



May 5, 2016

Mr. William F. Durham
Director
WVDEP, Division of Air Quality
601 – 57th Street SE
Charleston, West Virginia 25304



Re: Columbia Gas Transmission, Title V Renewal Application, R30-09900013-2012

Dear Mr. Durham,

Columbia Pipeline Group (CPG) and SLR International Corporation have teamed up to prepare the attached 45CSR30 Title V Renewal Application for the Ceredo Compressor Station located in Wayne County, West Virginia (Facility ID 099-00013). The facility is currently operating under Title V operating permit number R30-09900013-2012.

In preparation for this renewal the existing terms and conditions of the permit were reviewed thoroughly for accuracy and clarity. As a result, a few areas have been identified where CPG compliance measures could be streamlined to enhance compliance clarity and move away from the old natural gas General Permit format. These suggested changes have been compiled within a proposed permit document being submitted for consideration within this application. The proposed permit has also been supplied in Microsoft Word format within the electronic submittal in hopes of being a useful tool for the reviewing Engineer's convenience.

SLR would be more than happy to discuss the details of the proposed predraft or the Title V Renewal Application at your convenience. If any additional information is needed, please feel free to contact me by telephone at (304) 545-8563 or by e-mail at jhanshaw@slrconsulting.com

Sincerely,
SLR International Corporation



Jesse Hanshaw
Principal Engineer

Cc: Ms. Kelly Taylor, CPG Environmental Manager



global environmental solutions

Columbia Gas Transmission, LLC

Ceredo Compressor Station

Facility ID No. 099-00013

Ceredo, West Virginia

Title V Operating Permit Renewal Application

SLR Ref: 116.01272.00013

April 2016





Title V Operating Permit Renewal Application

Prepared for:

Columbia Gas Transmission, LLC
1700 MacCorkle Avenue, SE
Charleston, West Virginia 25314

This document has been prepared by SLR International Corporation. The material and data in this permit application were prepared under the supervision and direction of the undersigned.

A handwritten signature in blue ink that reads "Chris Boggess".

Chris Boggess
Associate Engineer

A handwritten signature in blue ink that reads "Jesse Hanshaw".

Jesse Hanshaw, P.E.
Principal Engineer

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Notes:

- ATTACHMENT F – N/A – Source is in compliance with all facility wide requirements
- ATTACHMENT G – N/A – No control devices utilized at the facility
- ATTACHMENT H – N/A – No CAM plan requirements at the facility

APPLICATION FOR PERMIT

Title V Operating Permit Renewal Application

**Ceredo Compressor Station, Facility ID No. 099-00013
Ceredo, West Virginia**

Columbia Gas Transmission, LLC
1700 MacCorkle Avenue, SE
Charleston, West Virginia

April 2016



WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF AIR QUALITY

601 57th Street SE
Charleston, WV 25304
Phone: (304) 926-0475

www.dep.wv.gov/daq

INITIAL/RENEWAL TITLE V PERMIT APPLICATION - GENERAL FORMS

Section 1: General Information

Form with 10 numbered sections: 1. Name of Applicant (Columbia Gas Transmission, LLC), 2. Facility Name (Ceredo Compressor Station), 3. DAQ Plant ID No. (099-00013), 4. Federal Employer ID No. (31-0802435-30), 5. Permit Application Type (Renewal), 6. Type of Business Entity (LLC), 7. Is the Applicant the: (Both), 8. Number of onsite employees (Less than ten), 9. Governmental Code (Privately owned), 10. Business Confidentiality Claims (No).

11. Mailing Address		
Street or P.O. Box: 1700 MacCorkle Avenue, SE		
City: Charleston	State: WV	Zip: 25314
Telephone Number: (304) 357-2047	Fax Number: (304) 357-2770	

12. Facility Location		
Street: 1664 Walker's Branch Rd	City: Ceredo	County: Wayne
UTM Easting: 366.115 km	UTM Northing: 4,247.720 km	Zone: <input checked="" type="checkbox"/> 17 or <input type="checkbox"/> 18
Directions: Traveling West on Interstate 64 (I-64) from Charleston, take Exit 1 (Kenova – Ceredo). Turn Left onto Route 52. Make a left onto Airport Rd. Turn Right onto Walker's Branch Rd. at the Pilgrim Glass Plant, travel 2 miles and the station will be on the left.		
Portable Source? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Is facility located within a nonattainment area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, for what air pollutants?	
Is facility located within 50 miles of another state? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, name the affected state(s). Kentucky Ohio	
Is facility located within 100 km of a Class I Area¹? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, name the area(s).	
If no, do emissions impact a Class I Area¹? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
¹ Class I areas include Dolly Sods and Otter Creek Wilderness Areas in West Virginia, and Shenandoah National Park and James River Face Wilderness Area in Virginia.		

13. Contact Information		
Responsible Official: Tim Sweeney		Title: Manager of Operations
Street or P.O. Box: 1700 MacCorkle Avenue, SE		
City: Charleston	State: WV	Zip: 25314
Telephone Number: (304) 722-8486	Fax Number: (304) 357-2770	
E-mail address: tsweeney@cpg.com		
Environmental Contact: Kelly Taylor		Title: Environmental Coordinator
Street or P.O. Box: 1700 MacCorkle Avenue, SE		
City: Charleston	State: WV	Zip: 25314
Telephone Number: (304) 357-2047	Fax Number: (304) 357-2770	
E-mail address: kellytaylor@cpg.com		
Application Preparer: Jesse Hanshaw		Title: Principal Engineer
Company: SLR International Corporation		
Street or P.O. Box: 8 Capitol St., Suite 300		
City: Charleston	State: WV	Zip: 25301
Telephone Number: (681) 205-8949	Fax Number: (681) 205-8969	
E-mail address: jhanshaw@slrconsulting.com		

14. Facility Description

List all processes, products, NAICS and SIC codes for normal operation, in order of priority. Also list any process, products, NAICS and SIC codes associated with any alternative operating scenarios if different from those listed for normal operation.

Process	Products	NAICS	SIC
Natural Gas Transmission	Natural Gas	486210	4922

Provide a general description of operations.

Ceredo Compressor Station is a natural gas transmission facility covered by Standard Industrial Classification (SIC) Code 4922. The station has the potential to operate twenty-four (24) hours per day, seven (7) days per week, fifty-two (52) weeks per year. The station consists of six (6) 2,800 hp, 2SLB reciprocating engines, one (1) 2,700 hp, 2SLB reciprocating engine, one (1) 10,200 hp turbine engine, one (1) 12,500 hp turbine engine, one (1) 812 hp, 4SLB reciprocating engine/generator, one (1) 6.276 mmBtu/hr heating system boiler, and one (1) 0.375 mmBtu/hr fuel system heater.

- 15. Provide an **Area Map** showing plant location as **ATTACHMENT A**.
- 16. Provide a **Plot Plan(s)**, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is located as **ATTACHMENT B**. For instructions, refer to "Plot Plan - Guidelines."
- 17. Provide a detailed **Process Flow Diagram(s)** showing each process or emissions unit as **ATTACHMENT C**. Process Flow Diagrams should show all emission units, control equipment, emission points, and their relationships.

Section 2: Applicable Requirements

18. Applicable Requirements Summary	
Instructions: Mark all applicable requirements.	
<input checked="" type="checkbox"/> SIP	<input type="checkbox"/> FIP
<input checked="" type="checkbox"/> Minor source NSR (45CSR13)	<input type="checkbox"/> PSD (45CSR14)
<input checked="" type="checkbox"/> NESHAP (45CSR34)	<input type="checkbox"/> Nonattainment NSR (45CSR19)
<input type="checkbox"/> Section 111 NSPS	<input checked="" type="checkbox"/> Section 112(d) MACT standards
<input type="checkbox"/> Section 112(g) Case-by-case MACT	<input type="checkbox"/> 112(r) RMP
<input type="checkbox"/> Section 112(i) Early reduction of HAP	<input type="checkbox"/> Consumer/commercial prod. reqts., section 183(e)
<input type="checkbox"/> Section 129 Standards/Reqts.	<input type="checkbox"/> Stratospheric ozone (Title VI)
<input type="checkbox"/> Tank vessel reqt., section 183(f)	<input type="checkbox"/> Emissions cap 45CSR§30-2.6.1
<input type="checkbox"/> NAAQS, increments or visibility (temp. sources)	<input type="checkbox"/> 45CSR27 State enforceable only rule
<input checked="" type="checkbox"/> 45CSR4 State enforceable only rule	<input type="checkbox"/> Acid Rain (Title IV, 45CSR33)
<input type="checkbox"/> Emissions Trading and Banking (45CSR28)	<input type="checkbox"/> Compliance Assurance Monitoring (40CFR64)
<input type="checkbox"/> CAIR NO _x Annual Trading Program (45CSR39)	<input type="checkbox"/> CAIR NO _x Ozone Season Trading Program (45CSR40)
<input type="checkbox"/> CAIR SO ₂ Trading Program (45CSR41)	

19. Non Applicability Determinations
<p>List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.</p> <p>45CSR4 – <i>To Prevent and Control the Discharge of Air Pollutants into the Open Air Which Causes or Contributes to an Objectionable Odor or Odors:</i> According to 45CSR§4-7.1, this rule shall not apply to the following sources of objectionable odor until such time as feasible control methods are developed: Internal Combustion Engines</p> <p>45CSR10 – <i>To Prevent and Control Air Pollution from the Emission of Sulfur Oxides:</i> 45CSR10 is not applicable to the facility's heater because its maximum design heat input (DHI) is less than 10 MMBtu/hr</p> <p>45CSR21 – <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</p> <p>45CSR27 – <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."</p>
<input checked="" type="checkbox"/> Permit Shield

19. Non Applicability Determinations (Continued) - Attach additional pages as necessary.

List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.

40 CFR 60 Subpart Dc – *Standards of Performance for Steam Generating Units*: The fuel gas line heater at this facility is less than 10 mmBtu/hr; Hence Subpart Dc is not applicable in accordance with 60.40c(a)

40 CFR 60 Subpart GG – *Standards of Performance for Stationary Gas Turbines*: The two turbines on site were installed in 1967 and 1971 which predates this NSPS's applicability trigger date of October 3, 1977 as defined in §60.330(b).

40 CFR 60 Subparts K,Ka – *Standards of Performance for Storage Vessels for Petroleum Liquids*: All tanks at the facility are below 40,000 gallons in capacity as specified in 60.110a(a)

40 CFR 60 Subpart Kb – *Standards of Performance for Volatile Organic Liquid Storage Vessels*: All tanks at the facility are below 75m³ (19,813 gallons) in capacity as specified in 60.110b(a)

40 CFR 60 Subpart KKK – *Standards of Performance for Equipment Leaks of VOC From Onshore Natural Gas Processing Plant*: This compressor 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.

40 CFR 60 Subpart IIII – *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*: There are no compression ignition engines at this facility.

40 CFR 60 Subpart JJJJ – *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*: All engines at the facility were constructed, reconstructed, or modified prior to the June 12, 2006 applicability date listed in 60.4230(a)(4).

40 CFR 60 Subpart KKKK – *Standards of Performance for Stationary Combustion Turbines* – The two turbines on site were installed in 1967 and 1971, which predates this NSPS's applicability date of February 18, 2005 as specified in §60.4305(a).

40 CFR 60 Subpart OOOO – *Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution*: The Storage Vessel requirements defined for transmission sources is not applicable to this site because all vessels were constructed, commenced construction, prior to August 23, 2011 as stated in accordance with [40CFR§60.5365(e)].

40 CFR 63 Subpart HHH – *National Emission Standards for Hazardous Air Pollutants from Natural Gas Transmission and Storage Facilities*: This facility does not have a glycol dehydration unit and is therefore not subject to the requirements of this subpart.

40 CFR 63 Subpart YYYY – *Turbine MACT*: The two turbines on site, which were installed in 1967 and 1971, were constructed prior to the applicability trigger date of January 14, 2003 for newly constructed or reconstructed sources and is therefore considered an exempt existing source in accordance with §63.6090(b)(4).

40 CFR 64 – *Compliance Assurance Monitoring (CAM)*: There are no add-on controls at this facility; therefore, in accordance with 40CFR§64.2(b)(1), CAM is not applicable to this facility.

Permit Shield

20. Facility-Wide Applicable Requirements

List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements).

- T5 – 3.1.1 – 45 CSR 6-3.1 – Open burning prohibited
- T5 – 3.1.2 – 45 CSR 6-3.2 – Open burning exemption stipulations
- T5 – 3.1.3 – 40 CFR Part 61 and 45 CSR 34 – Asbestos inspection and removal
- T5 – 3.1.4 – 45 CSR 4 – No objectionable odors
- T5 – 3.1.5 – 45 CSR 11-5.2 – Standby plans for emergency episodes
- T5 – 3.1.6 – WV Code 22-5-4 (a) (14) – Annual emission inventory reporting
- T5 – 3.1.7 – 40 CFR Part 82 Subpart F – Ozone depleting substances
- T5 – 3.1.8 – 40 CFR Part 68 – Risk Management Plan
- T5 – 3.1.9 – 45 CSR 30-12.7 – Odor Control for Mercaptan
- T5 – 3.1.10 – 45 CSR 30-12.7 – Emergency Operating Conditions / unit replacement
- T5 – 3.3.1 – 45 CSR 22-5-4(a)(14-15) & 45CSR13 - Stack Testing - Conduct stack testing as required
- T5 – 3.4.1 – 45 CSR 30-5.1 - Monitoring information – general monitoring requirements
- T5 – 3.4.2 – 45 CSR 30-5.1 - Retention of records - Maintain records for a period of 5 years
- T5 – 3.4.3 – 45 CSR 30-5.1 - Odors - Maintain records of odor complaints and corrective actions
- T5 – 3.4.4 – 45 CSR 17.3 – Fugitive PM shall not cause statutory Air Pollution
- T5 – 3.5.1 – 45 CSR 30-4.4. and 5.1.c.3.D – All documents required by permit shall be certified by a Responsible Official
- T5 – 3.5.2 – 45 CSR 30-5.1.c.3.E. - A permittee may request confidential treatment
- T5 – 3.5.3 – 45 CSR 30-5 - Communication required or permitted to be made to the DEP and/or USEPA
- T5 – 3.5.4 – 45 CSR 30-8 - Certified emissions statement – Operator will Submit a certified emissions statement and pay fees on an annual basis
- T5 – 3.5.5 – 45 CSR 30-5.3.e. - Compliance certification. The permittee shall certify compliance with the conditions of this permit on the forms provided by the DAQ
- T5 – 3.5.6 – 45 SR§30-5.1.c.3.A - Semi-annual monitoring reports.
- T5 – 3.5.7 – 45 CSR 30-5.7.a through e. - Emergencies
- T5 – 3.5.8 – 45 CSR 30-5.1.c.3.B. and C. - Deviations
- T5 – 3.5.9 – 45 CSR 30-4.3.h.1.B. New applicable requirements. If any requirement is promulgated, the permittee will meet such requirements on a timely basis
- T5 – 3.5.10 – 45 CSR 30-5.1.c.3.C. Natural Gas Use certification during Compliance Certification

Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing / recordkeeping / reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- T5 – 3.1.3 – 40 CFR Part 61 and 45 CSR 34 – Prior to demolition/construction buildings will be inspected for asbestos and documented accordingly
- T5 – 3.1.4 – 45 CSR 4 – Permittee shall maintain records of all odor complaints received
- T5 – 3.1.5 – 45 CSR 11 – Upon request by the Secretary, the permittee shall prepare a standby plan
- T5 – 3.1.6 – WV 22-5-4 – The permittee shall submit annual emission inventory reports
- T5 – 3.1.7 – 40 CFR Part 82 Subpart F – The permittee will prohibit maintenance, service, or repair of appliances containing ozone depleting substances without persons certified pursuant to 40 CFR 82.161
- T5 – 3.1.8 – 40 CFR Part 68 – Should the permittee become subject to 40 CFR Part 68, a RMP shall be submitted
- T5 – 3.1.10 – 45CSR§30-12.7 For emergency situations which interrupt the critical supply of natural gas to the public, and which pose a life threatening circumstance to the customer, the permittee is allowed to temporarily replace failed engine(s). Proper notice will be provided to the WVDAQ
- T5 – 3.3.1 – 45 CSR 22-5-4 Stack Testing – All protocols and reports will be submitted to the WVDAQ
- T5 – 3.4.1 & 3.4.2 – 45 CSR 30-5.1 Retention of Records - Maintain records of all information required by permit for 5 yrs.
- T5 – 3.4.3 – 45 CSR 30-5.1 Odors - Maintain records of all odor complaints and responses.
- T5 – 3.5.1 – 45 CSR 30-4.4 and 5.1 Responsible Official - Reports, certifications, etc. shall contain a certification by the responsible official.
- T5 – 3.5.4 – 45 CSR 30-8 Certified emissions statement – Operator will Submit a certified emissions statement and pay fees on an annual basis
- T5 – 3.5.5 – 45 SR§30-5.3.e Compliance Certification - Prepare and submit an emission inventory as requested
- T5 – 3.5.6 – 45 CSR§30-5.1.c.3.A. Semi-annual monitoring reports.
- T5 – 3.5.7 – 45 CSR30-5.7.a through e. - For reporting emergency situations, refer to Section 2.17 of this permit
- T5 – 3.5.8 – 45 CSR 30-5.1.c.3.B. and C. – Deviations, In addition to required monitoring reports, the permittee shall promptly submit supplemental reports and notices of deviations / include upset conditions, cause of deviation(s) and corrective actions.
- T5 – 3.5.9 – 45 CSR 30-4.3.h.1.B. New applicable requirements. If any requirement is promulgated, the permittee will meet such requirements on a timely basis
- T5 – 3.5.10 – 45 CSR 30-5.1.c.3.C. During compliance certification, the facility shall certify that the facility burns natural gas in all stationary equipment except, when applicable, for emergency equipment.

Are you in compliance with all facility-wide applicable requirements? Yes No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

Section 3: Facility-Wide Emissions

23. Facility-Wide Emissions Summary [Tons per Year]	
Criteria Pollutants	Potential Emissions
Carbon Monoxide (CO)	331.74
Nitrogen Oxides (NO _x)	4,086.90
Lead (Pb)	-
Particulate Matter (PM _{2.5}) ¹	29.08
Particulate Matter (PM ₁₀) ¹	29.08
Total Particulate Matter (TSP)	29.08
Sulfur Dioxide (SO ₂)	1.18
Volatile Organic Compounds (VOC)	97.97
Hazardous Air Pollutants ²	Potential Emissions
Benzene	1.40
Toluene	0.75
Ethylbenzene	0.50
Xylene	0.23
n-Hexane	0.40
Formaldehyde	41.01
Acetaldehyde	5.77
Total HAPs	50.04
Regulated Pollutants other than Criteria and HAP	Potential Emissions
CO _{2e}	196,898

¹PM_{2.5} and PM₁₀ are components of TSP.
²For HAPs that are also considered PM or VOCs, emissions should be included in both the HAPs section and the Criteria Pollutants section.

