliance with this limit shall be satisfied by compliance with Condition 7.1.2.

7.1.2. The permittee shall install and operate prior to start-up of the 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. Such 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; 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)]

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 3.4.1.

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 compressor operated divided by the number of hours that any of the vessels was in service over a 12-month rolling period. Such records shall be maintained in accordance with Condition 3.4.1.

7.3. Testing Requirements

[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 3.4.1.

7.4.2. The vapor recovery system will comply with the recordkeeping requirements of §60.486 and §60.635(b). Such records shall be maintained in accordance with Condition 3.4.1.

7.5. Reporting Requirements

[Reserved]

8.0. Specific Requirements Gas Processing Units & LDAR Program

8.1. Limitations and Standards

8.1.1. All groups of equipment located within Sherwood I though IX Gas Processing Units, TEG Dehydration Unit, wet gas compressors, and any other unit(s) that is in VOC service (i.e. NGL) are subject to the following except for compressors and components only in residue gas service:

a. Each pneumatic controller at the facility must have a bleed rate of zero. Compliance with this requirement shall be satisfied by using only compressed air driven pneumatic controllers at the facility. Each pneumatic controller shall be tagged with the month and year of installation and identification information that allows traceability to the records for that pneumatic controller as required in Condition 8.4.4.
[40 CFR §60.5390(b)(1) & (b)(2)]

b. Each pressure relief device (PRD) in gas/vapor service shall be monitored quarterly and within 30 days after each pressure release to detect leaks by the methods specified in 40 CFR §60.485a(b) unless the PRD meets the criteria of sub item v. of this item.

i. If an instrument reading of 500 ppm or greater is measured, a leak is detected.

ii. 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 40 CFR §60.482-9a.

iii. A first attempt at repair must be made no later than 5 calendar days after each leak is detected.

iv. No pressure relief device shall not be operated for more than 30 days after a pressure release without being monitored for a leak.

v. Each pressure relief device in VOC gas/vapor service located at the facility that is piped into a closed vent system and routed to a control device in accordance with Condition 8.1.2. is exempt from the requirements of this item.
[40 CFR §§60.5401(b)(1) though (b)(4)]

c. All pumps in light liquid service, valves in gas/vapor or light liquid service, and connectors in gas/vapor or light liquid service shall not exhibit leaks as defined in the following.
[40 CFR §60.5400(a), §§60.482-2a, 7a, and 11a]

i. A leak for pumps in light liquid service is defined as a measured instrument reading of 2,000 ppm or greater using Method 21 or any visible emission that may otherwise be invisible to the naked eye using an optical gas imaging instrument (OGII).
[40 CFR §60.482-2a(b)(1) and §60.18(g)(3)]

ii. A leak for valves in gas/vapor or light liquid service is defined as a measured instrument reading of 500 ppm or greater using Method 21 or any visible emission that may otherwise be invisible to the naked eye using an OGII.
[40 CFR §60.482-7a(b) and §60.18(g)(3)]

iii. A leak for connector in gas/vapor or light liquid service is defined as a measured instrument reading of 500 ppm or greater using Method 21 or any visible emission that may otherwise be invisible to the naked eye using an OGII.
[40 CFR §60. 482-11a(b)(2) and §60.18(g)(3)]

d. Sampling connection systems are exempt from the requirements of §60.482-5a. **[40 CFR §60.5402(c)]**

e. Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve except as noted in Sub-items iii and iv of this item.

i. The cap, blind flange, plug, or second valve shall seal the open end at all times except during operation requiring process fluid flow through the open-ended valve or line.

ii. Each open-ended line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.

iii. When a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with item e of this condition at all other times.

iv. Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of the above sub-items of item e of this condition.
[40 CFR §60.5400(a), §§60.482-6a]

f. Any leaking component must be repaired as soon as practicable, but no later 15 calendar days after it is detected, except as provided in item h of this condition (40 CFR §60.482-9a).

i. A first attempt at repair must be made no later than 5 calendar days after each leak is detected.

g. Delay of repair (DOR) of equipment for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown. Monitoring to verify the repair must occur within 15 days after startup of the process unit.
[40 CFR §60.5400(a), §§60.482-9a(a)]

h. Delay of repair (DOR) of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service.
[40 CFR §60.5400(a), §§60.482-9a(b)]

i. Delay of repair for valves and connectors will be allowed if:

i. The permittee demonstrates that the emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from the delay of repair; and

ii. When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with the requirements of Condition 8.1.3. (40 CFR §60.482-10a).
[40 CFR §60.5400(a), §§60.482-9a(b)]

j. Delay of repair beyond a process unit shutdown is allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies have been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.

k. When delay of repair is allowed for a leaking pump, valve, or connector that remains in service, the pump, valve or connector may be considered to be repaired and no longer subject to delay of repair requirements if two consecutive monthly monitoring instrument readings are below the leak definition.

