West Virginia Department of Environmental Protection
Division of Air Quality

Fact Sheet

For Final Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Number: **R30-01700034-2018**
Application Received: **October 30, 2017**
Plant Identification Number: **017-00034**
Permittee: **MarkWest Liberty Midstream & Resources, L.L.C.**
Facility Name: **Sherwood Gas Plant**
Mailing Address: **1515 Arapahoe Street, Tower 1, Suite 1600; Denver, CO 80202-2137**

Revised: N/A

Physical Location:	West Union, Doddridge County, West Virginia
UTM Coordinates:	526.921 km Easting • 4,346.885 km Northing • Zone 17
Directions:	From Smithburg take US-50 east and go 2.8 miles, turn right at Co. Route 50/35 and go 0.1 miles, take the first right onto Blacklick Rd/Co Route 15/Sherwood-Greenbriar Rd and continue 0.4 miles. The site will be 0.5 miles west of Co Route 15.

Facility Description

The Sherwood Gas Plant (SIC Code: 1311) is a processing plant and compressor station for gas wells throughout West Virginia. The natural gas inlet stream from surrounding area wells enters the facility through an inlet separator prior to passing through the tri-ethylene glycol (TEG) dehydration unit, which is designed to remove unwanted liquids from the gas stream. The rich TEG is routed to the reboiler where water and organic impurities are driven from the TEG as the reboiler is heated. After passing through the TEG dehydration unit, the dry natural gas is cooled through a cryogenic plant with mechanical refrigeration, which serves to remove propane and heavier hydrocarbons in the gas stream. At this point the gas is ready for compression and passes through one of the natural gas fired compressor engines prior to entering the downstream pipeline to a distribution or processing company. Liquids are transported via pipeline to another facility. Liquid storage tanks at the gas plant are pressurized with no emissions to the atmosphere under normal conditions. Storage tanks at the compressor station are atmospheric tanks with emissions controlled with a vapor recovery unit (VRU) rated at 98% recovery efficiency. Under normal operating conditions electric pumps are utilized to transfer the removed saltwater and hydrocarbons to

another site for further processing. In emergency conditions truck loading may occur; however, the loading is done in a closed loop system into pressurized vehicles so any emissions would be de minimis. An emergency flare burns vapors released from the reboiler, pressure relief valves in the demethanizer, and refrigeration plant in the event of an emergency.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]

Regulated Pollutants	Potential Emissions	2017 Actual Emissions
Carbon Monoxide (CO)	138.10	107.07
Nitrogen Oxides (NO_X)	133.89	96.44
Particulate Matter ($PM_{2.5}$)	17.85	12.89
Particulate Matter (PM_{10})	17.85	12.89
Total Particulate Matter (TSP)	17.85	12.89
Sulfur Dioxide (SO_2)	1.42	1.54[1]
Volatile Organic Compounds (VOC)	93.01	59.92

PM_{10} is a component of TSP.

Hazardous Air Pollutants	Potential Emissions	2017 Actual Emissions
Benzene	0.35	0.13
Ethylbenzene	0.02	0.01
Formaldehyde	4.44	0.64
n-Hexane	4.30	2.49
Toluene	0.68	0.27
Xylene	0.31	0.05
Other HAPs	8.96	-[2]
Total HAPs	19.06	3.59

Some of the above HAPs may be counted as PM or VOCs.

[1]During 2017 a generator was required more than anticipated causing the 2017 emissions to exceed the reported PTE value for SO_2. The generator has been removed and will no longer affect PTE values.

[2]Emissions not reported.