Section 4: Insignificant Activities

24. Insignificant Activities (Check all that apply)	
<input checked="" type="checkbox"/>	1. Air compressors and pneumatically operated equipment, including hand tools.
<input type="checkbox"/>	2. Air contaminant detectors or recorders, combustion controllers or shutoffs.
<input checked="" type="checkbox"/>	3. Any consumer product used in the same manner as in normal consumer use, provided the use results in a duration and frequency of exposure which are not greater than those experienced by consumer, and which may include, but not be limited to, personal use items; janitorial cleaning supplies, office supplies and supplies to maintain copying equipment.
<input checked="" type="checkbox"/>	4. Bathroom/toilet vent emissions.
<input checked="" type="checkbox"/>	5. Batteries and battery charging stations, except at battery manufacturing plants.
<input type="checkbox"/>	6. Bench-scale laboratory equipment used for physical or chemical analysis, but not lab fume hoods or vents. Many lab fume hoods or vents might qualify for treatment as insignificant (depending on the applicable SIP) or be grouped together for purposes of description.
<input type="checkbox"/>	7. Blacksmith forges.
<input type="checkbox"/>	8. Boiler water treatment operations, not including cooling towers.
<input checked="" type="checkbox"/>	9. Brazing, soldering or welding equipment used as an auxiliary to the principal equipment at the source.
<input type="checkbox"/>	10. CO ₂ lasers, used only on metals and other materials which do not emit HAP in the process.
<input checked="" type="checkbox"/>	11. Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.
<input checked="" type="checkbox"/>	12. Combustion units designed and used exclusively for comfort heating that use liquid petroleum gas or natural gas as fuel.
<input checked="" type="checkbox"/>	13. Comfort air conditioning or ventilation systems not used to remove air contaminants generated by or released from specific units of equipment.
<input type="checkbox"/>	14. Demineralized water tanks and demineralizer vents.
<input type="checkbox"/>	15. Drop hammers or hydraulic presses for forging or metalworking.
<input type="checkbox"/>	16. Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.
<input type="checkbox"/>	17. Emergency (backup) electrical generators at residential locations.

24. Insignificant Activities (Check all that apply)																																																													
<input type="checkbox"/>	18. Emergency road flares.																																																												
<input checked="" type="checkbox"/>	<p>19. Emission units which do not have any applicable requirements and which emit criteria pollutants (CO, NO_x, SO₂, VOC and PM) into the atmosphere at a rate of less than 1 pound per hour and less than 10,000 pounds per year aggregate total for each criteria pollutant from all emission units.</p> <p>Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis:</p> <table border="1"> <thead> <tr> <th><i>Emission Point</i></th> <th><i>VOC Emissions (lb/hr)</i></th> <th><i>VOC Emissions (lb/yr)</i></th> </tr> </thead> <tbody> <tr><td>A06A</td><td>0.000</td><td>0.08</td></tr> <tr><td>A06B</td><td>0.000</td><td>0.06</td></tr> <tr><td>A07</td><td>0.000</td><td>1.84</td></tr> <tr><td>A08</td><td>0.000</td><td>1.84</td></tr> <tr><td>A09</td><td>0.000</td><td>0.57</td></tr> <tr><td>A11</td><td>0.063</td><td>555.42</td></tr> <tr><td>A12</td><td>0.000</td><td>0.08</td></tr> <tr><td>A13</td><td>0.000</td><td>0.08</td></tr> <tr><td>A14</td><td>0.000</td><td>0.08</td></tr> <tr><td>A15</td><td>0.000</td><td>0.08</td></tr> <tr><td>A18</td><td>0.127</td><td>1111.26</td></tr> <tr><td>A19</td><td>0.127</td><td>1111.26</td></tr> <tr><td>A20</td><td>0.127</td><td>1111.26</td></tr> <tr><td>A21</td><td>0.127</td><td>1111.26</td></tr> <tr><td>A22-2</td><td>0.000</td><td>1.72</td></tr> <tr><td>A25</td><td>0.000</td><td>0.04</td></tr> <tr><td>A26</td><td>0.000</td><td>0.04</td></tr> <tr><td>A27</td><td>0.000</td><td>0.19</td></tr> <tr> <td>Totals</td> <td>0.57</td> <td>5007.15</td> </tr> </tbody> </table>	<i>Emission Point</i>	<i>VOC Emissions (lb/hr)</i>	<i>VOC Emissions (lb/yr)</i>	A06A	0.000	0.08	A06B	0.000	0.06	A07	0.000	1.84	A08	0.000	1.84	A09	0.000	0.57	A11	0.063	555.42	A12	0.000	0.08	A13	0.000	0.08	A14	0.000	0.08	A15	0.000	0.08	A18	0.127	1111.26	A19	0.127	1111.26	A20	0.127	1111.26	A21	0.127	1111.26	A22-2	0.000	1.72	A25	0.000	0.04	A26	0.000	0.04	A27	0.000	0.19	Totals	0.57	5007.15
<i>Emission Point</i>	<i>VOC Emissions (lb/hr)</i>	<i>VOC Emissions (lb/yr)</i>																																																											
A06A	0.000	0.08																																																											
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A27	0.000	0.19																																																											
Totals	0.57	5007.15																																																											
<input type="checkbox"/>	<p>20. Emission units which do not have any applicable requirements and which emit hazardous air pollutants into the atmosphere at a rate of less than 0.1 pounds per hour and less than 1,000 pounds per year aggregate total for all HAPs from all emission sources. This limitation cannot be used for any source which emits dioxin/furans nor for toxic air pollutants as per 45CSR27.</p> <p>Please specify all emission units for which this exemption applies along with the quantity of hazardous air pollutants emitted on an hourly and annual basis:</p>																																																												
<input type="checkbox"/>	21. Environmental chambers not using hazardous air pollutant (HAP) gases.																																																												
<input checked="" type="checkbox"/>	22. Equipment on the premises of industrial and manufacturing operations used solely for the purpose of preparing food for human consumption.																																																												
<input type="checkbox"/>	23. Equipment used exclusively to slaughter animals, but not including other equipment at slaughterhouses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.																																																												
<input checked="" type="checkbox"/>	24. Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.																																																												
<input type="checkbox"/>	25. Equipment used for surface coating, painting, dipping or spray operations, except those that will emit																																																												

24. Insignificant Activities (Check all that apply)	
	VOC or HAP.
<input checked="" type="checkbox"/>	26. Fire suppression systems.
<input checked="" type="checkbox"/>	27. Firefighting equipment and the equipment used to train firefighters.
<input checked="" type="checkbox"/>	28. Flares used solely to indicate danger to the public.
<input checked="" type="checkbox"/>	29. Fugitive emission related to movement of passenger vehicle provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.
<input type="checkbox"/>	30. Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.
<input checked="" type="checkbox"/>	31. Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.
<input type="checkbox"/>	32. Humidity chambers.
<input type="checkbox"/>	33. Hydraulic and hydrostatic testing equipment.
<input checked="" type="checkbox"/>	34. Indoor or outdoor kerosene heaters.
<input checked="" type="checkbox"/>	35. Internal combustion engines used for landscaping purposes.
<input type="checkbox"/>	36. Laser trimmers using dust collection to prevent fugitive emissions.
<input type="checkbox"/>	37. Laundry activities, except for dry-cleaning and steam boilers.
<input checked="" type="checkbox"/>	38. Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.
<input type="checkbox"/>	39. Oxygen scavenging (de-aeration) of water.
<input type="checkbox"/>	40. Ozone generators.
<input checked="" type="checkbox"/>	41. Plant maintenance and upkeep activities (e.g., grounds-keeping, general repairs, cleaning, painting, welding, plumbing, re-tarring roofs, installing insulation, and paving parking lots) provided these activities are not conducted as part of a manufacturing process, are not related to the source's primary business activity, and not otherwise triggering a permit modification. (Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant owners/operators must still get a permit if otherwise requested.)
<input checked="" type="checkbox"/>	42. Portable electrical generators that can be moved by hand from one location to another. "Moved by Hand" means that it can be moved without the assistance of any motorized or non-motorized vehicle, conveyance, or device.
<input type="checkbox"/>	43. Process water filtration systems and demineralizers.
<input checked="" type="checkbox"/>	44. Repair or maintenance shop activities not related to the source's primary business activity, not including emissions from surface coating or de-greasing (solvent metal cleaning) activities, and not otherwise triggering a permit modification.
<input type="checkbox"/>	45. Repairs or maintenance where no structural repairs are made and where no new air pollutant emitting facilities are installed or modified.
<input type="checkbox"/>	46. Routing calibration and maintenance of laboratory equipment or other analytical instruments.
<input type="checkbox"/>	47. Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants. Shock chambers.
<input type="checkbox"/>	48. Shock chambers.
<input type="checkbox"/>	49. Solar simulators.
<input checked="" type="checkbox"/>	50. Space heaters operating by direct heat transfer.
<input type="checkbox"/>	51. Steam cleaning operations.
<input type="checkbox"/>	52. Steam leaks.
<input type="checkbox"/>	53. Steam sterilizers.
<input checked="" type="checkbox"/>	54. Steam vents and safety relief valves.

24. Insignificant Activities (Check all that apply)	
<input type="checkbox"/>	55. Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.
<input type="checkbox"/>	56. Storage tanks, vessels, and containers holding or storing liquid substances that will not emit any VOC or HAP. Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids should be based on size limits such as storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.
<input type="checkbox"/>	57. Such other sources or activities as the Director may determine.
<input checked="" type="checkbox"/>	58. Tobacco smoking rooms and areas.
<input checked="" type="checkbox"/>	59. Vents from continuous emissions monitors and other analyzers.

Section 5: Emission Units, Control Devices, and Emission Points

25. Equipment Table
Fill out the Title V Equipment Table and provide it as ATTACHMENT D .
26. Emission Units
For each emission unit listed in the Title V Equipment Table , fill out and provide an Emission Unit Form as ATTACHMENT E .
For each emission unit not in compliance with an applicable requirement, fill out a Schedule of Compliance Form as ATTACHMENT F .
27. Control Devices
For each control device listed in the Title V Equipment Table , fill out and provide an Air Pollution Control Device Form as ATTACHMENT G .
For any control device that is required on an emission unit in order to meet a standard or limitation for which the potential pre-control device emissions of an applicable regulated air pollutant is greater than or equal to the Title V Major Source Threshold Level, refer to the Compliance Assurance Monitoring (CAM) Form(s) for CAM applicability. Fill out and provide these forms, if applicable, for each Pollutant Specific Emission Unit (PSEU) as ATTACHMENT H .

Section 6: Certification of Information

28. Certification of Truth, Accuracy and Completeness and Certification of Compliance

*Note: This Certification must be signed by a responsible official. The **original**, signed in **blue ink**, must be submitted with the application. Applications without an **original** signed certification will be considered as incomplete.*

a. Certification of Truth, Accuracy and Completeness

I certify that I am a responsible official (as defined at 45CSR§30-2.38) and am accordingly authorized to make this submission on behalf of the owners or operators of the source described in this document and its attachments. I certify under penalty of law that I have personally examined and am familiar with the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine and/or imprisonment.

b. Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

Responsible official (type or print)

Name: Tim Sweeney

Title: Manager of Operations

Responsible official's signature:

Signature: _____

Signature Date: _____

4-25-2016

(Must be signed and dated in blue ink)

Note: Please check all applicable attachments included with this permit application:

ATTACHMENT A: Area Map

ATTACHMENT B: Plot Plan(s)

ATTACHMENT C: Process Flow Diagram(s)

ATTACHMENT D: Equipment Table

ATTACHMENT E: Emission Unit Form(s)

ATTACHMENT F: Schedule of Compliance Form(s)

ATTACHMENT G: Air Pollution Control Device Form(s)

ATTACHMENT H: Compliance Assurance Monitoring (CAM) Form(s)

All of the required forms and additional information can be found and downloaded from, the DEP website at www.dep.wv.gov/daq, requested by phone (304) 926-0475, and/or obtained through the mail.

ATTACHMENT A

AREA MAP

Title V Operating Permit Renewal Application

**Ceredo Compressor Station, Facility ID No. 099-00013
Ceredo, West Virginia**

Columbia Gas Transmission, LLC
1700 MacCorkle Avenue, SE
Charleston, West Virginia

April 2016



GPS Coordinates of Sites:
 Lat: 38.36766, Long: -82.53259

UTM Coordinates of Sites:
 Easting: 366.115 km, Northing: 4,247.720 km, Zone: 17

Columbia Gas Transmission, LLC
 1700 MacCorkle Avenue, SE
 Charleston, WV 25314

Report
 Title V Operating Permit Renewal Application
 Ceredo Compressor Station (ID No. 099-00013)

Drawing
 Attachment A - Area Map

Date: March 2016

Drawn By: CLB

Project: 116.01272.00013



ATTACHMENT B

PLOT PLAN

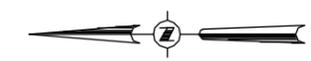
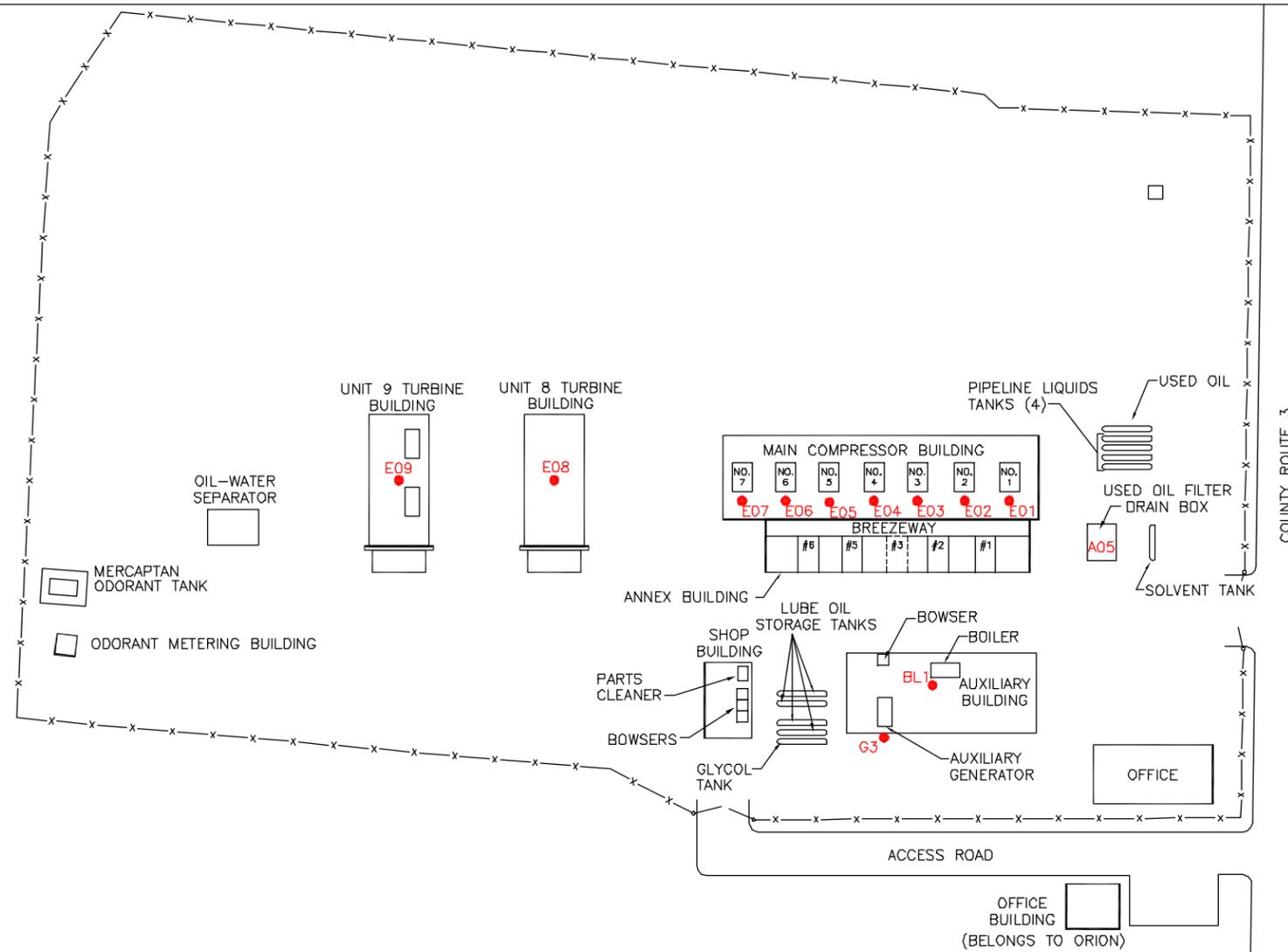
Title V Operating Permit Renewal Application

**Ceredo Compressor Station, Facility ID No. 099-00013
Ceredo, West Virginia**

Columbia Gas Transmission, LLC
1700 MacCorkle Avenue, SE
Charleston, West Virginia

April 2016

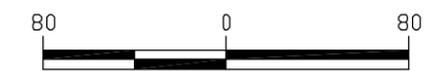
TWELVEPOLE CREEK



KEY

- x— FENCE LINE
- PROPERTY BOUNDARY
- - - NATURAL GAS PIPE LINE
- EMISSION POINT

ELEVATION = 545 FEET
LAT. 38°22'04" LONG. 82°31'58"



SCALE IN FEET

SIGNIFICANT EMISSION UNITS	
Emission Point ID Number	Equipment Category
BL1	Boiler No. 1
E01	Recip Engine/Integral Compressor No. 00501
E02	Recip Engine/Integral Compressor No. 00502
E03	Recip Engine/Integral Compressor No. 00503
E04	Recip Engine/Integral Compressor No. 00504
E05	Recip Engine/Integral Compressor No. 00505
E06	Recip Engine/Integral Compressor No. 00506
E07	Recip Engine/Integral Compressor No. 00507
E08	Turbine Engine/Centrifugal Compressor No. 00508
E09	Turbine Engine/Centrifugal Compressor No. 00509
G3	Recip Engine/Generator No. 005G3