8.1.2. The close vent system to route that is used to route any pressure relief devices in VOC service at the facility routed to control device Flare FL-991 or back to a process shall be installed, maintained and operated in accordance with the following requirements:

a. The closed vent system shall be constructed of hard piping;
[40 CFR §60.5400(a), §60.482-11a(f)(1)]

b. The closed vent system shall be free of leaks. A leaking component is defined as a measured instrument reading greater than 500 ppm above background or by visual inspection.
[40 CFR §60.5400(a), §60.482-11a(g)]

c. Detected leaks shall be repaired as soon as practicable with the first attempt at repair shall be made within 5 calendar days after detecting the leak. Repair shall be completed no later than 15 calendar days after the leak is detected.
[40 CFR §60.5400(a), §§60.482-11a(g)(1) & (g)(2)]

d. Delay of repair (DOR) of the closed vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process shutdown or if the permittee determines that emissions resulting from the immediate repair would be greater than the fugitive emissions likely to result from the DOR. Repair of such equipment shall be complete by the end of the next process shutdown.
[40 CFR §60.5400(a), §60.482-11a(h)]

e. If the permittee determines any parts of the closed vent system as unsafe to monitor by exposing the monitoring personnel to an imminent or potential danger, the permittee shall develop and implement a plan that allows for the monitoring of such components during safe-to-inspect times.

f. Any parts of the closed vent system that are designated, as described in 40 CFR §60.482-10a(l)(2), as difficult to inspect are exempt from the inspection requirements of Condition 8.2.2. if the permittee complies with the requirements specified in the following:

i. The permittee determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface;

ii. The process unit within which the closed vent system is located becomes an affected facility through §§60.14 or 60.15, or the permittee designates less than 3.0 percent of the total number of closed vent system equipment as difficult to inspect; and

iii. The permittee shall develop a written plan that requires inspection of difficult to inspect equipment at least once every 5 years.

g. Closed vent systems and control devices used to comply with provisions of Subpart OOOO to Part 60 shall be operated at all times when emissions may be vented to them.
[40 CFR §60.482-10a & §60.54009a)]

8.1.3. Flare FL-991shall 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 50.82 MMscf per year.

h. The total emissions from the flare shall not exceed following limits:

i. Emissions of NOx shall not exceed 600.45 pounds per hour and 8.01 tpy.

ii. Emissions of CO shall not exceed 1,198.74 pounds per hour and 16.00 tpy.

iii. a. Emissions of VOC shall not exceed 4,000 pounds per hour and 48.00 tpy.

iv. Total HAPs shall not exceed 0.33 pounds per hour and 1.47 tpy.

8.1.4. **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§13-5.11.]

8.2. Monitoring Requirements

8.2.1. For the purpose of demonstrating continuous compliance with the emission requirements of Condition 8.1.1.e., the permittee shall conduct leak detection monitoring of all affected components at the facility in accordance with the following:

a. Each pump in light liquid service shall be checked by visual inspection each calendar week for indication of liquids dripping from the pump seal. Designate the visual indications of liquids dripping as a leak, and repair the leak using either the procedures in 40 CFR §60.482-2a(c) or by eliminating the visual indications of liquids dripping.
[40 CFR §60.482-2a(a)(2)]

b. Each pump and valve shall be monitored monthly to detect leaks by the methods specified in 40 CFR §60.485a(b).
[40 CFR §60.482-2a(a)(1) & §60.482-7a(a)(1)]

c. Each connector shall be monitored shall be monitored in accordance with the frequency prescribed in 40 CFR §60.482-11a(b)(3) to detect leaks by the methods specified in 40 CFR §60.485a(b). Connectors on new process units (i.e. Sherwood VII, VIII, & IX) shall be monitoring in accordance with the frequency stipulated in this item 12 months after startup of the affecting process unit.

d. Each connector of a new process unit (i.e. Sherwood VII, VIII, & IX) at the facility shall be monitored within the initial 12 months after start-up of the process unit to detect leaks by methods specified in 40 CFR §60.485a(b).