Title V Program Applicability Basis

This facility has the potential to emit 138.10 TPY of CO and 133.89 TPY of NO_X. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, MarkWest Liberty Midstream & Resources,

L.L.C. is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR2	Particulate air pollution.
	45CSR6	Open burning prohibited.
	45CSR10	Emissions of sulfur oxides.
	45CSR11	Standby plans for emergency episodes.
	45CSR13	NSR Permits.
	45CSR16	Standards of Performance for New Stationary Sources Pursuant to 40 CFR Part 60.
	WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.
	45CSR30	Operating permit requirement.
	45CSR34	Emission Standards for Hazardous Air Pollutants.
	40CFR60, Subpart A	General Provisions.
	40 C.F.R. Part 60, Subpart Dc	Small Steam Generating Units
	40 C.F.R. Part 60, Subpart IIII	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.
	40 C.F.R. Part 60, Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines.
	40 C.F.R. Part 60, Subpart OOOO	Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution (8/23/11 – 9/18/2015).
	40 C.F.R. Part 60, Subpart OOOOa	Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution (After 9/18/2015).
	40 C.F.R. Part 61	Asbestos inspection and removal.
	40 C.F.R. Part 63, Subpart ZZZZ	National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.
	40 C.F.R. Part 82, Subpart F	Ozone depleting substances
State Only:	45CSR4	No objectionable odors.

Each State and Federally-enforceable condition of the Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit *(if any)*
R13-2914G	March 16, 2018	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table," which may be downloaded from DAQ's website.

Determinations and Justifications

Section 3.0: Facility-Wide Requirements

Most of this section is boilerplate language common to all Title V permits. However, the following conditions are specific to this facility:

Condition Number	Summary of Condition	Regulatory Citation	R13-2914G Condition
3.1.9.	Operation and Maintenance of Air Pollution Control Equipment	45CSR§13-5.11	4.1.5., 5.1.4., and 8.1.4.
3.1.10.	VOC and sulfur content of fuel gas	N/A	3.1.7.
3.2.1.	Monthly fuel gas analysis	N/A	3.2.1.
3.2.2.	Gas sampling for hydrogen sulfide	45CSR§10-8.3.a	3.2.2.
3.4.1.	Records of monitoring information	45CSR§30-5.1.c.2.A.	4.4..1. and 8.4.1.
3.4.4.	Record of Maintenance of Air Pollution Control Equipment	N/A	4.4.2., 5.4.1., and 8.4.2.
3.4.5.	Record of Malfunctions of Air Pollution Control Equipment	N/A	4.4.3., 5.4.2., and 8.4.3.

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

The compressor engines in this section, are subject to 40CFR60, Subpart JJJJ (Standards of Performance for Stationary Spark Ignition Internal Combustion Engines); the applicable portions of this rule are included in this section. These engines are not certified and are subject to testing requirements. The compressor engines are also subject to 40CFR63, Subpart ZZZZ (National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). However, as specified in 40CFR§63.6590(c)(1) for a new stationary RICE located at an area source, compliance with 40CFR63, Subpart ZZZZ is achieved by complying with 40CFR60, Subpart JJJJ.

The compressors are also subject to 40CFR60, Subpart OOOO (Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution for which Construction, Modification or Reconstruction Commenced After August 23, 2011, and on or before September 18, 2015). This rule requires the facility to:

- Replace the reciprocating compressor rod packing at least every 26,000 hours of operation.
- Demonstrate initial compliance by continuously monitoring the number of hours of operation or track the number of months since the last rod packing replacement.
- Submit the appropriate start up notifications.
- Submit the initial annual report for the reciprocating compressors.
- Maintain records of hours of operation since last rod packing replacement, records of the date and time of each rod packing replacement, and records of deviations in cases where the reciprocating compressor was not operated in compliance.

The applicable requirements to the compressor engines are summarized below:

Condition Number	Summary of Condition	Regulatory Citation	R13-2914G Condition
4.1.1.	Specific requirements for CM-1001 and CM-1002	N/A	4.1.1.
4.1.1.a.	NO_X, CO, VOC, and formaldehyde limits	45CSR16; 40 CFR §60.4233(e) & Table 1 to Subpart JJJJ of Part 60[1]	
4.1.1.b.	Installation of oxidation catalyst	N/A	
4.1.1.c.	Air to fuel controller	45CSR16; 40 CFR §60.4243(g)	
4.1.1.d.	Non-resettable hour meter	N/A	
4.1.1.e.	NO_x, CO, and VOC concentrations	N/A	
4.1.1.f.	Replacement of rod packing	45CSR16; 40 CFR §60.5385(a)(1) and §60.5415(c)(3)	
4.1.2.	Specific requirements for CM-2001	N/A	4.1.2.
4.1.2.a.	NO_X, CO, VOC, and formaldehyde limits	45CSR16; 40 CFR §60.4233(e) & Table 1 to Subpart JJJJ of Part 60[1]	
4.1.2.b.	Installation of oxidation catalyst	N/A	
4.1.2.c.	Air to fuel controller	45CSR16; 40 CFR §60.4243(g)	
4.1.2.d.	Non-resettable hour meter	N/A	
4.1.2.e.	NOx, CO, and VOC concentrations	N/A	

Condition Number	Summary of Condition	Regulatory Citation	R13-2914G Condition
4.1.2.f.	Replacement of rod packing	45CSR16; 40CFR§60.5385(a)(1) and §60.5415(c)(3)	
4.1.3.	Use only fuel gas (or propane in emergencies)	45CSR16; 40CFR§60.4243(e)	4.1.3.
4.1.4.	Use of oxidation catalysts	N/A	4.1.4.
4.2.1.	Maintenance plan and engine maintenance	45CSR16; 40 CFR §60.4243(b)(2)(ii)	4.2.1.
4.2.2.	Monitor and record hours of operation from hour meter and propane use	N/A	4.2.2.
4.3.1.	Performance testing	45CSR16; 40CFR§60.4243(b)	4.3.1.
4.4.1.	Records of hours of operation and rod packing replacement	45CSR16; 40 CFR §60.5385(a)(1), §60.5410(c)(1), §§60.5415(c)(1) and (2), and §§60.5420(c)(3)(i) and (ii)	4.4.4.
4.4.2.	Records of monitoring	N/A	4.4.5.
4.4.3.	Records of notification, maintenance, and documentation that engine meets emission standards; initial notification; submission of performance tests	45CSR16; 40 CFR §§60.4245(a)(1), (2), and (4), 40 CFR §§60.4245(c) and (d)	N/A
4.4.4.	Records for when compressors were not operated in compliance with 40CFR§60.5385.	45CSR16; 40 CFR §60.5420(c)(3)(iii)	N/A
4.5.1.	Annual compliance report	45CSR16; 40 CFR §§60.5420(b)(1) and (b)(4)(i) and (ii), §60.5415(c)(2)	4.5.1.

[1]Citation does not apply for formaldehyde limits.

Section 5.0: Production Gas Dehydration Unit [emission unit/point ID(s): DH-001, RB-001]
In addition to requirements from R13-2914G, the Production Gas Dehydration unit is subject to:

- 45CSR2 (To Prevent and Control Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers): according to 45CSR§2-3.1, RB-001 is subject to a 10 percent opacity limit. Since RB-001 has a heat input of less than 10 MMBtu/hr, it is exempt from Sections 4, 5, 6, 8, and 9 of this rule, per 45CSR§2-11.1.
- 45CSR10 (To Prevent and Control Air Pollution from the Emissions of Sulfur Oxides): the dehydration unit flare is subject to the emission limit in 45CSR§10-5.1. The flare is not defined as a "fuel burning unit"; however, the reboiler satisfies this definition. Condition 3.2.2 is used to demonstrate compliance with 5.1.2.c and 5.1.3.f.4 for the dehydration unit and flare.
- 40CFR60, Subpart OOOO (Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution for which Construction, Modification or Reconstruction Commenced After August 23, 2011, and on or before September 18, 2015): vapors from the regenerator still vent are vented to a closed vent system which is routed to the Dehydration Unit Flare (FL-DH). This control vent system is required to comply with the leak requirements of 40 CFR §60.5400(a).
- 40CFR63, Subpart HH (National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities): since the dehydration unit emits less than 0.9 megagrams of benzene per year, it is exempt from the requirements of 40CFR§63.764(d), according to 40CFR§63.764(e). The facility must install a device to monitor the flowrate of natural gas to the dehydration unit, as specified in 40 CFR §63.772(b)(1)(i), and maintain records of natural gas throughput and benzene emissions, as specified in 40 CFR §§63.774(d)(1)(i) and (ii).