SCALE AS SHOWN CONFIDENTIAL-ALL RIGHTS RESERVED-PROPERTY OF URS RDU, NORTH CAROLINA 27580	DESIGNED BY TSH	DATE 22SEP10	DRAWING TITLE Site Plan Columbia Gas Transmission Corp. Ceredo Station		
	CHECKED BY DW	DATE 22SEP10	CAD DRAWING FILE:		
APPROVED BY DW	DATE 22SEP10	CONTRACT NO. 31827062	DRAWING NO. CER-BM4	REV. 0	

ATTACHMENT C

PROCESS FLOW DIAGRAM

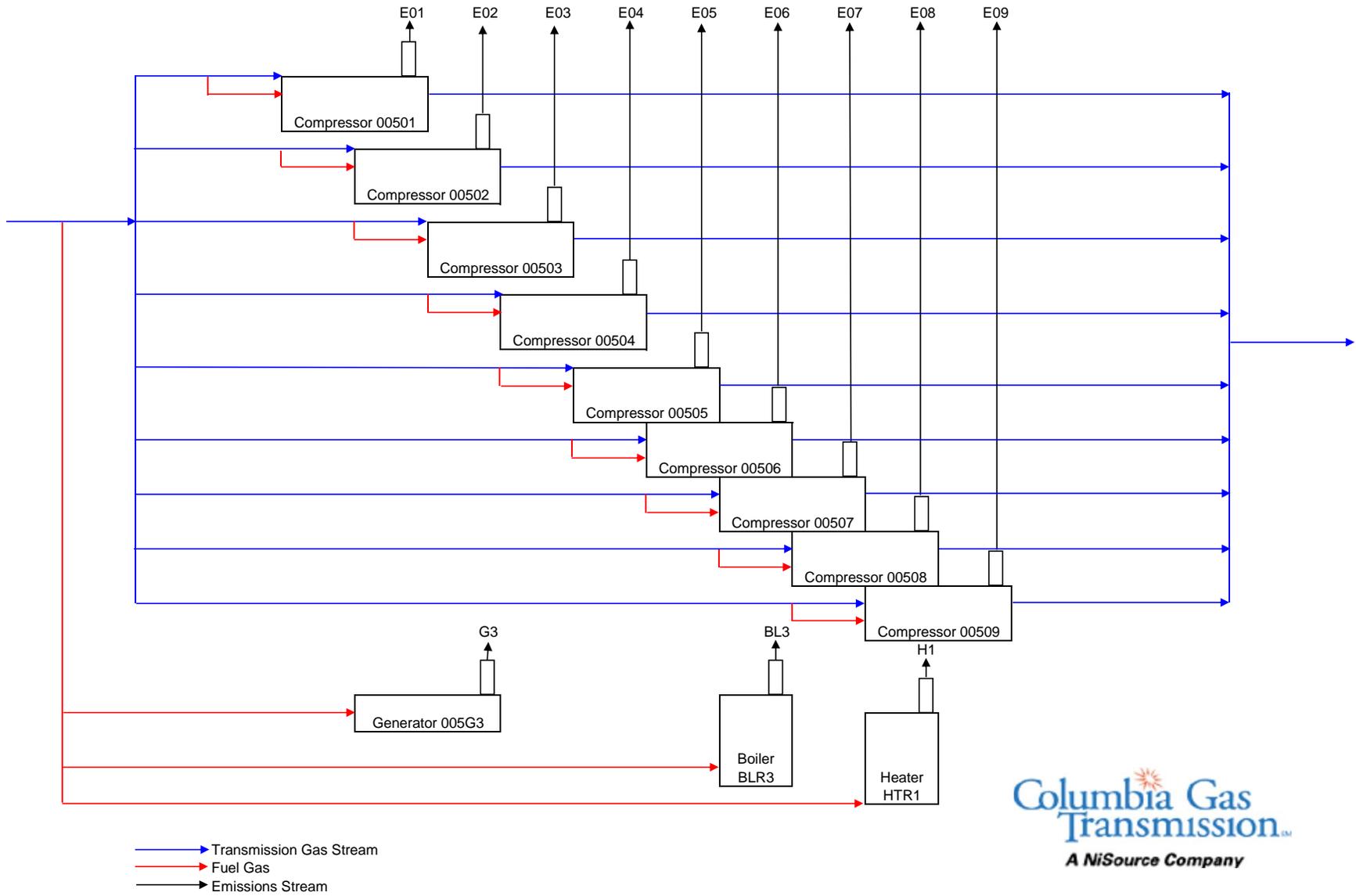
Title V Operating Permit Renewal Application

**Ceredo Compressor Station, Facility ID No. 099-00013
Ceredo, West Virginia**

Columbia Gas Transmission, LLC
1700 MacCorkle Avenue, SE
Charleston, West Virginia

April 2016

**ATTACHMENT C
CEREDO COMPRESSOR STATION PROCESS FLOW DIAGRAM**



ATTACHMENT D

EQUIPMENT TABLE

Title V Operating Permit Renewal Application

Ceredo Compressor Station, Facility ID No. 099-00013
Ceredo, West Virginia

Columbia Gas Transmission, LLC
1700 MacCorkle Avenue, SE
Charleston, West Virginia

April 2016

ATTACHMENT D - Title V Equipment Table
(includes all emission units at the facility except those designated as
insignificant activities in Section 4, Item 24 of the General Forms)

Emission Point ID ¹	Control Device ¹	Emission Unit ID ¹	Emission Unit Description	Design Capacity	Year Installed/Modified
BL3	N/A	BLR3*	Heating System Boiler; Hurst;	6.276 MMBtu/hr	2012
E01	N/A	00501*	Reciprocating Engine/Integral Compressor; Cooper-Bessemer GMWH-8; 2 Cycle, Lean Burn	2,800 hp	1954
E02	N/A	00502*	Reciprocating Engine/Integral Compressor; Cooper-Bessemer GMWH-8; 2 Cycle, Lean Burn	2,800 hp	1954
E03	N/A	00503*	Reciprocating Engine/Integral Compressor; Cooper-Bessemer GMWH-8; 2 Cycle, Lean Burn	2,800 hp	1954
E04	N/A	00504*	Reciprocating Engine/Integral Compressor; Cooper-Bessemer GMWH-8; 2 Cycle, Lean Burn	2,800 hp	1957
E05	N/A	00505*	Reciprocating Engine/Integral Compressor; Cooper-Bessemer GMWH-8; 2 Cycle, Lean Burn	2,800 hp	1958
E06	N/A	00506*	Reciprocating Engine/Integral Compressor; Cooper-Bessemer GMWH-8; 2 Cycle, Lean Burn	2,800 hp	1960
E07	N/A	00507*	Reciprocating Engine/Integral Compressor; Cooper-Bessemer 8V-250; 2 Cycle, Lean Burn	2,700 hp	1965
E08	N/A	00508*	Turbine Engine/Centrifugal Compressor; General Electric 3912R Turbine	10,200 Hp	1967
E09	N/A	00509*	Turbine Engine/Centrifugal Compressor; General Electric 3112R Turbine	12,500 Hp	1971
G3	N/A	005G3*	Reciprocating Engine/Generator; Waukesha 3521GL; 4 Cycle, Lean Burn	812 Hp	1996
H1	N/A	HTR1*	Fuel Gas Heater; FLAMECO; Model # FAH14	0.375 MMBtu/hr	1998
A11	N/A	A11	Mercaptan Odorant; Above Ground Storage Tank	6,000 gal	1966

¹For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.

*This equipment burns pipeline quality natural gas only.

ATTACHMENT E

EMISSION UNIT FORM(S)

Title V Operating Permit Renewal Application

Ceredo Compressor Station, Facility ID No. 099-00013
Ceredo, West Virginia

Columbia Gas Transmission, LLC
1700 MacCorkle Avenue, SE
Charleston, West Virginia

April 2016

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: 005G3	Emission unit name: Reciprocating Engine/Generator	List any control devices associated with this emission unit: NA
--	--	---

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
4-cycle, lean burn

Manufacturer: Waukesha	Model number: 3521GL	Serial number: NA
----------------------------------	--------------------------------	-----------------------------

Construction date: NA	Installation date: 1996	Modification date(s): NA
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 812 hp

Maximum Hourly Throughput: NA	Maximum Annual Throughput: NA	Maximum Operating Schedule: 8,760
---	---	---

Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
--	---

Maximum design heat input and/or maximum horsepower rating: 812 hp	Type and Btu/hr rating of burners: 8,000 Btu/hp-hr
--	--

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
Natural Gas
6,369 scf/hr / 55,792,440 scf/yr

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	Pipeline Quality		1,020 Btu/scf

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	See Appendix A	
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
	See Appendix A	
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>See Appendix A</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or **construction permit** with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

45 C.S.R. 13, Permit R13-1856

Condition (A) Specific Requirements – Emission Limitations; Maximum emissions shall not exceed the following listed in the table below;

<i>Pollutant</i>	<i>Maximum Hourly Emission (lb/hr)</i>	<i>Maximum Annual Emission (ton/yr)</i>
NO _x	2.44	10.69
CO	4.31	18.88
VOC	1.63	7.13

Condition; General Requirements (1) – Submit a certified emission statement in accordance with Title V (45CSR30).

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

45 C.S.R 13, Permit R13-1856

Condition (B) Other Requirements – For the purposes of conducting performance tests, the following methods shall be utilized;

<i>Pollutant</i>	<i>Method</i>
NO _x	40 CFR 60 Appendix A – Method 7
CO	40 CFR 60 Appendix A – Method 10
VOC	40 CFR 60 Appendix A – Method 25 or 25A

Condition; General Requirements (4) – At such reasonable times as the Chief may designate, the permittee shall conduct tests to determine compliance with the limitations established in Condition (A). The permittee shall submit a test protocol at least thirty (30) days prior to testing to be approved by the Chief and a notification at least fifteen (15) days in advance of the actual dates and times during which the test will be conducted.

At the Director’s request, the permittee shall track fuel usage and hours of operation in order to quantify annual emissions from this unit.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: 00501	Emission unit name: Reciprocating Engine/Integral Compressor	List any control devices associated with this emission unit: NA
--	--	---

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
2-cycle, lean burn

Manufacturer: Cooper-Bessemer	Model number: GMWH-8	Serial number: NA
---	--------------------------------	-----------------------------

Construction date: NA	Installation date: 1954	Modification date(s): NA
---------------------------------	-----------------------------------	------------------------------------

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 2,800 hp

Maximum Hourly Throughput: NA	Maximum Annual Throughput: NA	Maximum Operating Schedule: 8,760
---	---	---

Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
--	---

Maximum design heat input and/or maximum horsepower rating: 2,800 hp	Type and Btu/hr rating of burners: 8,400 Btu/hp-hr
--	--

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
Natural Gas
23,060 scf/hr / 202,005,600 scf/yr

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	Pipeline Quality		1,020 Btu/scf

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	See Appendix A	
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
	See Appendix A	
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>See Appendix A</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

According to 40 CFR 63.6590(b)(3)(i) and 40 CFR 63.6600(c), this existing, non-emergency, SI 2SLB engine > 500 hp located at a major source of HAPs does not have any requirements under 40 CFR Part 63 Subpart ZZZZ because it was constructed prior to December 12, 2002.

Therefore, there are no specific applicable requirements for this emission unit other than those to submit a certified emission statement in accordance with Title V permit condition 3.5.4 and an annual emission inventory according to Title V permit condition 3.1.6.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

The emission unit shall track fuel usage and hours of operation in order to quantify annual emissions from this unit.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: 00502	Emission unit name: Reciprocating Engine/Integral Compressor	List any control devices associated with this emission unit: NA
--	--	---

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
2-cycle, lean burn

Manufacturer: Cooper-Bessemer	Model number: GMWH-8	Serial number: NA
---	--------------------------------	-----------------------------

Construction date: NA	Installation date: 1954	Modification date(s): NA
---------------------------------	-----------------------------------	------------------------------------

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 2,800 hp

Maximum Hourly Throughput: NA	Maximum Annual Throughput: NA	Maximum Operating Schedule: 8,760
---	---	---

Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
--	---

Maximum design heat input and/or maximum horsepower rating: 2,800 hp	Type and Btu/hr rating of burners: 8,400 Btu/hp-hr
--	--

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Natural Gas
23,060 scf/hr / 202,005,600 scf/yr

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	Pipeline Quality		1,020 Btu/scf

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	See Appendix A	
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
	See Appendix A	
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>See Appendix A</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

According to 40 CFR 63.6590(b)(3)(i) and 40 CFR 63.6600(c), this existing, non-emergency, SI 2SLB engine > 500 hp located at a major source of HAPs does not have any requirements under 40 CFR Part 63 Subpart ZZZZ because it was constructed prior to December 12, 2002.

Therefore, there are no specific applicable requirements for this emission unit other than those to submit a certified emission statement in accordance with Title V permit condition 3.5.4 and an annual emission inventory according to Title V permit condition 3.1.6.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

The emission unit shall track fuel usage and hours of operation in order to quantify annual emissions from this unit.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description			
Emission unit ID number: 00503	Emission unit name: Reciprocating Engine/Integral Compressor	List any control devices associated with this emission unit: NA	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): 2-cycle, lean burn			
Manufacturer: Cooper-Bessemer	Model number: GMWH-8	Serial number: NA	
Construction date: NA	Installation date: 1954	Modification date(s): NA	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 2,800 hp			
Maximum Hourly Throughput: NA	Maximum Annual Throughput: NA	Maximum Operating Schedule: 8,760	
Fuel Usage Data (fill out all applicable fields)			
Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating: 2,800 hp		Type and Btu/hr rating of burners: 8,400 Btu/hp-hr	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. Natural Gas 23,060 scf/hr / 202,005,600 scf/yr			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	Pipeline Quality		1,020 Btu/scf

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	See Appendix A	
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants		
	PPH	TPY
	See Appendix A	
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>See Appendix A</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

According to 40 CFR 63.6590(b)(3)(i) and 40 CFR 63.6600(c), this existing, non-emergency, SI 2SLB engine > 500 hp located at a major source of HAPs does not have any requirements under 40 CFR Part 63 Subpart ZZZZ because it was constructed prior to December 12, 2002.

Therefore, there are no specific applicable requirements for this emission unit other than those to submit a certified emission statement in accordance with Title V permit condition 3.5.4 and an annual emission inventory according to Title V permit condition 3.1.6.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

The emission unit shall track fuel usage and hours of operation in order to quantify annual emissions from this unit.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description			
Emission unit ID number: 00504	Emission unit name: Reciprocating Engine/Integral Compressor	List any control devices associated with this emission unit: NA	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): 2-cycle, lean burn			
Manufacturer: Cooper-Bessemer	Model number: GMWH-8	Serial number: NA	
Construction date: NA	Installation date: 1957	Modification date(s): NA	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 2,800 hp			
Maximum Hourly Throughput: NA	Maximum Annual Throughput: NA	Maximum Operating Schedule: 8,760	
Fuel Usage Data (fill out all applicable fields)			
Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating: 2,800 hp		Type and Btu/hr rating of burners: 8,400 Btu/hp-hr	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. Natural Gas 23,060 scf/hr / 202,005,600 scf/yr			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	Pipeline Quality		1,020 Btu/scf

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	See Appendix A	
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
	See Appendix A	
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>See Appendix A</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

According to 40 CFR 63.6590(b)(3)(i) and 40 CFR 63.6600(c), this existing, non-emergency, SI 2SLB engine > 500 hp located at a major source of HAPs does not have any requirements under 40 CFR Part 63 Subpart ZZZZ because it was constructed prior to December 12, 2002.

Therefore, there are no specific applicable requirements for this emission unit other than those to submit a certified emission statement in accordance with Title V permit condition 3.5.4 and an annual emission inventory according to Title V permit condition 3.1.6.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

The emission unit shall track fuel usage and hours of operation in order to quantify annual emissions from this unit.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description			
Emission unit ID number: 00505	Emission unit name: Reciprocating Engine/Integral Compressor	List any control devices associated with this emission unit: NA	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): 2-cycle, lean burn			
Manufacturer: Cooper-Bessemer	Model number: GMWH-8	Serial number: NA	
Construction date: NA	Installation date: 1958	Modification date(s): NA	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 2,800 hp			
Maximum Hourly Throughput: NA	Maximum Annual Throughput: NA	Maximum Operating Schedule: 8,760	
Fuel Usage Data (fill out all applicable fields)			
Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating: 2,800 hp		Type and Btu/hr rating of burners: 8,400 Btu/hp-hr	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. Natural Gas 23,060 scf/hr / 202,005,600 scf/yr			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	Pipeline Quality		1,020 Btu/scf

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	See Appendix A	
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants		
	PPH	TPY
	See Appendix A	
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>See Appendix A</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

According to 40 CFR 63.6590(b)(3)(i) and 40 CFR 63.6600(c), this existing, non-emergency, SI 2SLB engine > 500 hp located at a major source of HAPs does not have any requirements under 40 CFR Part 63 Subpart ZZZZ because it was constructed prior to December 12, 2002.

Therefore, there are no specific applicable requirements for this emission unit other than those to submit a certified emission statement in accordance with Title V permit condition 3.5.4 and an annual emission inventory according to Title V permit condition 3.1.6.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

The emission unit shall track fuel usage and hours of operation in order to quantify annual emissions from this unit.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description			
Emission unit ID number: 00506	Emission unit name: Reciprocating Engine/Integral Compressor	List any control devices associated with this emission unit: NA	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): 2-cycle, lean burn			
Manufacturer: Cooper-Bessemer	Model number: GMWH-8	Serial number: NA	
Construction date: NA	Installation date: 1960	Modification date(s): NA	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 2,800 hp			
Maximum Hourly Throughput: NA	Maximum Annual Throughput: NA	Maximum Operating Schedule: 8,760	
Fuel Usage Data (fill out all applicable fields)			
Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating: 2,800 hp		Type and Btu/hr rating of burners: 8,400 Btu/hp-hr	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. Natural Gas 23,060 scf/hr / 202,005,600 scf/yr			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	Pipeline Quality		1,020 Btu/scf

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	See Appendix A	
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants		
	PPH	TPY
	See Appendix A	
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>See Appendix A</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

According to 40 CFR 63.6590(b)(3)(i) and 40 CFR 63.6600(c), this existing, non-emergency, SI 2SLB engine > 500 hp located at a major source of HAPs does not have any requirements under 40 CFR Part 63 Subpart ZZZZ because it was constructed prior to December 12, 2002.

