

# Fact Sheet



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

This Fact Sheet serves to address the changes specific to this Minor Modification, and shall be considered a supplement to the Fact Sheet corresponding with the Title V operating permit issued on October 25, 2016.

Permit Number: **R30-10300042-2016**  
Application Received: **March 7, 2017**  
Plant Identification Number: **03-54-103-00042**  
Permittee: **MarkWest Liberty Midstream & Resources LLC**  
Facility Name: **Mobley Gas Plant**  
Mailing Address: **1515 Arapahoe Street, Tower 1, Suite 1600**  
**Denver, CO 80202-2137**

Permit Action Number: *MM01*    Revised: *October 27, 2017*

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Physical Location: Smithfield, Wetzel County, West Virginia  
UTM Coordinates: 538.099 km Easting • 4,378.315 km Northing • Zone 17  
Directions: From Smithfield, head southwest on County Road 2/1/Mannington Road toward WV 20S. Turn right at WV 20N and go 1.1 miles. Take the first right onto County Road 7/8/Fallen Timber Run Road and go 2.8 miles. Continue onto County Road 80/Fallen Timber Road/Shuman Hill for 0.8 miles. Turn right at County Road 80/Shuman Hill and go 1.5 miles. Turn right at County Road 15/North Fork Road and go 2.8 miles. The site will be on the left.

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### Facility Description

The Mobley Gas Plant is a gas processing plant and compressor station to process field gas from nearby wells. Natural gas from the surrounding wells enter the facility and undergoes separation, filtration, and dehydration. Separation serves to remove any free liquids entrained in the gas. Filtration serves to remove any impurities. Dehydration removes any additional moisture remaining in the gas prior to processing. The gas is subsequently sent through a cryogenic process which serves to remove any natural gas liquids

(propane and heavier components) from the gas stream. At this point the gas is saleable, and is compressed prior to leaving the facility via pipeline. The natural gas liquids are transported offsite via pipeline.

This modification is to correct a heater size, correct naming, add generators, correct fugitive component counts, add rod packing and crankcase emissions, update emissions to the flare, and remove one (1) engine.

**Emissions Summary**

According to the Engineering Evaluation for R13-2878E, this modification resulted in the following changes to the facility wide emissions (PTE).

<b>Pollutant</b>	<b>Max Pre-Modification Emissions (tons/year)</b>	<b>Max Post-Modification Emissions (tons/year)</b>	<b>Net Emissions Changes (tons/year)</b>
Nitrogen Oxides	108.60	118.53	9.93
Carbon Monoxide	73.98	96.12	22.14
Volatile Organic Compounds	46.14	73.65	27.51
Particulate Matter-10/2.5	14.65	14.57	-0.08
Sulfur Dioxide	0.75	0.83	0.08
Total HAPs	15.01	14.66	-0.35

**Title V Program Applicability Basis**

With the proposed changes associated with this modification, this facility maintains the potential to emit 118.53 tons per year of NO<sub>x</sub>. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, MarkWest Liberty Midstream & Resources LLC 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.

The modification to this facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR2	Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers.
	45CSR10	To Prevent and Control Air Pollution from the Emissions of Sulfur Oxides.
	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
	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.
40 C.F.R. Part 63, Subpart ZZZZ	National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

State Only: None.

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 ( <i>if any</i> )
R13-2878E	July 31, 2017	

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**

This Minor Modification incorporated the changes made in R13-2878E into the Title V permit. The following changes were made:

Section 1.0 Emission Units

- Removed Emission Unit CM-1002 Waukesha P9390 GSI Compressor Engine.
- Removed Serial Numbers (SN) from the following emission unit descriptions: CM-1001, CM-1003, CM-1004, CM-1005, CM-1006, C-102, and C-103.
- Added generators to the emission units table: G-1, G-2, G-3, and G-4.
- Removed the Mobley I, II, III, IV, and V section headings from the emission units table.
- The Emission Unit ID's for several emission units changed as shown in the following table.

R13-2878D Emission Unit ID	R13-2878E Emission Unit ID
H-1741	H-741
H-1781	H-781
H-2741	H-1741

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R13-2878D Emission Unit ID	R13-2878E Emission Unit ID
H-2781	H-1781
H-4781	H-3781

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- The descriptions of the following emission units were changed to maintain consistency with R13-2878E: H-741, H-781, H-1741, H-1781, H-3741, H-4741, H-3781, H-5741, H-5781, and FL-991.
- Changed the design capacity of Emission Unit H-5781 from 22.93 to 50.78 MMBtu/hr.
- Changed the control device of Emission Unit H-5 from LoNO<sub>x</sub> Burner to none.
- Added the following Methanol Tanks and Closed Drain Tanks: TK-087, TK-2609, TK-3410, TK-3829, TK-4220, TK-4410, TK-1824, and TK-4824.
- Updated the Control Devices section of the Emission Units Table to remove CM-1002 and to correct the control device of the Waukesha P9390 Engines from Oxidation Catalyst to NSCR.