The applicable requirements for the production gas dehydration unit are summarized below:

Condition Number	Summary of Condition	Regulatory Citation	R13-2914G Condition
5.1.1.	Installation, operation, and maintenance of production gas dehydration unit	N/A	5.1.1.
5.1.1.a.	Benzene emissions requirements	45CSR34; 40CFR§63.764(e)(1)(ii)	
5.1.1.b.	Wet natural gas throughput limit	N/A	
5.1.1.c.	Routing of flash tank off gas	N/A	
5.1.1.d.	Vapors from regenerator still vent vented to Dehy Flare	45CSR16; 40 CFR §60.5400(a), 40 CFR §60.482-10a(g)	
5.1.2.	Operation and maintenance of reboiler	N/A	5.1.2.
5.1.2.a.	VOC Emissions	N/A	
5.1.2.b.	HAP Emissions	N/A	
5.1.2.c.	SO_2 Emissions	45 CSR §10-5.1.	
5.1.2.d.	Pilot light, visible emissions, and fuel requirements for reboiler	45 CSR §2-3.1.[1]	
5.1.3.	Design and operation of Dehy flare	N/A	5.1.3.
5.1.3.a.	Flare non-assisted	N/A	
5.1.3.b.	Visible emissions	45 CSR §6-4.3.	
5.1.3.c.	Flame present at all times	N/A	
5.1.3.d.	Net heating value of effluent	N/A	
5.1.3.e.	Flare tip exit velocity	N/A	
5.1.3.f.	HAP, NO_x, CO, VOC, SO_2, and H_2S emission limits.	45 CSR §10-5.1.[2]	

Condition Number	Summary of Condition	Regulatory Citation	R13-2914G Condition
5.2.1.	Monitoring and recording of parameters to comply with 5.1.1. and 5.1.3.	N/A	5.2.1.
5.2.1.a.	Throughput of wet natural gas	45CSR34; 40 CFR §63.774(d)(1)(i)	
5.2.1.b.	Annual average gas throughput	45CSR34; 40 CFR §63.772(b)(1)(i)	
5.2.1.c.	Periods of no pilot flame present	N/A	
5.2.1.d.	Actual average benzene emissions	45CSR34; 40 CFR §§63.772(b)(2)(i) & 63.774(d)(1)(ii)	
5.2.1.e.	Maintenance of records	N/A	
5.2.2.	Visible emissions observations	N/A	5.2.2.
5.3.1.	Opacity testing	N/A	5.3.1.
5.4.1.	Records of analysis to indicate compliance with 5.1.1.a and b.	45CSR34; 40 CFR §63.774(d)(1)(ii)	5.4.3.

[1]Only for visible emissions.
[2]Only for SO_2 and H_2S emissions.

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

In addition to requirements, from R13-2914G, the Process heaters are subject to:

- 45CSR2 (To Prevent and Control Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers): this rule applies to indirect heat exchangers, and process heaters are not indirect heat exchangers based on the definition in 45CSR§2-2.14. Therefore, this rule only applies to H-751, H-771, H-4712, H-6712, and H-8712. H-751, H-6712, H-4712, and H-8712 are only subject to the 10% opacity in 45CSR§2-3.1 because the heat input is below 10 MMBtu/hr per 45CSR§2-11.1. H-771 is subject to 45CSR§2-3.1 and 45CSR§2-4.1.b because it has a design heat input greater than 10MMBtu/hr. 45CSR§2-8.4.b exempts H-771 from 45CSR§§2-8.1.a and 8.2. Condition 6.1.4 specifies the use of residue gas which assures compliance with 45CSR§2-4.1.b.
- 45CSR10 (To Prevent and Control Air Pollution from the Emissions of Sulfur Oxides): H-711a, H-2711a, H-3711, H-4711, H-5711, H-6711, H-7711, H-8711, H-9711, H-10711, H-11711, D1-H-782, H-107868, D1-H-741, and H-10775 are subject to the sulfur dioxide concentration limit in 45CSR§10-4.1. Heaters H-751, H-4712, H-6712, and H-8712 having a design heat input under 10 MMBtu/hr are exempt from section 3 and sections 6 through 8, according to 45CSR§10-10.1. Heater H-771 with a heat input above 10 MMBtu/hr is exempt from section 8 according to 45CSR§10-10.3.
- 40CFR60, Subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units): since H-771 has a design heat input above 10 MMBtu/hr, but combusts only natural gas, it is only subject to recordkeeping requirements from this subpart.