Therefore, there are no specific applicable requirements for this emission unit other than those to submit a certified emission statement in accordance with Title V permit condition 3.5.4 and an annual emission inventory according to Title V permit condition 3.1.6.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

The emission unit shall track fuel usage and hours of operation in order to quantify annual emissions from this unit.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description			
Emission unit ID number: 00507	Emission unit name: Reciprocating Engine/Integral Compressor	List any control devices associated with this emission unit: NA	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): 2-cycle, lean burn			
Manufacturer: Cooper-Bessemer	Model number: 8V-250	Serial number: NA	
Construction date: NA	Installation date: 1965	Modification date(s): NA	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 2,700 hp			
Maximum Hourly Throughput: NA	Maximum Annual Throughput: NA	Maximum Operating Schedule: 8,760	
Fuel Usage Data (fill out all applicable fields)			
Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating: 2,700 hp		Type and Btu/hr rating of burners: 7,800 Btu/hp-hr	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. Natural Gas 20,647 scf/hr / 180,867,720 scf/yr			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	Pipeline Quality		1,020 Btu/scf

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	See Appendix A	
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
	See Appendix A	
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>See Appendix A</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

According to 40 CFR 63.6590(b)(3)(i) and 40 CFR 63.6600(c), this existing, non-emergency, SI 2SLB engine > 500 hp located at a major source of HAPs does not have any requirements under 40 CFR Part 63 Subpart ZZZZ because it was constructed prior to December 12, 2002.

Therefore, there are no specific applicable requirements for this emission unit other than those to submit a certified emission statement in accordance with Title V permit condition 3.5.4 and an annual emission inventory according to Title V permit condition 3.1.6.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

The emission unit shall track fuel usage and hours of operation in order to quantify annual emissions from this unit.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description			
Emission unit ID number: 00508	Emission unit name: Turbine Engine/Centrifugal Compressor	List any control devices associated with this emission unit: NA	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): Turbine Engine/Centrifugal Compressor			
Manufacturer: General Electric	Model number: 3912R	Serial number: NA	
Construction date: NA	Installation date: 1967	Modification date(s): NA	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 10,200 hp			
Maximum Hourly Throughput: NA	Maximum Annual Throughput: NA	Maximum Operating Schedule: 8,760	
Fuel Usage Data (fill out all applicable fields)			
Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating: 10,200 hp		Type and Btu/hr rating of burners: 9,200 Btu/hp-hr	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. Natural Gas 92,000 scf/hr / 805,920,000 scf/yr			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	Pipeline Quality		1,020 Btu/scf

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	See Appendix A	
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants		
	PPH	TPY
	See Appendix A	
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>See Appendix A</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

According to 40 CFR 60.330(b), 40 CFR 60.4305(a) and 40 CFR 63.6090(b)(4) this existing, stationary turbine located at a major source of HAPs does not have any specific applicable requirements other than to submit a certified emission statement in accordance with Title V permit condition 3.5.4 and an annual emission inventory according to Title V permit condition 3.1.6.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

The emission unit shall document its operating schedule in order to quantify annual emissions from this unit.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description			
Emission unit ID number: 00509	Emission unit name: Turbine Engine/Centrifugal Compressor	List any control devices associated with this emission unit: NA	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): Turbine Engine/Centrifugal Compressor			
Manufacturer: General Electric	Model number: 3112R	Serial number: NA	
Construction date: NA	Installation date: 1971	Modification date(s): NA	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 12,500 hp			
Maximum Hourly Throughput: NA	Maximum Annual Throughput: NA	Maximum Operating Schedule: 8,760	
Fuel Usage Data (fill out all applicable fields)			
Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating: 12,500 hp		Type and Btu/hr rating of burners: 9,200 Btu/hp-hr	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. Natural Gas 112,745 scf/hr / 987,646,200 scf/yr			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	Pipeline Quality		1,020 Btu/scf

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	See Appendix A	
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants		
	PPH	TPY
	See Appendix A	
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>See Appendix A</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

According to 40 CFR 60.330(b), 40 CFR 60.4305(a) and 40 CFR 63.6090(b)(4) this existing, stationary turbine located at a major source of HAPs does not have any specific applicable requirements other than to submit a certified emission statement in accordance with Title V permit condition 3.5.4 and an annual emission inventory according to Title V permit condition 3.1.6.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

The emission unit shall document its operating schedule in order to quantify annual emissions from this unit.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description			
Emission unit ID number: BLR3	Emission unit name: Heating System Boiler	List any control devices associated with this emission unit: NA	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): Heating boiler			
Manufacturer: Hurst	Model number: NA	Serial number: NA	
Construction date: NA	Installation date: 2012	Modification date(s): NA	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 6.276 mmBtu/hr			
Maximum Hourly Throughput: NA	Maximum Annual Throughput: NA	Maximum Operating Schedule: 8,760	
Fuel Usage Data (fill out all applicable fields)			
Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		If yes, is it? <input checked="" type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating: 6.276 mmBtu/hr		Type and Btu/hr rating of burners: 6.276 mmBtu/hr	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. Natural Gas 6,153 scf/hr / 53,900,000 scf/yr			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	Pipeline Quality		1,020 Btu/scf

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	See Appendix A	
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
	See Appendix A	
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>See Appendix A</p>		

Applicable Requirements		
<p>List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.</p> <p>45CSR34, 40 C.F.R. 63.7500(a)(1)&(3) and Table 3, Item 1 – Tune Up Requirement Work Practice 40 C.F.R. 63.7510(g) Initial Compliance Demonstration Date for New Sources. 40 C.F.R. 63.7540(a)(10) & (a)(12) Tune up Requirements and Schedule</p>		
<input checked="" type="checkbox"/> Permit Shield		
<p>For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)</p> <p>40 C.F.R. 63.7515(d) Tune up Test Frequency 40 C.F.R. 63.7555(a)(1) Record of Each Notification & Report 40 C.F.R. 63.7560 Requirement for Maintaining Records 40 C.F.R. 63.7545(e)(1)&(e)(8) Notification of Compliance Status Reporting Requirements. 40 C.F.R. 63.7550(b) & (b)(5) Report Submission – Semi Annual for Title V sources 40 C.F.R. 63.7550(c)(1), (c)(5)(i)-(iii), (c)(xiv), and (c)(xvii) Content of compliance reports.</p>		
<p>Are you in compliance with all applicable requirements for this emission unit? <input checked="" type="checkbox"/> Yes ___ No</p> <p>If no, complete the Schedule of Compliance Form as ATTACHMENT F.</p>		

ATTACHMENT E - Emission Unit Form		
<i>Emission Unit Description</i>		
Emission unit ID number: HTR1	Emission unit name: Fuel Gas Heater	List any control devices associated with this emission unit: NA
Provide a description of the emission unit (type, method of operation, design parameters, etc.): Fuel Gas Heater		
Manufacturer: FLAMECO	Model number: FAH14	Serial number: NA
Construction date: NA	Installation date: 1998	Modification date(s): NA
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 0.375 mmBtu/hr		

Maximum Hourly Throughput: NA	Maximum Annual Throughput: NA	Maximum Operating Schedule: 8,760	
Fuel Usage Data (fill out all applicable fields)			
Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		If yes, is it? <input checked="" type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating: 0.375 mmBtu/hr		Type and Btu/hr rating of burners: 0.375 mmBtu/hr	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. Natural Gas 343.6 scf/hr / 3,010,000 scf/yr			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	Pipeline Quality		1,020 Btu/scf
Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)	See Appendix A		
Nitrogen Oxides (NO _x)			
Lead (Pb)			
Particulate Matter (PM _{2.5})			
Particulate Matter (PM ₁₀)			
Total Particulate Matter (TSP)			
Sulfur Dioxide (SO ₂)			
Volatile Organic Compounds (VOC)			
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
	See Appendix A		

Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>See Appendix A</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or **construction permit** with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

45CSR34, 40 C.F.R. 63.7500(a)(1)&(3) and Table 3, Item 1 – Tune Up Requirement Work Practice
40 C.F.R. 63.7510(e) Initial Compliance Date for Existing Sources
40 C.F.R. 63.7540(a)(10) & (a)(12) Tune up Requirements and Schedule

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

40 C.F.R. 63.7515(d) Tune up Test Frequency
40 C.F.R. 63.7555(a)(1) Record of Each Notification & Report
40 C.F.R. 63.7560 Requirement for Maintaining Records
40 C.F.R. 63.7530 (e) & (f) Initial Compliance for Existing Source Energy Assessment Requirements
40 C.F.R. 63.7545(e)(1)&(e)(8) Notification of Compliance Status Reporting Requirements.
40 C.F.R. 63.7550(b) & (b)(5) Report Submission – Semi Annual for Title V sources
40 C.F.R. 63.7550(c)(1), (c)(5)(i)-(iii), (c)(xiv), and (c)(xvii) Content of compliance reports.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT F

SCHEDULE OF COMPLIANCE FORM (NOT APPLICABLE)

Title V Operating Permit Renewal Application

**Ceredo Compressor Station, Facility ID No. 099-00013
Ceredo, West Virginia**

Columbia Gas Transmission, LLC
1700 MacCorkle Avenue, SE
Charleston, West Virginia

April 2016

ATTACHMENT G

AIR POLLUTION CONTROL DEVICE FORM (NOT APPLICABLE)

Title V Operating Permit Renewal Application

**Ceredo Compressor Station, Facility ID No. 099-00013
Ceredo, West Virginia**

Columbia Gas Transmission, LLC
1700 MacCorkle Avenue, SE
Charleston, West Virginia

April 2016

ATTACHMENT H

**COMPLIANCE ASSURANCE MONITORING FORM (NOT
APPLICABLE)**

Title V Operating Permit Renewal Application

**Ceredo Compressor Station, Facility ID No. 099-00013
Ceredo, West Virginia**

Columbia Gas Transmission, LLC
1700 MacCorkle Avenue, SE
Charleston, West Virginia

April 2016

APPENDIX A

SUPPORTING CALCULATIONS

Title V Operating Permit Renewal Application

Ceredo Compressor Station, Facility ID No. 099-00013
Ceredo, West Virginia

Columbia Gas Transmission, LLC
1700 MacCorkle Avenue, SE
Charleston, West Virginia

April 2016

**Table 1. Annual Potential To Emit (PTE) Summary
Columbia Pipeline Group - Ceredo Compressor Station**

Criteria Pollutants

Proposed PTE - Criteria Pollutants

Source	PM	PM10	PM2.5	SO2	NOx	CO	VOC	CO2e
Engines (ton/yr)	29.018	29.018	29.018	1.157	4084.048	329.349	94.294	193478.227
Heaters/Boilers/Reboilers (ton/yr)	0.054	0.054	0.054	0.020	2.845	2.390	0.156	3395.847
Storage Tanks (ton/yr)	-	-	-	-	-	-	2.504	-
Fugitives (ton/yr)	-	-	-	-	-	-	1.010	23.476
Total Emissions (ton/yr)	29.072	29.072	29.072	1.177	4086.893	331.739	97.963	196897.550
Total Emissions (lb/hr)	6.637	6.637	6.637	0.269	933.081	75.740	22.366	44953.779

Hazardous Air Pollutants (HAPs)

Proposed PTE - HAPs

Source	Acetaldehyde	Benzene	Toluene	Ethylbenzene	Xylene	n-Hexane	Formaldehyde	Total HAPs
Engines (ton/yr)	5.7666	1.3955	0.7491	0.4999	0.2219	0.3477	41.005	49.986
Heaters/Boilers/Reboilers (ton/yr)	-	0.0001	0.0001	-	-	0.0512	0.002	0.054
Storage Tanks (ton/yr)	-	-	-	-	-	-	-	0.000
Fugitives (ton/yr)	-	-	-	-	-	-	-	0.000
Total Emissions (ton/yr)	5.767	1.396	0.749	0.500	0.222	0.399	41.007	50.040
Total Emissions (lb/hr)	1.317	0.319	0.171	0.114	0.051	0.091	9.362	11.425

Table 2. Reciprocating Engine / Integral Compressor Emissions (E01 - E06)
Cooper-Bessmer GMWH-8; 2SLB
Columbia Pipeline Group - Ceredo Compressor Station

Pollutant	Maximum Hourly Emissions		Annual Emissions	
	Emission Factor	PTE per Engine (lb/hr)	Emission Factor	PTE per Engine (tons/yr)
Criteria Pollutants				
PM/PM10/PM2.5	3.84E-02 lb/MMBtu (1)	0.90 (a)	3.84E-02 lb/MMBtu (1)	3.96 (c)
SO ₂	0.25 grains S / 100 ft ³ (2)	0.02 (e)	0.25 grains S / 100 ft ³ (2)	0.07 (f)
NOx	4.01E-02 lb/hp-hr (3)	112.28 (b)	4.01E-02 lb/hp-hr (3)	491.79 (d)
CO	2.86E-03 lb/hp-hr (3)	8.01 (b)	2.86E-03 lb/hp-hr (3)	35.08 (d)
VOC	1.20E-01 lb/MMBtu (1)	2.82 (a)	1.20E-01 lb/MMBtu (1)	12.36 (c)
Hazardous Air Pollutants				
1,1,2,2-Tetrachloroethane	6.63E-05 lb/MMBtu (1)	0.002 (a)	6.63E-05 lb/MMBtu (1)	0.007 (c)
1,1,2-Trichloroethane	5.27E-05 lb/MMBtu (1)	0.001 (a)	5.27E-05 lb/MMBtu (1)	0.005 (c)
1,3-Butadiene	8.20E-04 lb/MMBtu (1)	0.019 (a)	8.20E-04 lb/MMBtu (1)	0.084 (c)
1,3-Dichloropropene	4.38E-05 lb/MMBtu (1)	0.001 (a)	4.38E-05 lb/MMBtu (1)	0.005 (c)
2-Methylnapthalene	2.14E-05 lb/MMBtu (1)	0.001 (a)	2.14E-05 lb/MMBtu (1)	0.002 (c)
2,2,4-Trimethylpentane	8.46E-04 lb/MMBtu (1)	0.020 (a)	8.46E-04 lb/MMBtu (1)	0.087 (c)
Acetaldehyde	7.76E-03 lb/MMBtu (1)	0.183 (a)	7.76E-03 lb/MMBtu (1)	0.799 (c)
Acrolein	7.78E-03 lb/MMBtu (1)	0.183 (a)	7.78E-03 lb/MMBtu (1)	0.801 (c)
Benzene	1.94E-03 lb/MMBtu (1)	0.046 (a)	1.94E-03 lb/MMBtu (1)	0.200 (c)
Biphenyl	3.95E-06 lb/MMBtu (1)	0.000 (a)	3.95E-06 lb/MMBtu (1)	0.000 (c)
Carbon Tetrachloride	6.07E-05 lb/MMBtu (1)	0.001 (a)	6.07E-05 lb/MMBtu (1)	0.006 (c)
Chlorobenzene	4.44E-05 lb/MMBtu (1)	0.001 (a)	4.44E-05 lb/MMBtu (1)	0.005 (c)
Chloroform	4.71E-05 lb/MMBtu (1)	0.001 (a)	4.71E-05 lb/MMBtu (1)	0.005 (c)
Ethylbenzene	1.08E-04 lb/MMBtu (1)	0.003 (a)	1.08E-04 lb/MMBtu (1)	0.011 (c)
Ethylene Dibromide	7.34E-05 lb/MMBtu (1)	0.002 (a)	7.34E-05 lb/MMBtu (1)	0.008 (c)
Formaldehyde	5.52E-02 lb/MMBtu (1)	1.298 (a)	5.52E-02 lb/MMBtu (1)	5.687 (c)
Methanol	2.48E-03 lb/MMBtu (1)	0.058 (a)	2.48E-03 lb/MMBtu (1)	0.255 (c)
Methylene Chloride	1.47E-04 lb/MMBtu (1)	0.003 (a)	1.47E-04 lb/MMBtu (1)	0.015 (c)
n-Hexane	4.45E-04 lb/MMBtu (1)	0.010 (a)	4.45E-04 lb/MMBtu (1)	0.046 (c)
Naphthalene	9.63E-05 lb/MMBtu (1)	0.002 (a)	9.63E-05 lb/MMBtu (1)	0.010 (c)
PAH (POM)	1.34E-04 lb/MMBtu (1)	0.003 (a)	1.34E-04 lb/MMBtu (1)	0.014 (c)
Phenol	4.21E-05 lb/MMBtu (1)	0.001 (a)	4.21E-05 lb/MMBtu (1)	0.004 (c)
Styrene	5.48E-05 lb/MMBtu (1)	0.001 (a)	5.48E-05 lb/MMBtu (1)	0.006 (c)
Toluene	9.63E-04 lb/MMBtu (1)	0.023 (a)	9.63E-04 lb/MMBtu (1)	0.099 (c)
Vinyl Chloride	2.47E-05 lb/MMBtu (1)	0.001 (a)	2.47E-05 lb/MMBtu (1)	0.003 (c)
Xylenes	2.68E-04 lb/MMBtu (1)	0.006 (a)	2.68E-04 lb/MMBtu (1)	0.028 (c)
Total HAP		1.870		8.192
Greenhouse Gas Emissions				
CO ₂	116.89 lb/MMBtu (4)	2749.23 (a)	116.89 lb/MMBtu (4)	12041.63 (c)
CH ₄	2.2E-03 lb/MMBtu (4)	0.05 (a)	2.2E-03 lb/MMBtu (4)	0.23 (c)
N ₂ O	2.2E-04 lb/MMBtu (4)	0.01 (a)	2.2E-04 lb/MMBtu (4)	0.02 (c)
CO ₂ e ^(g)	-	2752.07	-	12054.08

Calculations:

Maximum Hourly Emissions - If emission factor note 1 or 4 is used, use calculation (a). If emission factor note 3 is used, use calculation (b).

(a) Maximum Hourly Emissions (lb/hr) = Emission factor (lb/MMBtu) * (1MMBtu/1000000 Btu) * Engine Power Output (hp) * Average BSFC (Btu/hp-hr)

(b) Maximum Hourly Emissions (lb/hr) = Emission factor (lb/hp-hr) * Engine Power Output (hp)

Annual Emissions - If emission factor note 1 or 4 is used, use calculation (c). If emission factor note 3 is used, use calculation (d).

(c) Annual emissions (tons/yr) = Emission factor (lb/MMBtu) * (1MMBtu/1000000Btu) * Engine Power Output (hp) * Average BSFC (Btu/hp-hr) * Annual Hours of operation (hr/yr) * (1ton/2000lbs)

(d) Annual emissions (tons/yr) = Emission factor (lb/hp-hr) * Engine Power Output (hp) * Annual Hours of operation (hr/yr) * (1ton/2000lbs)

SO₂ Emissions - If emission factor note 2 is used, use calculations (e) and (f) for hourly and annual emissions, respectively.

