

# Fact Sheet



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

Permit Number: **R30-03900048-2017**  
Application Received: **April 28, 2017**  
Plant Identification Number: **039-00048**  
Permittee: **Columbia Gas Transmission, LLC**  
Facility Name: **Clendenin Compressor Station**  
Mailing Address: **5151 San Felipe St., Suite 2400, Houston, TX, 77056**

*Revised: N/A*

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Physical Location: Clendenin, Kanawha County, West Virginia  
UTM Coordinates: 472.793 km Easting • 4260.836 km Northing • Zone 17  
Directions: Traveling north on US Route 119 from Clendenin, go approximately 0.8 mile and turn right onto Thorofare Road (WV secondary Route 59). Proceed approximately 2.5 miles and turn right onto Route 59-2 and travel approximately 1.2 miles to the station.

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### Facility Description

The Clendenin compressor station compresses natural gas for pipeline transmission. The facility operates under SIC code 4922. This facility uses one (1) heating system boiler, one (1) indirect-fired heater, one (1) reciprocating engine/compressor, one (1) turbine engine/centrifugal compressor, and one (1) reciprocating engine/generator.



	45CSR6	Open burning prohibited.
	45CSR11	Standby plans for emergency episodes.
	45CSR13	NSR permits.
	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	Hazardous air pollutants.
	45CSR40	Ozone season NO <sub>x</sub> emissions.
	40 C.F.R. Part 61	Asbestos inspection and removal
	40 C.F.R. Part 63, Subpart ZZZZ	RICE MACT
	40 C.F.R. Part 63, Subpart DDDDD	Boiler MACT
	40 C.F.R. Part 82, Subpart F	Ozone depleting substances
State Only:	45CSR4	No objectionable odors.
	45CSR17	Fugitive Particulate emissions

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>
R13-2247B	11/25/2014	
CO-R40-C-2017-1	10/13/2017	

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**

**Stack Testing for Cooper-Bessemer Engine/Compressor (Emission Point: E05)**

The Cooper-Bessemer LSV-16 is a 4-cycle, lean burn reciprocating engine/integral compressor installed in 1969. This facility's major HAP source status is based on the facility's maximum potential formaldehyde emissions claimed from this engine. The permittee has provided stack testing data to support their claim, however it is neither site nor fuel specific. Ordinarily, definitive proof that this engine emits pollutants at the claimed levels would be verified via site specific stack testing. However, this engine is currently in standby mode and is intended to only operate if another unit at the facility is unavailable due to breakdown or maintenance. Condition 3.3.2 was added to this permit renewal requiring site specific stack testing of

the engine for VOCs and formaldehyde if the engine exceeds 1,000 hours of operation in a calendar year. This will allow verification of the permittee's claimed emissions levels if the engine is to be used extensively in the future.

#### **NO<sub>x</sub> Compliance Plan (CO-R40-C-2017-7)**

Through a Compliance Order (CO-R40-C-2017-7), the Director has approved a NO<sub>x</sub> Compliance Plan submitted to the Division of Air Quality by the permittee. The NO<sub>x</sub> Compliance Plan, in conjunction with the provisions of this Order, provide certain methodologies by which the Company will achieve and demonstrate required reductions of nitrogen oxides (NO<sub>x</sub>) emissions each ozone season. Section 3.9 of this permit specifies the requirements of the compliance plan pertinent to this facility.

#### **New Permit Format**

The previous permit renewal was written in a general permit-style format. This renewal was reformatted into the standard Title V permit format. The permit sections and the source-specific permit conditions will be summarized below.

#### **Equipment Changes**

Since the previous permitting action, one engine (emission point ID: E07) was removed. It has been replaced with an electric motor. There were also several minor corrections to the emission unit descriptions and installation dates in the Emission Units Table, but these did not affect applicable requirements. Catalytic Heaters (SH1, SH2, and SH3) were not included because they have no applicable requirements.