The applicable requirements for the process heaters are summarized below:

Condition Number	Summary of Condition	Regulatory Citation	R13-2914G Condition
6.1.1.	Maximum design heat input	N/A	6.1.1.
6.1.2.	Visible emissions	45CSR§2-3.1	6.1.2.
6.1.3.	NO_x, CO, and VOC emission limits	N/A	6.1.3.
6.1.4.	Heater fuel requirements	45CSR§2-8.4.b.; 45CSR§2A-3.1.a., 45CSR§10-10.3., and 45CSR§10A-3.1.b.	6.1.4.
6.1.5.	Heater tune-up	N/A	6.1.5.
6.1.6.	Comply with annual heat input limit in 6.1.1. (12 month rolling total)	N/A	6.1.6.
6.1.7.	In-stack sulfur dioxide concentration	45CSR§10-4.1.	N/A
6.2.1.	Record hours of operation and calculate rolling heat input	45CSR16; 40 CFR §60.48c(g)(2), 45CSR§2A-7.1.a.1., 45CSR§2-8.3.c	6.2.1.
6.4.1.	Record CO and NO_x in effluent and any corrective actions during tune-up.	N/A	6.4.1.

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

In addition to requirements, from R13-2914G, the Storage Tanks are subject to 40CFR60, Subpart OOOO (Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution for which Construction, Modification or Reconstruction Commenced After August 23, 2011, and on or before September 18, 2015). TNK-001 is covered by 40CFR§60.5365(e)(3), which states the following:

> "For storage vessels not subject to a legally and practically enforceable limit in an operating permit or other requirement established under Federal, state, local or tribal authority, any vapor from the storage vessel that is recovered and routed to a process through a VRU designed and operated as specified in this section is not required to be included in the determination of VOC potential to emit for purposes of determining affected facility status, provided you comply with the requirements in paragraphs (e)(3)(i) through (iv) of this section."

This section includes the requirements specified by 40CFR§60.5365(e)(3), and the applicable requirements for the storage tanks are summarized below:

Condition Number	Summary of Condition	Regulatory Citation	R13-2914G Condition
7.1.1.	VOC emission limits	N/A	7.1.1.
7.1.2.	Vapor recovery unit	40 CFR §60.5365(e)(3)	7.1.2.
7.1.2.a.	Continuous impermeable barrier	40 CFR §60.5411(b)(1)	
7.1.2.b.	Each cover opening shall be secured in a closed, sealed position when not in use	40 CFR §60.5411(b)(2)	
7.1.2.c.	Weighted mechanism to close hatches	40 CFR §60.5411(b)(3)	
7.1.2.d.	Route gases, vapors, and fumes to a control device	40 CFR §60.5411(c)(1)	
7.1.2.e.	No detectable emissions	40 CFR §§60.5411(c) & (c)(2)	
7.1.2.f.	Bypass devices	40 CFR §60.5411(c)(3)	
7.1.2.f.i.	Flow indicator	40 CFR §60.5411(c)(3)(i)(A)	
7.1.2.f.ii.	Secure bypass device	40 CFR §60.5411(c)(3)(i)(B)	
7.1.2.g.	Low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and safety devices exempt	40 CFR §60.5411(c)(3)(ii)	
7.2.1.	Continuous monitoring of bypass device	N/A	7.2.1.
7.2.2.	Monitoring of liquid throughput during truck loading operations and the hours the compressor for the VRU system operated	N/A	7.2.2.
7.4.1.	Record of the amount of liquid unloaded from the vessels	N/A	7.4.1.
7.4.2.	Vapor recovery system recordkeeping	N/A	7.4.2.
7.4.3.	Records showing compliance with cover and closed vent requirements	45CSR16; 40 CFR §60.5365(e)(3)(iii)	N/A