(e) Maximum Hourly Emissions SO₂ Cacluation (lb/hr) = (0.25 grain S/100ft³) * Fuel throughput (ft³/hr) * (1lb/7000 grains) * (lbmol S/32.06 lb S) * (lbmol SO₂/ lbmol S) * (64.07 lb SO₂/lbmol SO₂)

(f) Annual Emissions SO₂ Cacluation (ton/yr) = (0.25 grain S/100ft³) * Fuel throughput (ft³/hr) * (1lb/7000 grains) * (lbmol S/32.06 lb S) * (lbmol SO₂/ lbmol S) * (64.07 lb SO₂/lbmol SO₂) * Annual hours of operation (hr/yr) * (1ton/2000lbs)

MAXIMUM HOURLY EMISSION INPUTS	
Engine Power Output (kW) =	2088
Engine Power Output (hp) =	2,800
Number of Engines =	6
Average BSFC (BTU/HP-hr) =	8,400 (5)
Heat Content Natural Gas(Btu/scf) =	1,020.0 (6)
Fuel Throughput (ft ³ /hr) =	23,058.8 (7)
PTE Hours of Operation =	1

ANNUAL EMISSION INPUTS	
Engine Power Output (kW) =	2088
Engine Power Output (hp) =	2,800
Number of Engines =	6
Average BSFC (BTU/HP-hr) =	8,400 (5)
Heat Content Natural Gas(Btu/scf) =	1,020.0 (6)
Fuel Throughput (ft ³ /hr) =	23,058.8 (7)
PTE Hours of Operation =	8,760

(g) CO₂ equivalent = [(CO₂ emissions)*(GWP_{CO2})]+[(CH₄ emissions)*(GWP_{CH4})]+[(N₂O emissions)*(GWP_{N2O})]
 Global Warming Potential (GWP)

CO ₂	1	(8)
CH ₄	25	(8)
N ₂ O	298	(8)

Notes:

- AP-42, Chapter 3.2, Table 3.2-1. *Natural Gas-fired Reciprocating Engines* (7/00). Uncontrolled Emission Factors for 2-Stroke Lean-Burn Engines.
- AP-42, Chapter 5.3, Section 5.3.1
- Emission Factors derived from Stack Test Data
- Emission factors are from 40 CFR 98, Subpart C, Table C-1 and C-2.
- Fuel consumption from manufacturer's specification sheet.
- Value obtained from AP-42, Chapter 3.2, Table 3.2-1, footnote b
- Fuel throughput = BSFC (BTU/HP-hr) x Power (HP) / Heat Content (BTU/scf)
- Global Warming Potentials obtained from 40 CFR 98, Subpart A, Table A-1

Table 3. Reciprocating Engine / Integral Compressor Emissions (E07)
Cooper-Bessemer 8V-250; 2SLB
Columbia Pipeline Group - Ceredo Compressor Station

Pollutant	Maximum Hourly Emissions		Annual Emissions	
	Emission Factor	PTE per Engine (lb/hr)	Emission Factor	PTE per Engine (tons/yr)
Criteria Pollutants				
PM/PM10/PM2.5	3.84E-02 lb/MMBtu (1)	0.81 (a)	3.84E-02 lb/MMBtu (1)	3.54 (c)
SO ₂	0.25 grains S / 100 ft ³ (2)	0.01 (e)	0.25 grains S / 100 ft ³ (2)	0.06 (f)
NOx	5.00E-02 lb/hp-hr (3)	135.00 (b)	5.00E-02 lb/hp-hr (3)	591.30 (d)
CO	3.30E-03 lb/hp-hr (3)	8.91 (b)	3.30E-03 lb/hp-hr (3)	39.03 (d)
VOC	1.20E-01 lb/MMBtu (1)	2.53 (a)	1.20E-01 lb/MMBtu (1)	11.07 (c)
Hazardous Air Pollutants				
1,1,2,2-Tetrachloroethane	6.63E-05 lb/MMBtu (1)	0.001 (a)	6.63E-05 lb/MMBtu (1)	0.006 (c)
1,1,2-Trichloroethane	5.27E-05 lb/MMBtu (1)	0.001 (a)	5.27E-05 lb/MMBtu (1)	0.005 (c)
1,3-Butadiene	8.20E-04 lb/MMBtu (1)	0.017 (a)	8.20E-04 lb/MMBtu (1)	0.076 (c)
1,3-Dichloropropene	4.38E-05 lb/MMBtu (1)	0.001 (a)	4.38E-05 lb/MMBtu (1)	0.004 (c)
2-Methylnaphthalene	2.14E-05 lb/MMBtu (1)	0.000 (a)	2.14E-05 lb/MMBtu (1)	0.002 (c)
2,2,4-Trimethylpentane	8.46E-04 lb/MMBtu (1)	0.018 (a)	8.46E-04 lb/MMBtu (1)	0.078 (c)
Acetaldehyde	7.76E-03 lb/MMBtu (1)	0.163 (a)	7.76E-03 lb/MMBtu (1)	0.716 (c)
Acrolein	7.78E-03 lb/MMBtu (1)	0.164 (a)	7.78E-03 lb/MMBtu (1)	0.718 (c)
Benzene	1.94E-03 lb/MMBtu (1)	0.041 (a)	1.94E-03 lb/MMBtu (1)	0.179 (c)
Biphenyl	3.95E-06 lb/MMBtu (1)	0.000 (a)	3.95E-06 lb/MMBtu (1)	0.000 (c)
Carbon Tetrachloride	6.07E-05 lb/MMBtu (1)	0.001 (a)	6.07E-05 lb/MMBtu (1)	0.006 (c)
Chlorobenzene	4.44E-05 lb/MMBtu (1)	0.001 (a)	4.44E-05 lb/MMBtu (1)	0.004 (c)
Chloroform	4.71E-05 lb/MMBtu (1)	0.001 (a)	4.71E-05 lb/MMBtu (1)	0.004 (c)
Ethylbenzene	1.08E-04 lb/MMBtu (1)	0.002 (a)	1.08E-04 lb/MMBtu (1)	0.010 (c)
Ethylene Dibromide	7.34E-05 lb/MMBtu (1)	0.002 (a)	7.34E-05 lb/MMBtu (1)	0.007 (c)
Formaldehyde	5.52E-02 lb/MMBtu (1)	1.163 (a)	5.52E-02 lb/MMBtu (1)	5.092 (c)
Methanol	2.48E-03 lb/MMBtu (1)	0.052 (a)	2.48E-03 lb/MMBtu (1)	0.229 (c)
Methylene Chloride	1.47E-04 lb/MMBtu (1)	0.003 (a)	1.47E-04 lb/MMBtu (1)	0.014 (c)
n-Hexane	4.45E-04 lb/MMBtu (1)	0.009 (a)	4.45E-04 lb/MMBtu (1)	0.041 (c)
Naphthalene	9.63E-05 lb/MMBtu (1)	0.002 (a)	9.63E-05 lb/MMBtu (1)	0.009 (c)
PAH (POM)	1.34E-04 lb/MMBtu (1)	0.003 (a)	1.34E-04 lb/MMBtu (1)	0.012 (c)
Phenol	4.21E-05 lb/MMBtu (1)	0.001 (a)	4.21E-05 lb/MMBtu (1)	0.004 (c)
Styrene	5.48E-05 lb/MMBtu (1)	0.001 (a)	5.48E-05 lb/MMBtu (1)	0.005 (c)
Toluene	9.63E-04 lb/MMBtu (1)	0.020 (a)	9.63E-04 lb/MMBtu (1)	0.089 (c)
Vinyl Chloride	2.47E-05 lb/MMBtu (1)	0.001 (a)	2.47E-05 lb/MMBtu (1)	0.002 (c)
Xylenes	2.68E-04 lb/MMBtu (1)	0.006 (a)	2.68E-04 lb/MMBtu (1)	0.025 (c)
Total HAP		1.675		7.335
Greenhouse Gas Emissions				
CO ₂	116.89 lb/MMBtu (4)	2461.68 (a)	116.89 lb/MMBtu (4)	10782.18 (c)
CH ₄	2.2E-03 lb/MMBtu (4)	0.05 (a)	2.2E-03 lb/MMBtu (4)	0.20 (c)
N ₂ O	2.2E-04 lb/MMBtu (4)	0.00 (a)	2.2E-04 lb/MMBtu (4)	0.02 (c)
CO ₂ e ^(g)	-	2464.23	-	10793.32

Calculations:

Maximum Hourly Emissions - If emission factor note 1 or 4 is used, use calculation (a). If emission factor note 3 is used, use calculation (b).

(a) Maximum Hourly Emissions (lb/hr) = Emission factor (lb/MMBtu) * (1MMBtu/1000000 Btu) * Engine Power Output (hp) * Average BSFC (Btu/hp-hr)

(b) Maximum Hourly Emissions (lb/hr) = Emission factor (lb/hp-hr) * Engine Power Output (hp)

Annual Emissions - If emission factor note 1 or 4 is used, use calculation (c). If emission factor note 3 is used, use calculation (d).

(c) Annual emissions (tons/yr) = Emission factor (lb/MMBtu) * (1MMBtu/1000000Btu) * Engine Power Output (hp) * Average BSFC (Btu/hp-hr) * Annual Hours of operation (hr/yr) * (1ton/2000lbs)

(d) Annual emissions (tons/yr) = Emission factor (lb/hp-hr) * Engine Power Output (hp) * Annual Hours of operation (hr/yr) * (1ton/2000lbs)

SO₂ Emissions - If emission factor note 2 is used, use calculations (e) and (f) for hourly and annual emissions, respectively.

(e) Maximum Hourly Emissions SO₂ Calculation (lb/hr) = (0.25 grain S/100ft³) * Fuel throughput (ft³/hr) * (1lb/7000 grains) * (lbmol S/32.06 lb S) * (lbmol SO₂/lbmol S) * (64.07 lb SO₂/lbmol SO₂)

(f) Annual Emissions SO₂ Calculation (ton/yr) = (0.25 grain S/100ft³) * Fuel throughput (ft³/hr) * (1lb/7000 grains) * (lbmol S/32.06 lb S) * (lbmol SO₂/lbmol S) * (64.07 lb SO₂/lbmol SO₂) * Annual hours of operation (hr/yr) * (1ton/2000lbs)

MAXIMUM HOURLY EMISSION INPUTS	
Engine Power Output (kW) =	2013
Engine Power Output (hp) =	2,700
Number of Engines =	1
Average BSFC (BTU/HP-hr) =	7,800 (5)
Heat Content Natural Gas(Btu/scf) =	1,020.0 (6)
Fuel Throughput (ft ³ /hr) =	20,647.1 (7)
PTE Hours of Operation =	1

ANNUAL EMISSION INPUTS	
Engine Power Output (kW) =	2013
Engine Power Output (hp) =	2,700
Number of Engines =	1
Average BSFC (BTU/HP-hr) =	7,800 (5)
Heat Content Natural Gas(Btu/scf) =	1,020.0 (6)
Fuel Throughput (ft ³ /hr) =	20,647.1 (7)
PTE Hours of Operation =	8,760

(g) CO₂ equivalent = [(CO₂ emissions)*(GWP_{CO2})]+[(CH₄ emissions)*(GWP_{CH4})]+[(N₂O emissions)*(GWP_{N2O})]
 Global Warming Potential (GWP)

CO ₂	1	(8)
CH ₄	25	(8)
N ₂ O	298	(8)

Notes:

- AP-42, Chapter 3.2, Table 3.2-1. *Natural Gas-fired Reciprocating Engines* (7/00). Uncontrolled Emission Factors for 2-Stroke Lean-Burn Engines.
- AP-42, Chapter 5.3, Section 5.3.1
- Emission Factors derived from Stack Test Data
- Emission factors are from 40 CFR 98, Subpart C, Table C-1 and C-2.
- Fuel consumption from manufacturer's specification sheet.
- Value obtained from AP-42, Chapter 3.2, Table 3.2-1, footnote b
- Fuel throughput = BSFC (BTU/HP-hr) x Power (HP) / Heat Content (BTU/scf)
- Global Warming Potentials obtained from 40 CFR 98, Subpart A, Table A-1

Table 4. Turbine Engine / Centrifugal Compressor Emissions (E08)
General Electric 3912R Turbine
Columbia Pipeline Group - Ceredo Compressor Station

Pollutant	Maximum Hourly Emissions				Annual Emissions			
	Emission Factor		PTE per Engine (lb/hr)		Emission Factor		PTE per Engine (tons/yr)	
Criteria Pollutants								
PM/PM10/PM2.5	1.90E-03 lb/MMBtu	(1)	0.18	(a)	1.90E-03 lb/MMBtu	(1)	0.78	(c)
SO ₂	0.25 grains S / 100 ft ³	(2)	0.07	(e)	0.25 grains S / 100 ft ³	(2)	0.29	(f)
NOx	5.95E-03 lb/hp-hr	(3)	60.69	(b)	5.95E-03 lb/hp-hr	(3)	265.82	(d)
CO	4.41E-04 lb/hp-hr	(3)	4.50	(b)	4.41E-04 lb/hp-hr	(3)	19.70	(d)
VOC	2.10E-03 lb/MMBtu	(1)	0.20	(a)	2.10E-03 lb/MMBtu	(1)	0.86	(c)
Hazardous Air Pollutants								
1,3-Butadiene	4.30E-07 lb/MMBtu	(4)	0.000	(a)	4.30E-07 lb/MMBtu	(4)	0.000	(c)
Acetaldehyde	4.00E-05 lb/MMBtu	(4)	0.004	(a)	4.00E-05 lb/MMBtu	(4)	0.016	(c)
Acrolein	6.40E-06 lb/MMBtu	(4)	0.001	(a)	6.40E-06 lb/MMBtu	(4)	0.003	(c)
Benzene	1.20E-05 lb/MMBtu	(4)	0.001	(a)	1.20E-05 lb/MMBtu	(4)	0.005	(c)
Ethylbenzene	3.20E-05 lb/MMBtu	(4)	0.003	(a)	3.20E-05 lb/MMBtu	(4)	0.013	(c)
Formaldehyde	7.10E-04 lb/MMBtu	(4)	0.067	(a)	7.10E-04 lb/MMBtu	(4)	0.292	(c)
Naphthalene	1.30E-06 lb/MMBtu	(4)	0.000	(a)	1.30E-06 lb/MMBtu	(4)	0.001	(c)
PAH (POM)	2.20E-06 lb/MMBtu	(4)	0.000	(a)	2.20E-06 lb/MMBtu	(4)	0.001	(c)
Phenol	2.90E-05 lb/MMBtu	(4)	0.003	(a)	2.90E-05 lb/MMBtu	(4)	0.012	(c)
Toluene	1.30E-04 lb/MMBtu	(4)	0.012	(a)	1.30E-04 lb/MMBtu	(4)	0.053	(c)
Xylenes	6.40E-05 lb/MMBtu	(4)	0.006	(a)	6.40E-05 lb/MMBtu	(4)	0.026	(c)
Total HAP			0.096				0.422	
Greenhouse Gas Emissions								
CO ₂	116.89 lb/MMBtu	(5)	10968.87	(a)	116.89 lb/MMBtu	(5)	48043.66	(c)
CH ₄	2.2E-03 lb/MMBtu	(5)	0.21	(a)	2.2E-03 lb/MMBtu	(5)	0.91	(c)
N ₂ O	2.2E-04 lb/MMBtu	(5)	0.02	(a)	2.2E-04 lb/MMBtu	(5)	0.09	(c)
CO ₂ e ^(g)	-	-	10980.21		-	-	48093.32	

Calculations:

Maximum Hourly Emissions - If emission factor note 1, 4 or 5 is used, use calculation (a). If emission factor note 3 is used, use calculation (b).

(a) Maximum Hourly Emissions (lb/hr) = Emission factor (lb/MMBtu) * (1MMBtu/1000000 Btu) * Engine Power Output (hp) * Average BSFC (Btu/hp-hr)

(b) Maximum Hourly Emissions (lb/hr) = Emission factor (lb/hp-hr) * Engine Power Output (hp)

Annual Emissions - If emission factor note 1, 4 or 5 is used, use calculation (c). If emission factor note 3 is used, use calculation (d).

(c) Annual emissions (tons/yr) = Emission factor (lb/MMBtu) * (1MMBtu/1000000Btu) * Engine Power Output (hp) * Average BSFC (Btu/hp-hr) * Annual Hours of operation (hr/yr) * (1ton/2000lbs)

(d) Annual emissions (tons/yr) = Emission factor (lb/hp-hr) * Engine Power Output (hp) * Annual Hours of operation (hr/yr) * (1ton/2000lbs)

SO₂ Emissions - If emission factor note 2 is used, use calculations (e) and (f) for hourly and annual emissions, respectively.