#### **Section 4.0: Miscellaneous Indirect Natural Gas Heaters and Boilers less than 10 MMBtu/hr [emission point ID(s): H1 and H2]**

The following requirements apply to H1 and H2:

<b>Condition Number</b>	<b>Summary of Condition</b>	<b>Regulatory Citation</b>	<b>R13-2247B Condition</b>
4.1.1.	10% opacity limit	45CSR§2-3.1	7.1.1.
4.1.2.	Determine visible emissions with Method 9 readings or COMS	45CSR§2-3.2	7.1.2.
4.2.1.	Observe visible emissions with Method 22	N/A	7.2.1.

**Section 5.0: 40 C.F.R. 63, Subpart ZZZZ MACT Requirements for Emergency Reciprocating Internal Combustion Engine(s) RICE at a Major HAP Source [emission point ID(s): G2]**

The following requirements apply to G2:

Condition Number	Summary of Condition	Regulatory Citation
5.1.1.	Engine maintenance requirements	45CSR34; 40 C.F.R. § 63.6602 and Table 2c of 40CFR63, Subpart ZZZZ, Item 6
5.1.2.	General requirements	45CSR34; 40 C.F.R. § 63.6605
5.1.3.	Continuous compliance	45CSR34; 40 C.F.R. §§ 63.6640(a), (b), and (e)
5.1.4.	Emergency engine requirements	45CSR34; 40 C.F.R. § 63.6640(f)
5.1.5.	Applicable general provisions	45CSR34; 40 C.F.R. § 63.6665
5.2.1.a.	Operate engine according to manufacturer's instructions	45CSR34; 40 C.F.R. §63.6625(e)(2)
5.2.1.b.	Non-resettable hour meter	45CSR34; 40 C.F.R. §63.6625(f)
5.2.1.c.	Minimize idle time	45CSR34; 40 C.F.R. §63.6625(h)
5.2.1.d.	Oil analysis program option	45CSR34; 40 C.F.R. §63.6625(j)
5.4.1.	Records of notifications, reports, malfunctions, tests, evaluations, maintenance, and corrective actions.	45CSR34; 40 CFR §63.6655(a)
5.4.2.	Records showing continuous compliance	45CSR34; 40 CFR §63.6655(d)
5.4.3.	Maintenance records	45CSR34; 40 CFR §63.6655(e)(2)
5.4.4.	Hours of operation records	45CSR34; 40 CFR §63.6655(f)(1)
5.5.1.	Emergency RICE reporting	45CSR34; 40 CFR §63.6650(h)

Per 40 C.F.R. §63.6590(b)(3)(ii) and 40 C.F.R. §63.6600(c), the Cooper-Bessemer LSV-16, 4-cycle, lean burn engine (emission point ID: E05) does not have any requirements under 40 CFR 63, Subpart ZZZZ because it was constructed prior to December 19, 2002, has a site rating of more than 500 brake hp, and is located at a major source of HAPs.

**Section 6.0: 40 C.F.R. 63, Subpart DDDDD MACT Requirements for Boiler(s) and Process Heater(s)  
 [emission point ID(s): H1 and H2]**

The following requirements apply to H1 and H2:

<b>Condition Number</b>	<b>Summary of Condition</b>	<b>Regulatory Citation</b>	<b>R13-2247B Condition</b>
6.1.1.	Work practice standards	45CSR34; 40 CFR§§63.7500(a)(1) and (3); Table 3, Items 1 and 3 of 40CFR63, Subpart DDDDD	N/A
6.1.2.	Boiler tune-up	45CSR34; 40 CFR§63.7500(e)	7.1.3.
6.1.3.	Initial tune-up	45CSR34; 40 CFR§63.7510(e)	N/A
6.1.4.	Initial compliance and first 5-year tune-up date	45CSR34; 40 CFR§63.7510(g)	N/A
6.1.5.	5-year performance tune-up and schedule	45CSR34; 40 CFR§63.7515(d)	N/A
6.1.6.	Tune-up requirements	45CSR34; 40 CFR§63.7540(a)(10)	7.1.3.
6.1.7.	Tune-up schedule for process heaters less than or equal to 5 mmBtu/hr	45CSR34; 40 CFR§63.7540(a)(12)	7.1.3.
6.1.8.	Schedule when unit not operating on required tune-up date	45CSR34; 40 CFR§63.7540(a)(13)	7.1.3.
6.4.1.	Records of notification and reports	45CSR34; 40 CFR§63.7555(a)(1)	7.4.1.
6.4.2.	Retention and availability of records	45CSR34; 40 CFR§63.7560	7.4.2.
6.5.1.	Signed certification of energy assessment	45CSR34; 40 CFR§§63.7530(e) and (f)	N/A
6.5.2.	Submission of notifications	45CSR34; 40 CFR§§63.7545 (a) and (c)	7.5.1.
6.5.3.	Notification of compliance status	45CSR34; 40 CFR§§63.7545(e)(1) & (8)	N/A
6.5.4.	Report submission schedules	45CSR34; 40 CFR§63.7550(b)	7.5.2.
6.5.5.	Compliance report contents	45CSR34; 40 CFR§§63.7550(c)(1) and (5)(i) through (iii), (xiv), and (xvii)	7.5.3.
6.5.6.	Submission of reports required by Table 9 of 40 C.F.R. 63, Subpart DDDDD	45CSR34; 40 CFR§63.7550(h)(3)	7.5.4.

**Section 7.0: 45CSR13 Permit Conditions from R13-2247 [emission point ID(s): G2 and E06]**

The following requirements from R13-2247B apply to G2 and E06:

Condition Number	Summary of Condition	R13-2247B Condition
7.1.1.	Natural gas usage limit for G2	5.1.1.
7.1.2.	Emission limits for G2	5.1.2.
7.1.3.	Natural gas usage limit for E06	6.1.1.
7.1.4.	NO <sub>x</sub> limit during ozone season for E06	6.1.2.
7.2.1.	Parametric monitoring program to quantify NO <sub>x</sub> reduction	6.2.1.
7.4.1.	Records of natural gas consumed by G2	5.2.1.
7.4.2.	Records of the hours of operation, the BHP-hrs of Solar Centaur T-4500, ozone season NO <sub>x</sub> emission reduction, and the quantity of fuel combusted by E06.	6.4.1.
7.5.1.	Reporting of total ozone season NO <sub>x</sub> emissions reduction	6.5.1.
7.5.2.	Notification for any required performance test	6.5.2.
7.5.3.	Submission of performance test results	6.5.3.

**Non-Applicability Determinations**

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

<b>45CSR4</b>	<i>To Prevent and Control the Discharge of Air Pollutants into the Open Air Which Cause or Contributes to an Objectionable Odor or Odors:</i> This State Rule shall not apply to the following source of objectionable odor until such time as feasible control methods are developed: Internal combustion engines.
<b>45CSR10</b>	<i>To Prevent and Control Air Pollution from the Emission of Sulfur Dioxide - Emissions from Indirect Heat Exchangers.</i> WVDAQ has determined that 45CSR10 does not apply to natural gas fired engines. Also, the requirements for fuel burning units does not apply to HTR1 and HTR2 because they have design heat inputs less than 10 mmBTU/hr and are exempt in accordance with 45CSR§10-10.1.
<b>45CSR21</b>	<i>To Prevent and Control Air Pollution from the Emission of Volatile Organic Compounds:</i> All storage tanks at the station, which are listed as insignificant sources, are below 40,000 gallons in capacity which exempts the facility from 45CSR§21-28. The compressor station is not engaged in the extraction or fractionation of natural gas which exempts the facility from 45CSR§21-29.
<b>45CSR27</b>	<i>To Prevent and Control the Emissions of Toxic Air Pollutants:</i> Natural gas is included as a petroleum product and contains less than 5% benzene by weight. 45CSR§27-2.4 exempts equipment “used in the production and distribution of petroleum products providing that such equipment does not produce or contact materials containing more than 5% benzene by weight.”
<b>40 C.F.R. Part 60 Subpart Dc</b>	<i>Standards of Performance for Steam Generating Units:</i> The fuel gas heaters have a maximum design heat input capacity of less than 10 MMBtu/hr, which is below the applicability threshold defined within 40CFR§60.40c(a).
<b>40 C.F.R. Part 60 Subpart K and Ka</b>	<i>Standards of Performance for Storage Vessels for Petroleum Liquids:</i> All tanks at the facility are below 40,000 gallons in capacity as specified in 40CFR§§60.110(a) and 60.110a(a).
<b>40 C.F.R. Part 60 Subpart Kb</b>	<i>Standards of Performance for Volatile Organic Liquid Storage Vessels:</i> All tanks at the facility are below 75m <sup>3</sup> (19,813 gallons) in capacity as specified in 40CFR§60.110b(a).