e. The permittee may use the Alternative Work Practice (AWP) for monitoring equipment for leaks in lieu of the methods specified in 40 CFR §60.485a(b) (Method 21) as outlined in 40 CFR §§60.18(g), (h), and (i) (OGII). If the permittee elects to use the AWP, then the following items are in effect:

i. The frequency of monitoring for all affected components shall be bi-monthly or one of the other monitoring frequencies listed in Table 1 to Subpart A of Part 60.

ii. The detection sensitivity level shall be 60 grams per hour or the corresponding selected monitoring frequency in Table 1 to Subpart A of Part 60.

iii. The selected OGII must provide the operator with an image of the potential leak points for each piece of equipment at both the detection sensitivity level and within the distance used in the daily instrument check described in 40 CFR §60.18(i)(2) of this section. The detection sensitivity level depends upon the frequency at which leak monitoring is to be performed. The OGII must provide a date and time stamp for video records of every monitoring event.

iv. If the AWP is used to identify leaks, re-screening after an attempted repair of leaking equipment must be conducted using either AWP or the 40 CFR part 60, appendix A-7, Method 21 monitor at the leak definition required in the applicable subpart to which the equipment is subject.

v. The AWP shall not be used for equipment being monitored:

1. Skip period leak detection and repair;

2. Quality improvement plans; or

3. Complying with standards for allowable percentage of valves and pumps to leak.

vi. All components shall be monitored annually using 40 CFR Part 60, appendix A-7, Method 21 monitor at the leak definition required in Condition 8.1.1.c. The permittee may choose the specific monitoring period (for example, first quarter) to conduct the annual monitoring. Subsequent monitoring must be conducted every 12 months from the initial period. The permittee must keep records of the annual Method 21 screening results, as specified in 40 CFR §60.18(i)(4)(vii).

f. Records of such monitoring shall be maintained in accordance with Section 8.4.and Condition 3.4.1.

[40 CFR §60.18(a)(2), §§60.18(g) though (i), §60.485a(b), §60.5410(f)]

8.2.2. For the purpose of demonstrating compliance with the requirements of the closed vent system in Conditions 5.1.1.d., 7.1.2.e. and 8.1.2., the permittee shall conduct the following:

a. Conduct an initial inspection according to the procedures in 40 CFR §60.485a(b) (Method 21).

b. Conduct annual visual inspections for visible, audible, or olfactory indicators of leaks. The permittee may use an OGII if the distance to targeted components is within the distance used in the daily instrument check described in 40 CFR §60.18(i)(2) to satisfy the annual visual inspection requirement.

c. Detected leaks shall be repaired in accordance with the timing stated in Condition 8.1.2.

d. Records of such inspections shall be maintained in accordance with Condition 8.4.6.
[40 CFR §60.482-10a(f)1) & §60.5400(a)]

8.2.3. The permittee shall monitor and recorded the volumetric amount of effluent, which includes the purge gas, routed to Flare FL-991. Such records shall be maintained in accordance with Condition 3.4.1.

8.2.4. In order to demonstrate compliance with the requirements of 8.1.4.c, the permittee shall monitor the presence or absence of a flare pilot flame using a thermocouple or any other equivalent device. **[40 CFR §60.18(f)(2)]**

8.2.5. For the purpose of demonstrating proper operation of the flare (FL-991), 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 emission 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 3.4.1.

8.3. Testing Requirements

8.3.1. In order to demonstrate compliance with the flare opacity requirements of 8.1.4.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.
[40 CFR §60.18(f)(1)]

8.4. Recordkeeping Requirements

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

a. The date, place as defined in this permit, and time of sampling or measurements;

b. The date(s) analyses were performed;

c. The company or entity that performed the analyses;

d. The analytical techniques or methods used;

e. The results of the analyses; and

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

8.4.2. **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.

8.4.3. **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.

8.4.4. The permittee shall record the information specified in the following for each monitoring event required in Conditions 8.2.1. and 8.2.2.

a. Monitoring instrument identification.

b. Operator identification.

c. Equipment identification.

d. Date of monitoring.

e. Instrument reading.
[40 CFR §60.486a(a)(3) & §60.5421]

8.4.5. The permittee shall record and maintain such records in accordance with Condition 3.4.1 for the following information as for the equipment of the closed vent system in Condition 8.1.2.

a. Identification of all parts of the closed vent system that are designated as unsafe to inspect, an explanation of why the equipment is unsafe to inspect, and the plan for inspecting the equipment.

b. Identification of all parts of the closed vent system that are designated as difficult to inspect, an explanation of why the equipment is difficult to inspect, and the plan for inspecting the equipment.

c. For each inspection during which a leak is detected, a record of the information specified in §60.486a(c).

d. For each inspection conducted in accordance with Condition 8.2.2. during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

e. For each visual inspection conducted as required in Condition 8.2.2. during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

f. The following information pertaining to the design requirements for closed vent systems and control devices described in Conditions 8.1.2. and 8.1.3. shall be recorded and kept in a readily accessible location:

i. Detailed schematics, design specifications, and piping and instrumentation diagrams.

ii. The dates and descriptions of any changes in the design specifications.

iii. Periods when the closed vent system and flare required in Conditions 8.1.2. and 8.1.3. are not operated as designed, including periods when a flare pilot light does not have a flame.

iv. Dates of startups and shutdowns of the closed vent systems and control devices.