(e) Maximum Hourly Emissions SO₂ Calculation (lb/hr) = (0.25 grain S/100ft³) * Fuel throughput (ft³/hr) * (1lb/7000 grains) * (lbmol S/32.06 lb S) * (lbmol SO₂/lbmol S) * (64.07 lb SO₂/lbmol SO₂)

(f) Annual Emissions SO₂ Calculation (ton/yr) = (0.25 grain S/100ft³) * Fuel throughput (ft³/hr) * (1lb/7000 grains) * (lbmol S/32.06 lb S) * (lbmol SO₂/lbmol S) * (64.07 lb SO₂/lbmol SO₂) * Annual hours of operation (hr/yr) * (1ton/2000lbs)

MAXIMUM HOURLY EMISSION INPUTS	
Engine Power Output (kW) =	7606
Engine Power Output (hp) =	10,200
Number of Engines =	1
Average BSFC (BTU/HP-hr) =	9,200 (6)
Heat Content Natural Gas(Btu/scf) =	1,020.0 (7)
Fuel Throughput (ft ³ /hr) =	92,000.0 (8)
PTE Hours of Operation =	1

ANNUAL EMISSION INPUTS	
Engine Power Output (kW) =	7606
Engine Power Output (hp) =	10,200
Number of Engines =	1
Average BSFC (BTU/HP-hr) =	9,200 (6)
Heat Content Natural Gas(Btu/scf) =	1,020.0 (7)
Fuel Throughput (ft ³ /hr) =	92,000.0 (8)
PTE Hours of Operation =	8,760

(g) CO₂ equivalent = [(CO₂ emissions)*(GWP_{CO2})]+[(CH₄ emissions)*(GWP_{CH4})]+[(N₂O emissions)*(GWP_{N2O})]
 Global Warming Potential (GWP)

CO ₂	1	(9)
CH ₄	25	(9)
N ₂ O	298	(9)

Notes:

- AP-42, Chapter 3.1, Table 3.1-2a - Emission Factors for Criteria Pollutants and Greenhouse Gases from Stationary Gas Turbines (4/00)
- AP-42, Chapter 5.3, Section 5.3.1
- Emission factors derived from stack test data
- AP-42, Chapter 3.1, Table 3.1-3 - Emission Factors for Hazardous Air Pollutants from Natural Gas-Fired Stationary Gas Turbines (4/00)
- Emission factors are from 40 CFR 98, Subpart C, Table C-1 and C-2.
- Fuel consumption from manufacturer's specification sheet.
- Value obtained from AP-42, Chapter 3.1, Table 3.1-2a, footnote c
- Fuel throughput = BSFC (BTU/HP-hr) x Power (HP) / Heat Content (BTU/scf)
- Global Warming Potentials obtained from 40 CFR 98, Subpart A, Table A-1

Table 5. Turbine Engine / Centrifugal Compressor Emissions (E09)
General Electric 3112R Turbine
Columbia Pipeline Group - Ceredo Compressor Station

Pollutant	Maximum Hourly Emissions				Annual Emissions			
	Emission Factor		PTE per Engine (lb/hr)		Emission Factor		PTE per Engine (tons/yr)	
Criteria Pollutants								
PM/PM10/PM2.5	1.90E-03 lb/MMBtu	(1)	0.22	(a)	1.90E-03 lb/MMBtu	(1)	0.96	(c)
SO ₂	0.25 grains S / 100 ft ³	(2)	0.08	(e)	0.25 grains S / 100 ft ³	(2)	0.35	(f)
NO _x	4.85E-03 lb/hp-hr	(3)	60.63	(b)	4.85E-03 lb/hp-hr	(3)	265.54	(d)
CO	8.20E-02 lb/MMBtu	(4)	9.43	(a)	8.20E-02 lb/MMBtu	(4)	41.30	(c)
VOC	2.10E-03 lb/MMBtu	(1)	0.24	(a)	2.10E-03 lb/MMBtu	(1)	1.06	(c)
Hazardous Air Pollutants								
1,3-Butadiene	4.30E-07 lb/MMBtu	(5)	0.000	(a)	4.30E-07 lb/MMBtu	(5)	0.000	(c)
Acetaldehyde	4.00E-05 lb/MMBtu	(5)	0.005	(a)	4.00E-05 lb/MMBtu	(5)	0.020	(c)
Acrolein	6.40E-06 lb/MMBtu	(5)	0.001	(a)	6.40E-06 lb/MMBtu	(5)	0.003	(c)
Benzene	1.20E-05 lb/MMBtu	(5)	0.001	(a)	1.20E-05 lb/MMBtu	(5)	0.006	(c)
Ethylbenzene	3.20E-05 lb/MMBtu	(5)	0.004	(a)	3.20E-05 lb/MMBtu	(5)	0.016	(c)
Formaldehyde	7.10E-04 lb/MMBtu	(5)	0.082	(a)	7.10E-04 lb/MMBtu	(5)	0.358	(c)
Naphthalene	1.30E-06 lb/MMBtu	(5)	0.000	(a)	1.30E-06 lb/MMBtu	(5)	0.001	(c)
PAH (POM)	2.20E-06 lb/MMBtu	(5)	0.000	(a)	2.20E-06 lb/MMBtu	(5)	0.001	(c)
Phenol	2.90E-05 lb/MMBtu	(5)	0.003	(a)	2.90E-05 lb/MMBtu	(5)	0.015	(c)
Toluene	1.30E-04 lb/MMBtu	(5)	0.015	(a)	1.30E-04 lb/MMBtu	(5)	0.065	(c)
Xylenes	6.40E-05 lb/MMBtu	(5)	0.007	(a)	6.40E-05 lb/MMBtu	(5)	0.032	(c)
Total HAP			0.118				0.517	
Greenhouse Gas Emissions								
CO ₂	116.89 lb/MMBtu	(6)	13442.25	(a)	116.89 lb/MMBtu	(6)	58877.04	(c)
CH ₄	2.2E-03 lb/MMBtu	(6)	0.25	(a)	2.2E-03 lb/MMBtu	(6)	1.11	(c)
N ₂ O	2.2E-04 lb/MMBtu	(6)	0.03	(a)	2.2E-04 lb/MMBtu	(6)	0.11	(c)
CO ₂ e ^(g)	-	-	13456.14				58937.89	

Calculations:

Maximum Hourly Emissions - If emission factor note 1, 4, 5 or 6 is used, use calculation (a). If emission factor note 3 is used, use calculation (b).

(a) Maximum Hourly Emissions (lb/hr) = Emission factor (lb/MMBtu) * (1MMBtu/1000000 Btu) * Engine Power Output (hp) * Average BSFC (Btu/hp-hr)

(b) Maximum Hourly Emissions (lb/hr) = Emission factor (lb/hp-hr) * Engine Power Output (hp)

Annual Emissions - If emission factor note 1, 4, 5 or 6 is used, use calculation (c). If emission factor note 3 is used, use calculation (d).

(c) Annual emissions (tons/yr) = Emission factor (lb/MMBtu) * (1MMBtu/1000000Btu) * Engine Power Output (hp) * Average BSFC (Btu/hp-hr) * Annual Hours of operation (hr/yr) * (1ton/2000lbs)

(d) Annual emissions (tons/yr) = Emission factor (lb/hp-hr) * Engine Power Output (hp) * Annual Hours of operation (hr/yr) * (1ton/2000lbs)

SO₂ Emissions - If emission factor note 2 is used, use calculations (e) and (f) for hourly and annual emissions, respectively.

(e) Maximum Hourly Emissions SO₂ Caclulation (lb/hr) = (0.25 grain S/100ft³) * Fuel throughput (ft³/hr) * (1lb/7000 grains) * (lbmol S/32.06 lb S) * (lbmol SO₂/lbmol S) * (64.07 lb SO₂/lbmol SO₂)

(f) Annual Emissions SO₂ Caclulation (ton/yr) = (0.25 grain S/100ft³) * Fuel throughput (ft³/hr) * (1lb/7000 grains) * (lbmol S/32.06 lb S) * (lbmol SO₂/lbmol S) * (64.07 lb SO₂/lbmol SO₂) * Annual hours of operation (hr/yr) * (1ton/2000lbs)

MAXIMUM HOURLY EMISSION INPUTS	
Engine Power Output (kW) =	9321
Engine Power Output (hp) =	12,500
Number of Engines =	1
Average BSFC (BTU/HP-hr) =	9,200 (7)
Heat Content Natural Gas(Btu/scf) =	1,020.0 (8)
Fuel Throughput (ft ³ /hr) =	112,745.1 (9)
PTE Hours of Operation =	1

ANNUAL EMISSION INPUTS	
Engine Power Output (kW) =	9321
Engine Power Output (hp) =	12,500
Number of Engines =	1
Average BSFC (BTU/HP-hr) =	9,200 (7)
Heat Content Natural Gas(Btu/scf) =	1,020.0 (8)
Fuel Throughput (ft ³ /hr) =	112,745.1 (9)
PTE Hours of Operation =	8,760

(g) CO₂ equivalent = [(CO₂ emissions)*(GWP_{CO2})]+[(CH₄ emissions)*(GWP_{CH4})]+[(N₂O emissions)*(GWP_{N2O})]
 Global Warming Potential (GWP)

CO ₂	1	(10)
CH ₄	25	(10)
N ₂ O	298	(10)

Notes:

(1) AP-42, Chapter 3.1, Table 3.1-2a - Emission Factors for Criteria Pollutants and Greenhouse Gases from Stationary Gas Trubines (4/00)

(2) AP-42, Chapter 5.3, Section 5.3.1

(3) Emission factors derived from stack test data

(4) AP-42, Chapter 3.1, Table 3.1-1 - Emission Factors for Nitrogen Oxides and Carbon Monoxide from Natural Gas-Fired Stationary Gas Turbines (4/00)

(5) AP-42, Chapter 3.1, Table 3.1-3 - Emission Factors for Hazardous Air Pollutants from Natural Gas-Fired Stationary Gas Turbines (4/00)

(6) Emission factors are from 40 CFR 98, Subpart C, Table C-1 and C-2.

(7) Fuel consumption from manufacturer's specification sheet.

(8) Value obtained from AP-42, Chapter 3.1, Table 3.1-2a, footnote c

(9) Fuel throughput = BSFC (BTU/HP-hr) x Power (HP) / Heat Content (BTU/scf)

(10) Global Warming Potentials obtained from 40 CFR 98, Subpart A, Table A-1

Table 6. Reciprocating Engine / Generator Emissions (G3)
Waukesha 3521GL; 4SLB
Columbia Pipeline Group - Ceredo Compressor Station

Pollutant	Emission Factor	PTE (lb/hr)	PTE (ton/yr)
Criteria Pollutants			
PM/PM10/PM2.5	7.71E-05 lb/MMBtu (1)	0.001 (a)	0.002 (b)
SO ₂	0.25 grains S / 100 ft ³ (2)	0.005	0.020 (f)
NO _x	3.00E-03 lb/hp-hr (3)	2.44 (c)	10.67 (d)
CO	5.31E-03 lb/hp-hr (3)	4.31 (c)	18.87 (d)
VOC	2.01E-03 lb/hp-hr (3)	1.63 (c)	7.13 (d)
Hazardous Air Pollutants			
1,1,2,2-Tetrachloroethane	4.00E-05 lb/MMBtu (1)	0.000 (a)	0.001 (b)
1,1,2-Trichloroethane	3.18E-05 lb/MMBtu (1)	0.000 (a)	0.001 (b)
1,3-Butadiene	2.67E-04 lb/MMBtu (1)	0.002 (a)	0.008 (b)
1,3-Dichloropropene	2.64E-05 lb/MMBtu (1)	0.000 (a)	0.001 (b)
2-Methylnaphthalene	3.32E-05 lb/MMBtu (1)	0.000 (a)	0.001 (b)
2,2,4-Trimethylpentane	2.50E-05 lb/MMBtu (1)	0.000 (a)	0.001 (b)
Acetaldehyde	8.36E-03 lb/MMBtu (1)	0.054 (a)	0.238 (b)
Acrolein	5.14E-03 lb/MMBtu (1)	0.033 (a)	0.146 (b)
Benzene	4.40E-04 lb/MMBtu (1)	0.003 (a)	0.013 (b)
Carbon Tetrachloride	3.67E-05 lb/MMBtu (1)	0.000 (a)	0.001 (b)
Chlorobenzene	3.04E-05 lb/MMBtu (1)	0.000 (a)	0.001 (b)
Chloroform	2.85E-05 lb/MMBtu (1)	0.000 (a)	0.001 (b)
Ethylbenzene	3.97E-05 lb/MMBtu (1)	0.000 (a)	0.001 (b)
Ethylene Dibromide	4.43E-05 lb/MMBtu (1)	0.000 (a)	0.001 (b)
Formaldehyde	5.28E-02 lb/MMBtu (1)	0.343 (a)	1.502 (b)
Methanol	2.50E-03 lb/MMBtu (1)	0.016 (a)	0.071 (b)
Methylene Chloride	2.00E-05 lb/MMBtu (1)	0.000 (a)	0.001 (b)
n-Hexane	1.11E-03 lb/MMBtu (1)	0.007 (a)	0.032 (b)
Naphthalene	7.44E-05 lb/MMBtu (1)	0.000 (a)	0.002 (b)
PAH (POM)	2.69E-05 lb/MMBtu (1)	0.000 (a)	0.001 (b)
Phenanthrene	1.04E-05 lb/MMBtu (1)	0.000 (a)	0.000 (b)
Phenol	2.40E-05 lb/MMBtu (1)	0.000 (a)	0.001 (b)
Styrene	2.36E-05 lb/MMBtu (1)	0.000 (a)	0.001 (b)
Toluene	4.08E-04 lb/MMBtu (1)	0.003 (a)	0.012 (b)
Vinyl Chloride	1.49E-05 lb/MMBtu (1)	0.000 (a)	0.000 (b)
Xylenes	1.84E-04 lb/MMBtu (1)	0.001 (a)	0.005 (b)
Total HAPs		0.466	2.041
Greenhouse Gas Emissions			
CO ₂	116.89 lb/MMBtu (4)	759.31 (a)	3325.78 (b)
CH ₄	2.2E-03 lb/MMBtu (4)	0.01 (a)	0.06 (b)
N ₂ O	2.2E-04 lb/MMBtu (4)	0.00 (a)	0.01 (b)
CO ₂ e ^(g)	-	760.10	3329.22

Calculations:

Hourly Emissions - If emission factor note 1 or 4 is used, use calculation (a). If emission factor note 3 is used, use calculation (b).

(a) Maximum Hourly Emissions (lb/hr) = Emission factor (lb/MMBtu) * (1MMBtu/1000000 Btu) * Engine Power Output (hp) * Average BSFC (Btu/hp-hr)

(b) Maximum Hourly Emissions (lb/hr) = Emission factor (lb/hp-hr) * Engine Power Output (hp)

Annual Emissions - If emission factor note 1 or 4 is used, use calculation (c). If emission factor note 3 is used, use calculation (d).

(c) Annual emissions (tons/yr) = Emission factor (lb/MMBtu) * (1MMBtu/1000000Btu) * Engine Power Output (hp) * Average BSFC (Btu/hp-hr) * Annual Hours of operation (hr/yr) * (1ton/2000lbs)

(d) Annual emissions (tons/yr) = Emission factor (lb/hp-hr) * Engine Power Output (hp) * Annual Hours of operation (hr/yr) * (1ton/2000lbs)

SO₂ Emissions - If emission factor note 2 is used, use calculations (e) and (f) for hourly and annual emissions, respectively.

(e) Maximum Hourly Emissions SO₂ Calculation (lb/hr) = (0.25 grain S/100ft³) * Fuel throughput (ft³/hr) * (1 lb/7000 grains) * (lbmol S/32.06 lb S) * (lbmol SO₂/ lbmol S) * (64.07 lb SO₂/lbmol SO₂)

(f) Annual Emissions SO₂ Calculation (ton/yr) = (0.25 grain S/100ft³) * Fuel throughput (ft³/hr) * (1lb/7000 grains) * (lbmol S/32.06 lb S) * (lbmol SO₂/ lbmol S) * (64.07 lb SO₂/lbmol SO₂) * Annual hours of operation (hr/yr) * (1ton/2000lbs)

EMISSION INPUTS TABLE	
Engine Power Output (kW) =	606
Engine Power Output (hp) =	812
Number of Engines Operating at a Time =	1
Average BSFC (BTU/HP-hr) =	8,000 (5)
Heat Content Natural Gas(Btu/scf) =	1,020.0 (6)
Fuel Throughput (ft ³ /hr) =	6,368.6 (7)
PTE Hours of Operation =	8,760

(g) CO₂ equivalent = [(CO₂ emissions)*(GWP_{CO2})]+[(CH₄ emissions)*(GWP_{CH4})]+[(N₂O emissions)*(GWP_{N2O})]
 Global Warming Potential (GWP)

CO ₂	1	(8)
CH ₄	25	(8)
N ₂ O	298	(8)

Notes:

(1) AP-42, Chapter 3.2, Table 3.2-2. - *Uncontrolled Emission Factors for 4-Stroke Lean Burn Engines* (7/00)

(2) AP-42, Chapter 5.3, Section 5.3.1

(3) 45 CSR 13, Permit R13-1856, Condition (A) - Specific Requirements

(4) Emission factors are from 40 CFR 98, Subpart C, Table C-1 and C-2.

(5) Fuel consumption from manufacturer's specification sheet.

(6) Value obtained from AP-42, Chapter 3.2, Table 3.2-3, footnote b

(7) Fuel throughput = BSFC (BTU/HP-hr) x Power (HP) / Heat Content (BTU/scf)

(8) Global Warming Potentials obtained from 40 CFR 98, Subpart A, Table A-1

**Table 7. Heating System Boiler Emissions (BL3)
Hurst Boiler
Columbia Pipeline Group - Ceredo Compressor Station**

Pollutant	Emission Factor	PTE (lb/hr)	PTE (ton/yr)
Criteria Pollutants			
PM/PM10/PM2.5	1.9 lb/MMcf (1)	0.01 (a)	0.05 (b)
SO ₂ (Hourly)	20 grains S / 100ft ³ (5)	0.35 (e)	-
SO ₂ (Annual)	0.25 grains S / 100ft ³ (5)	-	0.02 (f)
NOx	100 lb/MMcf (2)	0.62 (a)	2.69 (b)
CO	84 lb/MMcf (2)	0.52 (a)	2.26 (b)
VOC	5.5 lb/MMcf (1)	0.03 (a)	0.15 (b)
Hazardous Air Pollutants			
Arsenic	2.00E-04 lb/MMcf (3)	0.00 (a)	0.000 (b)
Benzene	2.10E-03 lb/MMcf (4)	0.00 (a)	0.000 (b)
Beryllium	1.20E-05 lb/MMcf (3)	0.00 (a)	0.000 (b)
Cadmium	1.10E-03 lb/MMcf (3)	0.00 (a)	0.000 (b)
Chromium	1.40E-03 lb/MMcf (3)	0.00 (a)	0.000 (b)
Cobalt	8.40E-05 lb/MMcf (3)	0.00 (a)	0.000 (b)
Dichlorobenzene	1.20E-03 lb/MMcf (4)	0.00 (a)	0.000 (b)
Formaldehyde	7.50E-02 lb/MMcf (4)	0.00 (a)	0.002 (b)
Hexane	1.80E+00 lb/MMcf (4)	0.01 (a)	0.049 (b)
Lead	5.00E-04 lb/MMcf (3)	0.00 (a)	0.000 (b)
Manganese	3.80E-04 lb/MMcf (3)	0.00 (a)	0.000 (b)
Mercury	2.60E-04 lb/MMcf (3)	0.00 (a)	0.000 (b)
Naphthalene	6.10E-04 lb/MMcf (4)	0.00 (a)	0.000 (b)
Nickel	2.10E-03 lb/MMcf (3)	0.00 (a)	0.000 (b)
PAH/POM	1.29E-03 lb/MMcf (4)	0.00 (a)	0.000 (b)
Selenium	2.40E-05 lb/MMcf (3)	0.00 (a)	0.000 (b)
Toluene	3.40E-03 lb/MMcf (4)	0.00 (a)	0.000 (b)
Total HAP		0.00	0.051
Greenhouse Gas Emissions			
CO ₂	116.89 lb/MMBtu (6)	733.60 (c)	3213.15 (d)
CH ₄	2.2E-03 lb/MMBtu (6)	0.01 (c)	0.06 (d)
N ₂ O	2.2E-04 lb/MMBtu (6)	0.00 (c)	0.01 (d)
CO ₂ e ^(g)	-	734.35	3216.47

Calculations:

LB/MMCF

(a) Hourly emissions (lb/hr) = Emission Factor (lb/MMcf) * Fuel Use (MMCF/yr) / Annual hours of operation (hr/yr)

(b) Annual emissions (ton/yr) = Emission Factor (lb/MMcf) * Fuel Use (MMcf/yr) * (1ton/2000lbs)

LB/MMBTU

(c) Hourly Emissions (lb/hr) = Emission Factor (lb/MMBtu) * Fuel Use (MMBtu/hr)

(d) Annual Emissions (ton/yr) = Emission Factor (lb/MMBtu) * Fuel Use (MMBtu/yr) * Hours of operation (hr/yr) * (1ton/2000lbs)

SO₂

(e) Hourly Emissions SO₂ Caclulation (lb/hr) = (20 grain S/100ft³) * Fuel throughput (MMft³/yr) * (1000000ft³/1MMft³) / annual hours of operation (hr/yr) * (1lb/7000 grains) * (lbmol S/32.06 lb S) * (lbmol SO₂/lbmol S) * (64.07 lb SO₂/lbmol SO₂)

(f) Annual Emissions SO₂ Caclulation (ton/yr) = (0.25 grain S/100ft³) * Fuel throughput (MMft³/yr) * (1000000ft³/1MMft³) * (1lb/7000 grains) * (lbmol S/32.06 lb S) * (lbmol SO₂/lbmol S) * (64.07 lb SO₂/lbmol SO₂) * (1ton/2000lbs)

EMISSION INPUTS TABLE	
Fuel Use (MMBtu/hr) =	6.276
Hours of Operation (hr/yr)=	8760
MMBtu/MMcf=	1020
PTE Fuel Use (MMft ³ /yr) =	53.9

(g) CO₂ equivalent = [(CO₂ emissions)*(GWP_{CO2})]+[(CH₄ emissions)*(GWP_{CH4})]+[(N₂O emissions)*(GWP_{N2O})]
Global Warming Potential (GWP)

CO ₂	1	(7)
CH ₄	25	(7)
N ₂ O	298	(7)

Notes:

(1) AP-42, Chapter 1.4, Table 1.4-2. Emission Factors For Criteria Pollutants and Greenhouse Gases From Natural Gas Combustion, July 1998.