<b>40 C.F.R. Part 60 Subpart KKK</b>	<i>Standards of Performance for Equipment Leaks of VOC From Onshore Natural Gas Processing Plant(s).</i> The station is not engaged in the extraction or fractionation of natural gas liquids from field gas, the fractionation of mixed natural gas liquids to natural gas products, or both. As a result, the station has no affected sources operating within this source category.
<b>40 C.F.R. Part 60 Subpart IIII</b>	<i>Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.</i> The compressor station does not have any compression ignition internal combustion engines.
<b>40 C.F.R. Part 60 Subpart JJJJ</b>	<i>Standards of Performance for Stationary Spark Ignition (SI) Internal Combustion Engines.</i> All engines at the facility were constructed, reconstructed, or modified prior to the June 12, 2006 applicability date listed in 40CFR§60.4230(a)(4).
<b>40 C.F.R. Part 60 Subpart OOOO</b>	<i>Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution.</i> The storage vessel requirements defined for transmission sources is not applicable to this site because all vessels were constructed, modified, or commenced reconstruction, prior to August 23, 2011 as stated in 40CFR§60.5365(e). No other affected sources were identified at this site.
<b>40 C.F.R. Part 60 Subpart OOOOa</b>	<i>Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification, or Reconstruction Commenced after September 18, 2015.</i> The requirements defined by this NSPS are not applicable to this site because all affected sources commenced construction prior to September 18, 2015 in accordance with the applicability criteria defined within 40CFR§60.5365a.
<b>40 C.F.R. Part 60 Subpart GG</b>	<i>Standards of Performance for Stationary Gas Turbines.</i> The provisions of this subpart are not applicable to this facility because the turbine was installed in 1970, which is prior to the October 3, 1977 NSPS applicability date for these sources defined within §60.330(b). Additionally, no modifications have occurred since the original installation.
<b>40 C.F.R. Part 60 Subpart KKKK</b>	<i>Standards of Performance for Stationary Combustion Turbines.</i> The provisions of this subpart are not applicable to this facility's turbine because it predates the NSPS applicability date of February 18, 2005 defined by §60.4305(a).
<b>40 C.F.R. Part 63 Subpart HHH</b>	<i>National Emission Standards for Hazardous Air Pollutants from Natural Gas Transmission and Storage Facilities.</i> The compressor station is not subject to Subpart HHH since there are no affected dehydration units utilized at this site.
<b>40 C.F.R. Part 63 Subpart YYY</b>	<i>National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines.</i> This MACT requirement exempts existing turbines constructed prior to January 14, 2003 in accordance with §63.6090(b)(4).
<b>40 C.F.R. Part 64</b>	<i>Compliance Assurance Monitoring (CAM).</i> This is the third permit renewal for this facility. The facility was found not to be subject to CAM at the time of the second renewal since the facility did not have any pollutant specific emissions units (PSEU) that satisfied all of the applicability criteria requirements of 40 C.F.R. § 64.2 (a). There have been no changes to any PSEUs at the facility since the second renewal that have resulted in a source satisfying the applicability requirements of 40 C.F.R. § 64.2 (a) and becoming subject to CAM.

**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, November 14, 2017  
 Ending Date: Thursday, December 14, 2017

### **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 57<sup>th</sup> Street SE  
Charleston, WV 25304  
Phone: 304/926-0499 ext. 1209 • Fax: 304/926-0478  
[Rex.E.Compston@wv.gov](mailto: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.