### Section 3.0 Facility-Wide Requirements

- In condition 3.2.2 the reference to condition 5.1.4 was removed.
- Updated boiler plate language in the following conditions: 3.5.3, 3.5.5, and 3.5.6.

### Section 4.0 Source Specific Requirements Compressor Engines

- Removed CM-1002 from the section title and following conditions: 4.1.1, 4.3.1, and 4.4.3.
- Updated 4.1.4.a and 4.1.4.b to reflect changes in the language used in R13-2878E.
- Removed Condition 4.2.2 since it was removed in R13-2878E.

### Section 5.0 Source Specific Requirements Process Heaters

- The Emission Unit ID changes in the Emission Units Table were made throughout this section and affected the following conditions: 5.1.1., 5.1.2, 5.1.3, and 5.1.5.
- In condition 5.1.1 there was also an increase to the MDHI (22.93 to 50.78 MMBTU/hr) and Annual Heat Input (200,866.80 to 444,832.80 MMBtu/hr) of Emission Unit H-5781. This resulted in a change to the Total Maximum Design Heat Input.

\*Note: In R13-2878E condition 5.1.1, not all of the design capacities and Emission Unit IDs correctly match up with what is in the emission units table of R13-2878E. I have corrected this in the Title V version of condition 5.1.1.

- Updated the emission limits in condition 5.1.4.

### Section 6.0 Source Specific Requirements Gas Process Units & LDAR Program

- Updated condition 6.1.3 to reflect changes made in R13-2878E relating to FL-991.
- Updated conditions 6.2.1, 6.2.2, 6.4.7, and 6.5.1 to reflect changes made in R13-2878E.

### Section 7.0 Source-Specific Requirements (Emergency Generators (G-1, G-3, G-4))

- Section 7.0 was added to incorporate the applicable requirements of R13-2878E and 40 C.F.R. 60 Subpart IIII for the emergency generators G-1, G-3, and G-4.

- As new emergency CI engines less than 100HP, G-1, G-3, and G-4 are required to meet the applicable requirements of 40 C.F.R. 60, Subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. These include Emission Standards (conditions 7.1.1, 7.1.2, 7.1.6, and 7.1.8), Fuel Requirements (condition 7.1.3), installing a non-resettable hour meter (condition 7.1.5), Engine Operations and Maintenance (conditions 7.1.7 and 7.1.9), Performance Testing (conditions 7.1.10 and 7.3.4), and Recordkeeping Requirements (conditions 7.1.10, 7.4.2 and 7.4.3),
- Conditions 7.1.11 and 7.1.12 contain the Emission Limits for the emergency generators G-1, G-3, and G-4
- The Emergency Generators G-1, G-3, and G-4 demonstrate compliance with 40 C.F.R. 63 Subpart ZZZZ by complying with the requirements of 40 C.F.R 60 Subpart IIII.

#### Section 8.0 Source-Specific Requirements (Emergency Generator, G-2)

- Section 8.0 was added to incorporate the applicable requirements of R13-2878E and 40 C.F.R. 60 Subpart JJJJ for the emergency generator G-2.
- As an emergency SI engine, less than 100HP, Emission Unit G-2 is subject to the applicable requirements of 40 C.F.R. 60, Subpart JJJJ—Standards of Performance for Stationary Spark Ignition Internal Combustion Engines. These include the Emission Standards in Section 8.2, the Compliance requirements in Section 8.3, the Testing Requirements in Section 8.4, and the Notification, Reports and Records requirements in Section 8.5.
- The Emergency Generator G-2 demonstrates compliance with 40 C.F.R. 63 Subpart ZZZZ by complying with the requirements of 40 C.F.R 60 Subpart JJJJ.

#### Section 9.0 Source-Specific Requirements (Blowdown Operations)

- Section 9.0 was added to incorporate the applicable requirements of R13-2878E for Blowdown Operations

### **Non-Applicability Determinations**

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

#### **40CFR60 Subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units)**

40CFR60 Subpart Dc applies to steam generating units. The rule further defines a steam generating unit as a device that combusts any fuel and produces steam or heats water or any other heat transfer medium. However, this term does not include process heaters as defined in this subpart. Process heater is defined as a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst. The process heaters at the Mobley facility are dedicated to the removal and separation of NGLs from the gas stream. They do not serve any other purpose such as providing steam for the heating of buildings or for co-generation of electric power. Therefore, this rule does not apply to the process heaters.

#### **40CFR60 Subpart KKK (Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants)**

40CFR60 Subpart KKK applies to onshore natural gas processing plants that commenced construction after January 20, 1984, and on or before August 23, 2011. The Mobley Gas Plant

was constructed after August 23, 2011 therefore, MarkWest would not be subject to this rule. MarkWest is subject to the requirements of 40CFR60 Subpart OOOO.

**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: Not Applicable for minor modifications.  
Ending Date: N/A

**Point of Contact**

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

Robert Mullins  
West Virginia Department of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304  
Phone: 304/926-0499 ext. 1243 • Fax: 304/926-0478  
Robert.A.Mullins@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.