(2) AP-42, Chapter 1.4, Table 1.4-1. Emission Factors For Nitrogen Oxides (Nox) and Carbon Monoxide(CO) From Natural Gas Combustion, July 1998.

(3) AP-42, Chapter 1.4, Table 1.4-4. Emission Factors For Metals From Natural Gas Combustion, July 1998.

(4) AP-42, Chapter 1.4, Table 1.4-3. Emission Factors for Speciated Organic Compounds from Natural Gas Combustion, July 1998.

(5) AP-42, Chapter 5.3, Section 5.3.1

(6) Emission factors are from 40 CFR 98, Subpart C, Table C-1 and C-2.

(7) Global Warming Potentials obtained from 40 CFR 98, Subpart A, Table A-1

**Table 8. Fuel Gas Heater Emissions (H1)
FLAMECO; FAH14
Columbia Pipeline Group - Ceredo Compressor Station**

Pollutant	Emission Factor	PTE (lb/hr)	PTE (ton/yr)
Criteria Pollutants			
PM/PM10/PM2.5	1.9 lb/MMcf (1)	0.00 (a)	0.00 (b)
SO ₂ (Hourly)	20 grains S / 100ft ³ (5)	0.02 (e)	-
SO ₂ (Annual)	0.25 grains S / 100ft ³ (5)	-	0.00 (f)
NOx	100 lb/MMcf (2)	0.03 (a)	0.15 (b)
CO	84 lb/MMcf (2)	0.03 (a)	0.13 (b)
VOC	5.5 lb/MMcf (1)	0.00 (a)	0.01 (b)
Hazardous Air Pollutants			
Arsenic	2.00E-04 lb/MMcf (3)	0.00 (a)	0.000 (b)
Benzene	2.10E-03 lb/MMcf (4)	0.00 (a)	0.000 (b)
Beryllium	1.20E-05 lb/MMcf (3)	0.00 (a)	0.000 (b)
Cadmium	1.10E-03 lb/MMcf (3)	0.00 (a)	0.000 (b)
Chromium	1.40E-03 lb/MMcf (3)	0.00 (a)	0.000 (b)
Cobalt	8.40E-05 lb/MMcf (3)	0.00 (a)	0.000 (b)
Dichlorobenzene	1.20E-03 lb/MMcf (4)	0.00 (a)	0.000 (b)
Formaldehyde	7.50E-02 lb/MMcf (4)	0.00 (a)	0.000 (b)
Hexane	1.80E+00 lb/MMcf (4)	0.00 (a)	0.003 (b)
Lead	5.00E-04 lb/MMcf (3)	0.00 (a)	0.000 (b)
Manganese	3.80E-04 lb/MMcf (3)	0.00 (a)	0.000 (b)
Mercury	2.60E-04 lb/MMcf (3)	0.00 (a)	0.000 (b)
Naphthalene	6.10E-04 lb/MMcf (4)	0.00 (a)	0.000 (b)
Nickel	2.10E-03 lb/MMcf (3)	0.00 (a)	0.000 (b)
PAH/POM	1.29E-03 lb/MMcf (4)	0.00 (a)	0.000 (b)
Selenium	2.40E-05 lb/MMcf (3)	0.00 (a)	0.000 (b)
Toluene	3.40E-03 lb/MMcf (4)	0.00 (a)	0.000 (b)
Total HAP		0.00	0.003
Greenhouse Gas Emissions			
CO ₂	116.89 lb/MMBtu (6)	40.91 (c)	179.19 (d)
CH ₄	2.2E-03 lb/MMBtu (6)	0.00 (c)	0.00 (d)
N ₂ O	2.2E-04 lb/MMBtu (6)	0.00 (c)	0.00 (d)
CO ₂ e ^(g)	-	40.95	179.38

Calculations:

LB/MMCF

(a) Hourly emissions (lb/hr) = Emission Factor (lb/MMcf) * Fuel Use (MMCF/yr) / Annual hours of operation (hr/yr)

(b) Annual emissions (ton/yr) = Emission Factor (lb/MMcf) * Fuel Use (MMcf/yr) * (1ton/2000lbs)

LB/MMBTU

(c) Hourly Emissions (lb/hr) = Emission Factor (lb/MMBtu) * Fuel Use (MMBtu/hr)

(d) Annual Emissions (ton/yr) = Emission Factor (lb/MMBtu) * Fuel Use (MMBtu/yr) * Hours of operation (hr/yr) * (1ton/2000lbs)

SO₂

(e) Hourly Emissions SO₂ Calculation (lb/hr) = (20 grain S/100ft³) * Fuel throughput (MMft³/yr) * (1000000ft³/1MMft³) / annual hours of operation (hr/yr) * (1lb/7000 grains) * (lbmol S/32.06 lb S) * (lbmol SO₂/lbmol S) *(64.07 lb SO₂/lbmol SO₂)

(f) Annual Emissions SO₂ Calculation (ton/yr) = (0.25 grain S/100ft³) * Fuel throughput (MMft³/yr) * (1000000ft³/1MMft³) * (1lb/7000 grains) * (lbmol S/32.06 lb S) * (lbmol SO₂/lbmol S) *(64.07 lb SO₂/lbmol SO₂) * (1ton/2000lbs)

EMISSION INPUTS TABLE	
Fuel Use (MMBtu/hr) =	0.35
Hours of Operation (hr/yr)=	8760
MMBtu/MMcf=	1020
PTE Fuel Use (MMft ³ /yr) =	3.01

(g) CO₂ equivalent = [(CO₂ emissions)*(GWP_{CO2})]+[(CH₄ emissions)*(GWP_{CH4})]+[(N₂O emissions)*(GWP_{N2O})]
Global Warming Potential (GWP)

CO ₂	1	(7)
CH ₄	25	(7)
N ₂ O	298	(7)

Notes:

- AP-42, Chapter 1.4, Table 1.4-2. Emission Factors For Criteria Pollutants and Greenhouse Gases From Natural Gas Combustion, July 1998.
- AP-42, Chapter 1.4, Table 1.4-1. Emission Factors For Nitrogen Oxides (Nox) and Carbon Monoxide(CO) From Natural Gas Combustion, July 1998.
- AP-42, Chapter 1.4, Table 1.4-4. Emission Factors For Metals From Natural Gas Combustion, July 1998.
- AP-42, Chapter 1.4, Table 1.4-3. Emission Factors for Speciated Organic Compounds from Natural Gas Combustion, July 1998.
- AP-42, Chapter 5.3, Section 5.3.1
- Emission factors are from 40 CFR 98, Subpart C, Table C-1 and C-2.
- Global Warming Potentials obtained from 40 CFR 98, Subpart A, Table A-1

Table 9. Tank Emissions
Columbia Pipeline Group - Ceredo Compressor Station

Emission Point	Tank Capacity (gal)	Tank Contents	Control Devices	Tank Throughput (bbls/day)	VOC Emission Factor (lbs/bbls)		VOC Emissions (lbs/yr) ^(a)	VOC Emissions (lb/hr) ^(b)	VOC Emissions (tons/yr) ^(c)
A06A	2500	Glycol	None	0.33	6.72E-04	(1)	0.08	0.000	0.000
A06B	2170	Glycol	None	0.28	5.81E-04	(1)	0.06	0.000	0.000
A07	5000	Lube Oil	None	1.04	4.83E-03	(1)	1.84	0.000	0.001
A08	5000	Lube Oil	None	1.04	4.83E-03	(1)	1.84	0.000	0.001
A09	1600	Lube Oil	None	0.21	7.48E-03	(1)	0.57	0.000	0.000
A11	6000	Mercaptan Odorant	None	0.78	1.94E+00	(1)	555.42	0.063	0.278
A12	120	Lube Oil	None	0.02	1.40E-02	(1)	0.08	0.000	0.000
A13	120	Lube Oil	None	0.02	1.40E-02	(1)	0.08	0.000	0.000
A14	120	Lube Oil	None	0.02	1.40E-02	(1)	0.08	0.000	0.000
A15	120	Lube Oil	None	0.02	1.40E-02	(1)	0.08	0.000	0.000
A18	6000	Pipeline Liquids	None	1.57	1.94E+00	(2)	1111.26	0.127	0.556
A19	6000	Pipeline Liquids	None	1.57	1.94E+00	(2)	1111.26	0.127	0.556
A20	6000	Pipeline Liquids	None	1.57	1.94E+00	(2)	1111.26	0.127	0.556
A21	6000	Pipeline Liquids	None	1.57	1.94E+00	(2)	1111.26	0.127	0.556
A22-2	5000	Used Oil	None	0.65	7.22E-03	(1)	1.72	0.000	0.001
A25	1500	Glycol	None	0.20	5.60E-04	(1)	0.04	0.000	0.000
A26	1500	Glycol	None	0.20	5.60E-04	(1)	0.04	0.000	0.000
A27	550	Used Oil	None	0.07	7.25E-03	(1)	0.19	0.000	0.000
Totals							5007.15	0.57	2.50

Calculations:

(a) VOC Emissions (lb/day) = Tank Throughput (bbls/day) * VOC Emission Factor (lbs/bbls)

(b) VOC Emissions (lb/hr) = VOC Emissions (lbs/yr) * (yr/8760hr)

(c) VOC Emissions (ton/yr) = VOC Emissions (lbs/yr) * (1ton/2000lbs)

Notes:

(1) VOC emission factor includes Working/Breathing losses as calculated from TANKS 4.0.9.d

(2) VOC emission factor includes Flashing/Working/Breathing losses calculated from pressurized liquid sample (GOR= 0.059 lb VOC/bbl) direct flash measurement added to working and breathing losses calculated using EPA Tanks 4.09. The pressurized liquid sample was taken from a high pressure separator at a similar site and is considered to be worst case representative with respect to gas composition and pressure at the Station

**Table 10. Fugitive Leak Emissions
Columbia Pipeline Group - Ceredo Compressor Station**

Pollutant	Emission Factor	PTE ^(a) Gas Service (tons/yr)
Valves	9.9E-03 lb/hr/source (1)	28.11
Low Bleed Pneumatic Valves	9.9E-03 lb/hr/source (1)	0.48
Flanges	8.6E-04 lb/hr/source (1)	8.53
Connector	4.4E-04 lb/hr/source (1)	4.38
Other Points in Gas Service	1.9E-02 lb/hr/source (1)	8.99
Total Gas Released	- -	50.49
Total VOC Released (gas service)	(b)	1.01
Calculations:	CO2e	23.48

(a) Annual emissions (tons/yr) = [Emission Factor (lb/hr/source)] x [Number of Sources] x [Hours of Operation per Year] x [0.0005 tons/ lb]

(b) Gas sample for station assumed to be worst case at 2 wt % VOC⁽³⁾

Number of Components in Gas Service

Valves=	647	(2)
Low Bleed Pneumatic Valves=	11	(2)
Connectors=	2,265	(2)
Other Points in Gas Service =	48	(2)

Maximum Hour of Operation = 8,760

(1) Emission factors from 1995 EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 Oil and Gas Production

(2) *Default Average Component Counts for Major Onshore Natural Gas Production Equipment* from 40 CFR 98, Subpart W, Table W-1B

(3) Worst case VOC wt % assumption for station based on gas sample analysis from compressor stations located in close proximity to the site

(4) Global Warming Potentials obtained from 40 CFR 98, Subpart A, Table A-1

APPENDIX B

PROPOSED PERMIT LANGUAGE

Title V Operating Permit Renewal Application

**Ceredo Compressor Station, Facility ID No. 099-00013
Ceredo, West Virginia**

Columbia Gas Transmission, LLC
1700 MacCorkle Avenue, SE
Charleston, West Virginia

April 2016

**West Virginia Department of Environmental Protection
Division of Air Quality**

*Earl Ray Tomblin
Governor*

*Randy C. Huffman
Cabinet Secretary*

Permit to Operate



*Pursuant to
Title V
of the Clean Air Act*

Issued to:
**Columbia Gas Transmission, LLC
Ceredo Compressor Station
R30-09900013-2016**

*William F. Durham
Director*

*Issued: • Effective: Draft
Expiration: • Renewal Application Due:*

Permit Number: **R30-09900013-2016**
Permittee: **Columbia Gas Transmission, LLC**
Facility Name: **Ceredo Compressor Station**
Permittee Mailing Address: **1700 MacCorkle Avenue, SE**
Charleston, WV 25314

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

Facility Location: Walker's Branch Road, Wayne County, West Virginia
Facility Mailing Address: 1664 Walker's Branch Road, Ceredo, WV 25704
Telephone Number: (304) 357-2047
Type of Business Entity: LLC
Facility Description: Natural Gas Transmission Facility
SIC Codes: 4922
UTM Coordinates: 366.1 km Easting • 4,247.5 km Northing • Zone 17

Permit Writer: **Engineer Name**

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

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

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

1.1 Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
BLR3*	BL3	Heating System Boiler; Hurst	2012	6.275 MMBtu/hr	N/A
00501*	E01	Reciprocating Engine/Integral Compressor; Cooper-Bessemer GMWH-8; 2-cycle, lean burn	1954	2,800 HP	N/A
00502*	E02	Reciprocating Engine/Integral Compressor; Cooper-Bessemer GMWH-8; 2-cycle, lean burn	1954	2,800 HP	N/A
00503*	E03	Reciprocating Engine/Integral Compressor; Cooper-Bessemer GMWH-8; 2-cycle, lean burn	1954	2,800 HP	N/A
00504*	E04	Reciprocating Engine/Integral Compressor; Cooper-Bessemer GMWH-8; 2-cycle, lean burn	1957	2,800 HP	N/A
00505*	E05	Reciprocating Engine/Integral Compressor; Cooper-Bessemer GMWH-8; 2-cycle, lean burn	1958	2,800 HP	N/A
00506*	E06	Reciprocating Engine/Integral Compressor; Cooper-Bessemer GMWH-8; 2-cycle, lean burn	1960	2,800 HP	N/A
00507*	E07	Reciprocating Engine/Integral Compressor; Cooper-Bessemer 8V-250; 2-cycle, lean burn	1965	2,700 HP	N/A
00508*	E08	Turbine Engine/Integral Compressor; General Electric 3912R Turbine	1967	10,200 HP	N/A
00509	E09	Turbine Engine/Integral Compressor; General Electric 3112R Turbine	1971	12,500 HP	N/A
005G3*	G3	Reciprocating Engine/Generator; Waukesha 3521GL; 4-cycle, lean burn	1996	812 HP	N/A
HTR1*	H1	Natural Gas Line Heater; Enertek; Model # LH-3536	1998	0.375 MMBtu/hr	N/A
A11	A11	Mercaptan Odorant; Above Ground Storage Tank	1966	6,000 gal	N/A

* All equipment is fueled exclusively with pipeline quality natural gas.

1.1 Active R13, R14, and R19 Permits

The underlying authority for any conditions from R13, R14, and/or R19 permits contained in this operating permit is cited using the original permit number (e.g. R13-1234). The current applicable version of such permit(s) is listed below.

Permit Number	Date of Issuance
R13-1856	July 17, 1995

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.
- 2.1.4. Unless otherwise specified in a permit condition or underlying rule or regulation, all references to a "rolling yearly total" shall mean the sum of the monthly data, values or parameters being measured, monitored, or recorded, at any given time for the previous twelve (12) consecutive calendar months.

2.2. Acronyms

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

2.3. Permit Expiration and Renewal

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

2.4. Permit Actions

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

2.5. Reopening for Cause

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

2.6. Administrative Permit Amendments

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

2.7. Minor Permit Modifications

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

2.8. Significant Permit Modification

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

2.9. Emissions Trading

- 2.9.1. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in the permit and that are in accordance with all applicable requirements.
[45CSR§30-5.1.h.]

2.10. Off-Permit Changes

- 2.10.1. Except as provided below, a facility may make any change in its operations or emissions that is not addressed nor prohibited in its permit and which is not considered to be construction nor modification under any rule promulgated by the Secretary without obtaining an amendment or modification of its permit. Such changes shall be subject to the following requirements and restrictions:
- a. The change must meet all applicable requirements and may not violate any existing permit term or condition.
 - b. The permittee must provide a written notice of the change to the Secretary and to U.S. EPA within two (2) business days following the date of the change. Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted and any applicable requirement that would apply as a result of the change.
 - c. The change shall not qualify for the permit shield.
 - d. The permittee shall keep records describing all changes made at the source that result in emissions of regulated air pollutants, but not otherwise regulated under the permit, and the emissions resulting from those changes.
 - e. No permittee may make any change subject to any requirement under Title IV of the Clean Air Act (Acid Deposition Control) pursuant to the provisions of 45CSR§30-5.9.