[40 CFR §60.482-10a(l), §60.486a(d), §60.5400(a), & §60.5421(a)]

8.4.6. The permittee shall record the following for when each leak is detected as specified in Condition 8.1.1.c.

a. A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.

b. The identification on a valve may be removed after it has been monitored for 2 successive months as specified in 40 CFR §60.482-7a(c) and no leak has been detected during those 2 months.

c. The identification on equipment, except on a valve or connector, may be removed after it has been repaired.

[40 CFR §60.486a(b) & §60.5421]

8.4.7. The permittee shall record the following information for when each leak is detected as specified in Condition 8.1.1.c. in a log and shall be kept for 2 years in a readily accessible location:

a. The instrument and operator identification numbers and the equipment identification number, except when indications of liquids dripping from a pump are designated as a leak.

b. The date the leak was detected and the dates of each attempt to repair the leak.

c. Repair methods applied in each attempt to repair the leak.

d. Maximum instrument reading measured by Method 21 of appendix A-7 of this part at the time the leak is successfully repaired or determined to be non-repairable, except when a pump is repaired by eliminating indications of liquids dripping.

e. "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

f. The signature of the permittee (or designate) whose decision it was that repair could not be effected without a process shutdown.

g. The expected date of successful repair of the leak if a leak is not repaired within 15 days.

h. Dates of process unit shutdowns that occur while the equipment is unrepaired.

i. The date of successful repair of the leak.
[40 CFR §60.486a(c) & §60.5421(a)]

8.4.9. The following information pertaining to all equipment subject to the requirements in Conditions 8.1.1. and 8.1.2. shall be recorded in a log that is kept in a readily accessible location:

a. A list of identification numbers for equipment subject to the requirements of Conditions 8.1.1.c. and 8.1.2. (Subpart VVa Components).

b. A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of §§60.482-2a(e), 60.482-3a(i), and 60.482-7a(f).

c. The designation of equipment as subject to the requirements of §60.482-2a(e), §60.482-3a(i), or §60.482-7a(f) shall be signed by the owner or operator. Alternatively, the owner or operator may establish a mechanism with their permitting authority that satisfies this requirement.

d. The dates of each compliance test as required in §§60.482-2a(e), 60.482-3a(i), 60.482-4a, and 60.482-7a(f).

e. The background level measured during each compliance test.

f. The maximum instrument reading measured at the equipment during each compliance test.

g. A list of identification numbers for equipment in vacuum service.

h. The date and results of the weekly visual inspection for indications of liquids dripping from pumps in light liquid service.

i. Records of the information specified in paragraphs (e)(8)(i) through (vi) of this section for monitoring instrument calibrations conducted according to sections 8.1.2 and 10 of Method 21 of appendix A-7 of this part and §60.485a(b).

j. Date of calibration and initials of operator performing the calibration.

k. Calibration gas cylinder identification, certification date, and certified concentration.

l. Instrument scale(s) used.

m. A description of any corrective action taken if the meter readout could not be adjusted to correspond to the calibration gas value in accordance with section 10.1 of Method 21 of appendix A-7 of this part.

n. Results of each calibration drift assessment required by §60.485a(b)(2) (i.e., instrument reading for calibration at end of monitoring day and the calculated percent difference from the initial calibration value).

o. If the permittee makes their own calibration gas, a description of the procedure used.

p. The connector monitoring schedule for each process unit as specified in §60.482-11a(b)(3)(v).
[40 CFR §60.486a(e) & §60.5421(a)]

8.4.10. The permittee must keep the following records when using the AWP for monitoring equipment leaks in Condition 8.2.1.:

a. Identify equipment at the facility for which the permittee has chosen to use the AWP.

b. The detection sensitivity level selected from Table 1 to subpart A of this part for the optical gas imaging instrument.

c. The analysis to determine the piece of equipment in contact with the lowest mass fraction of chemicals that are detectable, as specified in 40 CFR §60.18(i)(2)(i)(A).