Section 8.0: Gas Processing Units & LDAR Program

In addition to requirements, from R13-2914G, the Gas Processing Units and LDAR Program are subject to:

- 40CFR60, Subpart A (General Provisions): the flare must be designed and operated in accordance with 40CFR§60.18(c).
- 40CFR60, Subpart OOOO (Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution for which Construction, Modification or Reconstruction Commenced After August 23, 2011, and on or before September 18, 2015): plants I though VI and the compressors are covered by this subpart. This subpart addresses compressor operation, VOC emissions,and equipment leaks. Since the pneumatic controllers at this facility are air driven, they are not subject to this subpart.
- 40CFR60, Subpart OOOOa (Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution for which Construction, Modification or Reconstruction Commenced After September 18, 2015): plants VII through XI and DeEthanizer I and II are covered by this subpart. This subpart addresses VOC emissionsand equipment leaks. Since the pneumatic controllers at this facility are air driven, they are not subject to this subpart.

The applicable requirements for the gas processing units and LDAR program are as follows:

Condition Number	Summary of Condition	Regulatory Citation	R13-2914G Condition
8.1.1.	LDAR requirements: 40CFR60, Subparts OOOO and OOOOa, TCEQ document[1], and chronic leaker replacement	N/A	8.1.1.
8.1.2.	Closed vent system routing pressure relief devices to flare	N/A	8.1.2.
8.1.3.	Flare design and operation	N/A	8.1.3.
8.1.3.a.	Main flare air-assisted with piggy-back to a non-assisted flare	40 CFR §60.18(c)(6) & §60.482-10a(d)	
8.1.3.b.	No visible emissions	40 CFR §60.18(c)(1)	
8.1.3.c.	Operate with flame present	40 CFR §60.18(c)(2)	
8.1.3.d.	Net heating value of the effluent going to the flare	40 CFR §§60.18(c)(3)(ii) & (c)(4)(ii)	
8.1.3.e.	main flare tip exit velocity	40CFR §60.18(c)(5)	
8.1.3.f.	Piggy-back flare tip exit velocity	40 CFR §60.18(c)(4)(ii)	
8.1.3.g.	Maximum flow rate to the flare system	N/A	
8.1.3.h.	NO_x, CO, VOC, and HAP emissions	N/A	
8.1.4.	Equipment leak standards	45CSR16; 40CFR§60.5400; 40CFR§60.5400a	N/A
8.1.5.	Exceptions: equipment leak standards	45CSR16; 40CFR§60.5401; 40CFR§60.5401a	N/A
8.1.6.	Alternative emission limitations for equipment leaks	45CSR16; 40CFR§60.5402; 40CFR§60.5402a	N/A

Condition Number	Summary of Condition	Regulatory Citation	R13-2914G Condition
8.1.7.	Provisions for exemption during startup, shutdown and malfunctions in 40 C.F.R. 60.8(c) do not apply to 40 C.F.R. 60, Subparts OOOO and OOOOa	45CSR16; 40CFR§60.5370(b); 40CFR§60.5370a(b)	N/A
8.2.1.	Monitor and record the volumetric amount of effluent to flare	N/A	8.2.3.
8.2.2.	Monitor presence or absence of flare pilot flame	45CSR16; 40 CFR §60.18(f)(2)	8.2.4.
8.2.3.	Visible emissions of flare	N/A	8.2.5.
8.2.4.	Continuous compliance for VOCs	45CSR16; 40CFR§60.5415(f); 40CFR§60.5415a(f)	N/A
8.3.1.	Flare opacity testing	45CSR16; 40CFR§60.18(f)(1)	8.3.1.
8.4.1.	Chronic leaker records	N/A	8.4.4.
8.4.2.	VOC requirement recordkeeping	45CSR16; 40CFR§60.5421; 40CFR§60.5421a	N/A
8.5.1.	Reporting requirements (Plants I though VI and Compressors)	45CSR16; 40CFR§60.5420(b)(1)	N/A
8.5.2.	Reporting requirements (Plants VII through XI and DeEthanizer I and II)	45CSR16; 40CFR§§60.5420a(b)(1) and (b)(11)	N/A
8.5.3.	Reporting for VOC requirements	45CSR16; 40CFR§60.5422; 40CFR§60.5422a	N/A
8.5.4.	Submission of Method 21 screening records	45CSR16; 40 CFR §60.18(i)(5)	8.5.1.