d. The technical basis for the mass fraction of detectable chemicals used in the equation in 40 CFR §60.18(i)(2)(i)(B).

e. The daily instrument check. Record the distance, per 40 CFR §60.18 (i)(2)(iv)(B), and the flow meter reading, per 40 CFR §60.18 (i)(2)(iv)(C), at which the leak was imaged. Keep a video record of the daily instrument check for each configuration of the optical gas imaging instrument used during the leak survey (for example, the daily instrument check must be conducted for each lens used). The video record must include a time and date stamp for each daily instrument check. The video record must be kept for 5 years.

f. A video record must be used to document the leak survey results. The video record must include a time and date stamp for each monitoring event. A video record can be used to meet the recordkeeping requirements of the applicable subparts if each piece of regulated equipment selected for this work practice can be identified in the video record. The video record must be kept for 5 years.

g. The results of the annual Method 21 screening required in Condition 8.1.1.e.vi. Records must be kept for all regulated equipment specified in item a of this condition. Records must identify the equipment screened, the screening value measured by Method 21, the time and date of the screening, and calibration information required in the 40 CFR §60.485a.
[40 CFR §60.18(i)(4)(i) though (i)(4)(vii) & §60.5421(a)]

8.5. Reporting Requirements

8.5.1. The permittee shall submit the initial semiannual report to the Director within 6 months after start-up for each new process unit (i.e. Sherwood VII, VIII, and IX) at the facility. Such report shall be in accordance with Condition 3.5.1.and included the following information:

a. Process unit identification.

b. Number of valves subject to the requirements of Condition 8.1.1.c.ii.

c. Number of pumps subject to the requirements of Condition 8.1.1.c.i.

d. Number of connectors subject to the requirements of Condition 8.1.1.c.iii.
[40 CFR §60.5422(a) and §§60.487a(a), (b)(1) though (b)(3) and (b)(5)]

8.5.2. The permittee shall submit semiannual reports 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 to the Director in satisfying the requirements of 40 CFR §60.5422 and §60.487a(c) for the equipment subject to Conditions 8.1.1c. Such report shall be in accordance with Condition 3.5.1.and included the following information summarized from the information required in Condition 8.4.9:

a. Process unit identification.

b. For each month during the reporting period,

i. Number of valves for which leaks were detected as in Condition 8.1.1.c.ii.

ii. Number of valves for which leaks were not repaired as required in Condition 8.1.1.f.

iii. Number of pumps for which leaks were detected as in Condition 8.1.1.c.i.

iv. Number of pumps for which leaks were not repaired as required in Condition 8.1.1.f.

v. Number of connectors for which leaks were detected as in Condition 8.1.1.c.iii.

vi. Number of connectors for which leaks were not repaired as required in Condition 8.1.1.f.

vii. The fact that explains each delay of repair (DOR) and, where appropriate, why a process unit shutdown was technically infeasible.

c. Dates of process unit shutdown which occurred during the reporting period.

d. Revisions to items reported to Condition 8.5.1. (Initial semiannual report) if changes have occurred since the initial report or subsequent revisions to the initial report.
[40 CFR §60.5420(b), §60.5422(a) and §60.487a(c)]

8.5.3. The permittee shall submit records of annual Method 21 screening as required in Condition 8.2.1.e.vi. to the Administrator via email CCC_AWP@EPA.GOV. The permittee shall maintain records of such submittal in accordance with Condition 3.4.1.
[40 CFR §60.18(i)(5)]

8.5.4. The permittee shall notify the Director when electing to change monitoring procedure or frequency of monitoring for affected equipment subject to the monitoring required in Condition 8.2.1. Such notification shall be submitted 60 days prior to implementing the change.

CERTIFICATION OF DATA ACCURACY

I, the undersigned, hereby certify that, based on information and belief formed after reasonable inquiry, all information contained in the attached _____, representing the period beginning _____ and ending _____, and any supporting documents appended hereto, is true, accurate, and complete.

Signature[1] (please use blue ink) _____ Responsible Official or Authorized Representative _____ Date

Name & Title (please print or type) _____ Name _____ Title

Telephone No. _____ Fax No. _____

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[1] This form shall be signed by a "Responsible Official." "Responsible Official" means one of the following:

a. For a corporation: The president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:

   (i) the facilities employ more than 250 persons or have a gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars), or

   (ii) the delegation of authority to such representative is approved in advance by the Director;

b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;

c. For a municipality, State, Federal, or other public entity: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of U.S. EPA); or

d. The designated representative delegated with such authority and approved in advance by the Director.