[1]Included in Appendix A.

Section 9.0: Emergency Generators [emission point ID(s): G-1, G-2]

The emergency engines in this section, are subject to 40CFR60, Subpart IIII (Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. The compressor engines are also subject to 40CFR63, Subpart ZZZZ (National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). However, as specified in 40CFR§63.6590(c)(1) for a new stationary RICE located at an area source, compliance with 40CFR63, Subpart ZZZZ is achieved by complying with 40CFR60, Subpart IIII.

The applicable requirements for the emergency generators are as follows:

Condition Number	Summary of Condition	Regulatory Citation	R13-2914G Condition
9.1.1.	Emission limits for G-1	N/A	9.1.1.
9.1.2.	Emission limits for G-2	N/A	9.1.2.
9.1.3.	Maximum yearly operation limitation	N/A	9.1.3.
9.1.4.	Comply with 40 C.F.R. 60, Subpart IIII	N/A	9.1.4.
9.1.5.	Emission limits for certified engines	45CSR16; 40CFR§60.4202(a)(2) and 40CFR§60.4205(b)	N/A
9.1.6.	Fuel requirements	45CSR16; 40CFR§60.4207(b)	N/A
9.1.7.	Emission standards apply for life of engine	45CSR16; 40CFR§60.4206	N/A
9.1.8.	Operation and maintenance requirements	45CSR16; 40CFR§60.4211(a)	N/A
9.1.9.	Purchase certified engine	45CSR16; 40CFR§60.4211(c)	N/A
9.1.10.	Emergency engine requirements	45CSR16; 40CFR§60.4211(f)	N/A
9.1.11.	Compliance demonstration when not following manufacturer's emission-related written instructions	45CSR16; 40CFR§60.4211(g)(2)	N/A
9.1.12.	General provisions of 40CFR60	45CSR16; 40CFR§60.4218; Table 8 of 40CFR60, Subpart IIII	N/A
9.2.1.	Hour meter and backpressure monitor	45CSR16; 40CFR§60.4209	N/A
9.3.1.	Performance testing	45CSR16; 40CFR§60.4212	N/A
9.4.1.	Records of hours of operation	N/A	9.2.1.
9.4.2.	Records of emergency engine operation	45CSR16; 40CFR§60.4214(b)	N/A
9.4.3.	Records of corrective action for backpressure monitor	45CSR16; 40CFR§60.4214(c)	N/A
9.5.1.	Annual reporting	45CSR16; 40CFR§60.4214(d)	N/A

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

a. 40 C.F.R. 60 Subpart Dc - The Mole Sieve Regeneration Heaters (H-711a, H-2711a, H-3711, H-4711, H-5711, H-6711, H-7711, H-8711, H-9711, H-10711, and H-11711) meet the definition of process heaters under 40 C.F.R. 60 subpart Dc. Thus, they are excluded as affected units (per definition of steam generating unit) under this regulation.

Request for Variances or Alternatives

None.

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date: Tuesday, May 29, 2018
Ending Date: Thursday, June 28, 2018

Point of Contact

All written comments should be addressed to the following individual and office:

Rex Compston, P.E.
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone: 304/926-0499 ext. 1209 • Fax: 304/926-0478
Rex.E.Compston@wv.gov

Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Response to Comments (Statement of Basis)

Not applicable.