- f. No permittee may make any changes which would require preconstruction review under any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) pursuant to the provisions of 45CSR§30-5.9.

[45CSR§30-5.9.]

2.11. Operational Flexibility

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

[45CSR§30-5.8]

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

[45CSR§30-5.8.a.]

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

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

[45CSR§30-5.8.c.]

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

[45CSR§30-2.39]

2.12. Reasonably Anticipated Operating Scenarios

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

[45CSR§30-5.1.i.]

2.13. Duty to Comply

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

[45CSR§30-5.1.f.1.]

2.14. Inspection and Entry

- 2.14.1. The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:
- a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;
 - d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

[45CSR§30-5.3.b.]

2.15. Schedule of Compliance

- 2.15.1. For sources subject to a compliance schedule, certified progress reports shall be submitted consistent with the applicable schedule of compliance set forth in this permit and 45CSR§30-4.3.h., but at least every six (6) months, and no greater than once a month, and shall include the following:
- a. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when such activities, milestones or compliance were achieved; and
 - b. An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measure adopted.

[45CSR§30-5.3.d.]

2.16. Need to Halt or Reduce Activity not a Defense

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

[45CSR§30-5.1.f.2.]

2.17. Emergency

- 2.17.1. An "emergency" means any situation arising from sudden and reasonably 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.

[45CSR§30-5.7.a.]

- 2.17.2. 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 45CSR§30-5.7.c. are met.

[45CSR§30-5.7.b.]

- 2.17.3. 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. Subject to the requirements of 45CSR§30-5.1.c.3.C.1, 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, report, and variance request fulfills the requirement of 45CSR§30-5.1.c.3.B. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

[45CSR§30-5.7.c.]

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

[45CSR§30-5.7.d.]

- 2.17.5. This provision is in addition to any emergency or upset provision contained in any applicable requirement.

[45CSR§30-5.7.e.]

2.18. Federally-Enforceable Requirements

- 2.18.1. All terms and conditions in this permit, including any provisions designed to limit a source's potential to emit and excepting those provisions that are specifically designated in the permit as "State-enforceable only", are enforceable by the Secretary, USEPA, and citizens under the Clean Air Act.

[45CSR§30-5.2.a.]

- 2.18.2. Those provisions specifically designated in the permit as "State-enforceable only" shall become "Federally-enforceable" requirements upon SIP approval by the USEPA.

2.19. Duty to Provide Information

- 2.19.1. The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records required to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.

[45CSR§30-5.1.f.5.]

2.20. Duty to Supplement and Correct Information

- 2.20.1. Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.

[45CSR§30-4.2.]

2.21. Permit Shield

2.21.1. Compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance provided that such applicable requirements are included and are specifically identified in this permit or the Secretary has determined that other requirements specifically identified are not applicable to the source and this permit includes such a determination or a concise summary thereof.

[45CSR§30-5.6.a.]

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

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

[45CSR§30-5.6.c.]

2.22. Credible Evidence

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

[45CSR§30-5.3.e.3.B. and 45CSR38]

2.23. Severability

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

[45CSR§30-5.1.e.]

2.24. Property Rights

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

[45CSR§30-5.1.f.4]

2.25. Acid Deposition Control

2.25.1. Emissions shall not exceed any allowances that the source lawfully holds under Title IV of the Clean Air Act (Acid Deposition Control) or rules of the Secretary promulgated thereunder.

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

[45CSR§30-5.1.d.]

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

[45CSR§30-5.1.a.2.]

3.0 Facility-Wide Requirements

3.1 Limitations and Standards

- 3.1.1. **Open burning.** The open burning of refuse by any person is prohibited except as noted in 45CSR§6-3.1.
[45CSR§6-3.1.]
- 3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause or allow any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.
[45CSR§6-3.2.]
- 3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health requires a copy of this notice to be sent to them.
[40 C.F.R. §61.145(b) and 45CSR34]
- 3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.
[45CSR§4-3.1 State-Enforceable only.]
- 3.1.5. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11.
[45CSR§11-5.2]
- 3.1.6. **Emission inventory.** The permittee is responsible for submitting, on an annual basis, an emission inventory in accordance with the submittal requirements of the Division of Air Quality.
[W.Va. Code § 22-5-4(a)(14)]
- 3.1.7. **Ozone-depleting substances.** For those facilities performing maintenance, service, repair or disposal of appliances, the permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 C.F.R. Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the prohibitions and required practices pursuant to 40 C.F.R. §§ 82.154 and 82.156.
 - b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 C.F.R. § 82.158.

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

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

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

[40 C.F.R. 68]

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

[45CSR§17-3.1; State Enforceable Only]

3.2. Monitoring Requirements

- 3.2.1. Reserved

3.3. Testing Requirements

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

- a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63, if applicable, in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable.
- b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit.
- c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the

information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.

- d. The permittee shall submit a report of the results of the stack test within 60 days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:
 1. The permit or rule evaluated, with the citation number and language.
 2. The result of the test for each permit or rule condition.
 3. A statement of compliance or non-compliance with each permit or rule condition.

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

3.4. Recordkeeping Requirements

- 3.4.1. **Monitoring information.** The permittee shall keep records of monitoring information that include the following:
 - a. The date, place as defined in this permit and time of sampling or measurements;
 - b. The date(s) analyses were performed;
 - c. The company or entity that performed the analyses;
 - d. The analytical techniques or methods used;
 - e. The results of the analyses; and
 - f. The operating conditions existing at the time of sampling or measurement.

[45CSR§30-5.1.c.2.A.]

- 3.4.2. **Retention of records.** The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of monitoring sample, measurement, report, application, or record creation date. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Where appropriate, records may be maintained in computerized form in lieu of the above records.

[45CSR§30-5.1.c.2.B.]

- 3.4.3. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.
[45CSR§30-5.1.c. State-Enforceable only.]

3.5. Reporting Requirements

- 3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.
[45CSR§§30-4.4. and 5.1.c.3.D.]
- 3.5.2. A permittee may request confidential treatment for the submission of reporting required under 45CSR§30-5.1.c.3. pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.
[45CSR§30-5.1.c.3.E.]
- 3.5.3. Except for the electronic submittal of the annual certification to the USEPA as required in 3.5.5 below, all notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, mailed first class or by private carrier 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 SE
Charleston, WV 25304

Phone: 304/926-0475
FAX: 304/926-0478

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. **Certified emissions statement.** 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.
[45CSR§30-8.]
- 3.5.5. **Compliance certification.** The permittee shall certify compliance with the conditions of this permit on the forms provided by the DAQ. In addition to the annual compliance certification, the permittee may be required to submit certifications more frequently under an applicable requirement of this permit. The annual certification shall be submitted to the DAQ and USEPA on or before March 15 of each year, and shall certify compliance for the period ending December 31. The annual certification to the USEPA shall be submitted in electronic format only. It shall be submitted by e-mail to the following address: R3_APD_Permits@epa.gov. The permittee shall maintain a copy of the certification on site for five (5) years from submittal of the certification.
[45CSR§30-5.3.e.]

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

[45CSR§30-5.1.c.3.A.]

3.5.7. **Emergencies.** For reporting emergency situations, refer to Section 2.17 of this permit.

3.5.8. **Deviations.**

a. In addition to monitoring reports required by this permit, the permittee shall promptly submit supplemental reports and notices in accordance with the following:

1. Any deviation resulting from an emergency or upset condition, as defined in 45CSR§30-5.7., shall be reported by telephone or telefax within one (1) working day of the date on which the permittee becomes aware of the deviation, if the permittee desires to assert the affirmative defense in accordance with 45CSR§30-5.7. A written report of such deviation, which shall include the probable cause of such deviations, and any corrective actions or preventative measures taken, shall be submitted and certified by a responsible official within ten (10) days of the deviation.
2. Any deviation that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to the Secretary immediately by telephone or telefax. A written report of such deviation, which shall include the probable cause of such deviation, and any corrective actions or preventative measures taken, shall be submitted by the responsible official within ten (10) days of the deviation.
3. Deviations for which more frequent reporting is required under this permit shall be reported on the more frequent basis.
4. All reports of deviations shall identify the probable cause of the deviation and any corrective actions or preventative measures taken.

[45CSR§30-5.1.c.3.C.]

b. The permittee shall, in the reporting of deviations from permit requirements, including those attributable to upset conditions as defined in this permit, report the probable cause of such deviations and any corrective actions or preventive measures taken in accordance with any rules of the Secretary.

[45CSR§30-5.1.c.3.B.]

3.5.9. **New applicable requirements.** If any applicable requirement is promulgated during the term of this permit, the permittee will meet such requirements on a timely basis, or in accordance with a more detailed schedule if required by the applicable requirement.

[45CSR§30-4.3.h.1.B.]

3.6. Compliance Plan

3.6.1. None

3.7. Permit Shield

3.7.1. The permittee is hereby granted a permit shield in accordance with 45CSR§30-5.6. The permit shield applies provided the permittee operates in accordance with the information contained within this permit.

3.7.2. The following requirements specifically identified are not applicable to the source based on the determinations set forth below. The permit shield shall apply to the following requirements provided the conditions of the determinations are met.

45CSR4	<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.
45CSR10	<i>To Prevent and Control Air Pollution from the Emission of Sulfur Oxides:</i> The sulfur requirement for fuel burning units do not apply to indirect combustion sources at this site because there are no units with design heat inputs above 10 MMBtu/hr. Therefore they are exempt in accordance with 45CSR§10-10.1
45CSR21	<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 station is not engaged in the extraction or fractionation of natural gas, which exempts the facility from 45CSR§21-29.
45CSR27	<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.”
40 C.F.R. Part 60 Subpart JJJJ	<i>Standards of Performance for Stationary Spark Ignition (SI) Internal Combustion Engines.</i> All SI engines located at this site were installed before July 12, 2006. Thus, these engines are not subject to 40 C.F.R. Part 60 Subpart JJJJ. [40CFR§60.4230(a)(4)]
40 C.F.R. Part 60 Subpart IIII	<i>Standards of Performance for Stationary Compression Ignition Internal Combustion Engines:</i> There are no compression ignition engines at this facility.
40 C.F.R. Part 60 Subpart OOOO	Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution. The Storage Vessel requirements defined for transmission sources is not applicable to this site because all vessels were constructed, commenced construction, prior to August 23, 2011 as stated in accordance with [40CFR§60.5365(e)]
40 C.F.R. Part 60 Subpart Dc	Standards of Performance for Steam Generating Units: The heating system boiler and line heater at this facility are less than 10 MMBtu/hr design heat capacity, which is below the applicability criteria stated in [40CFR60.40c(a)].

40 C.F.R. Part 60 Subpart K and Ka	Standards of Performance for Petroleum Liquid Storage Vessels. All tanks at the station are below the applicability criteria of 40,000 gallons in capacity as stated in [40CFR60.110a(a)]
40 C.F.R. Part 60 Subpart Kb	Standards of Performance for Petroleum Liquid Storage Vessels. All tanks at the station are below the applicability criteria of 19,813 gallons in capacity as stated in [40CFR60.110b(a)]
40 C.F.R. Part 60 Subpart KKK	Standards of Performance for Equipment Leaks of VOC From Onshore Natural Gas Processing Plant(s). The station is not engaged in the extraction or fractionation of natural gas liquids from field gas, the fractionation of mixed 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.
40 C.F.R. Part 60 Subpart GG	The provisions of this subpart are not applicable to this facility because it was installed in 1966, 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.
40 C.F.R. Part 60 Subpart KKKK	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)
40 C.F.R. Part 63 Subpart YYYY	This MACT requirement exempts existing turbines constructed prior to January 14, 2003 in accordance with 63.6090(b)(4).
40 C.F.R. Part 63 Subpart HHH	National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities. The Transmission Station is not subject to Subpart HHH since there are no affected dehydration units utilized at this site.
40 C.F.R. Part 64 CAM	The compliance assurance monitoring provisions of Part 64 are not applicable due there being no add-on controls at this facility. [40CFR§64.2(a)(2)]

3.8. Emergency Operating Scenario

For emergency situations which interrupt the critical supply of natural gas to the public, and which pose a life threatening circumstance to the customer, the permittee is allowed to temporarily replace failed engine(s) as long as all of the following conditions are met:

- a. The replacement engine(s) is only allowed to operate until repair of the failed engine(s) is complete, but under no circumstance may the replacement engine(s) operate in excess of sixty (60) days;
- b. Both the replacement engine(s) and the repaired failed engine(s) shall not operate at the same time with the exception of any necessary testing of the repaired engine(s) and this testing may not exceed five (5) hours;
- c. Potential hourly emissions from the replacement engine(s) are less than or equal to the potential hourly emissions from the engine(s) being replaced;
- d. Credible performance emission test data verifying the emission rates associated with the operation of the substitute engine shall be submitted to the Director within five (5) days;
- e. The permittee must provide written notification to the Director within five (5) days of the replacement. This notification must contain:

- i. Information to support the claim of life threatening circumstances to justify applicability of this emergency provision;
- ii. Identification of the engine(s) being temporarily replaced;
- iii. The design parameters of the replacement engine(s) including, but not limited to, the design horsepower and emission factors;
- iv. Projected duration of the replacement engine(s); and
- v. The appropriate certification by a responsible official.

[45CSR§30-12.7]

**4.0 Miscellaneous Indirect Natural Gas Heaters and Boilers less than 10 MMBtu/hr
[Emission Point ID(s): (BL3 and H1)]**

4.1. Limitations and Standards

- 4.1.1. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six minute block average.
[45CSR§2-3.1.]
- 4.1.2. Compliance with the visible emission requirements of 45CSR§2-3.1 (Section 4.1.1 of this permit) shall be determined in accordance with 40 C.F.R. Part 60, Appendix A, Method 9 or by using measurements from continuous opacity monitoring systems approved by the Director. The Director may require the installation, calibration, maintenance and operation of continuous opacity monitoring systems and may establish policies for the evaluation of continuous opacity monitoring results and the determination of compliance with the visible emission requirements of 45CSR§2-3.1 (Section 4.1.1 of this permit). Continuous opacity monitors shall not be required on fuel burning units which employ wet scrubbing systems for emission control.
[45CSR§2-3.2.]

4.2. Monitoring Requirements

- 4.2.1. At such reasonable times as the Secretary may designate, the permittee shall conduct visible emissions observations using Method 22 for the purpose of demonstrating compliance with Section 4.1.1. If visible emissions are observed, the permittee shall conduct a Method 9 reading unless the cause for visible emissions is corrected within 24 hours. Records of observation will be kept for at least 5 years from the date of observation.
[45CSR§30-5.1.c.]

4.3. Testing Requirements

- 4.3.1. N/A

4.4. Recordkeeping Requirements

- 4.4.1. N/A

4.5. Reporting Requirements

- 4.5.1. N/A

5.0 R13-1856 Emergency Generator Requirements [Emission Point: (G3)]

5.1 Limitations and Standards

5.1.1. Maximum emissions shall not exceed the following listed in the table below;

Pollutant	Maximum Hourly Emission (lb/hr)	Maximum Annual Emission (ton/yr)
NO _x	2.44	10.69
CO	4.31	18.88
VOC	1.63	7.13

[45CSR13, Permit R13-1856, Condition A(1-3)]

5.2. Monitoring Requirements

5.2.1. For the purposes of conducting performance tests, the following methods shall be utilized;

Pollutant	Method
NO _x	40 CFR 60 Appendix A – Method 7
CO	40 CFR 60 Appendix A – Method 10
VOC	40 CFR 60 Appendix A – Method 25 or 25A

[45CSR13, Permit R13-1856, Condition B(1)]

5.3. Testing Requirements

5.3.1. Condition; General Requirements (4) – At such reasonable times as the Chief may designate, the permittee shall conduct tests to determine compliance with the limitations established in Condition (A). The permittee shall submit a test protocol at least thirty (30) days prior to testing to be approved by the Chief and a notification at least fifteen (15) days in advance of the actual dates and times during which the test will be conducted.

[45CSR13, Permit R13-1856, General Requirements (4)]

5.4. Recordkeeping Requirements

5.4.1. N/A

5.5. Reporting Requirements

5.5.1. N/A

5.6. Compliance Plan

5.6.1 N/A

**6.0 40 C.F.R. 63, Subpart DDDDD MACT Requirements for Boiler(s) and Process Heater(s)
[Emission Points: (BL3 and H1)]**

6.1. Limitations and Standards

6.1.1. Subpart DDDDD applies to new, reconstructed, and existing affected sources as described in paragraphs (a)(1) and (2) of this section.

- (1) The affected source of this subpart is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in §63.7575.

[40 CFR §63.7490(a)(1)]

6.1.2. If you have an existing boiler or process heater, you must comply with this subpart no later than January 31, 2016, except as provided in §63.6(i).

[40 CFR §63.7495(b)](H1)

6.1.3. The boiler and process heater covered by this permit must meet the requirements in paragraphs (a)(1) and (3) of this section as follows, except as provided in paragraphs (b), through (e) of this section. You must meet these requirements at all times the affected unit is operating, except as provided in paragraph (f) of this section.

- (1) You must meet the work practice standard in Table 3, Items 1 and 4, except as provided under §63.7522

(2) If the unit is . . .	The permittee must meet the following . . .
1. A new or existing boiler or process heater with a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour in any of the following subcategories: unit designed to burn gas 1; unit designed to burn gas 2 (other); or unit designed to burn light liquid, or a limited use boiler or process heater	Conduct a tune-up of the boiler or process heater every 5 years as specified in §63.7540.
4. An existing boiler or process heater located at a major source facility, not including limited use units ¹	Must have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in this table, satisfies the energy assessment requirement. A facility that operated under an energy management program developed according to the ENERGY STAR guidelines for energy management or compatible with ISO 50001 for at least one year between January 1, 2008 and the compliance date specified in §63.7495 that includes the affected units also satisfies the energy assessment requirement. The energy assessment must include the following with extent of the evaluation for items a. to e. appropriate for the on-site technical hours listed in §63.7575:

	a. A visual inspection of the boiler or process heater system.
	b. An evaluation of operating characteristics of the boiler or process heater systems, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints.
	c. An inventory of major energy use systems consuming energy from affected boilers and process heaters and which are under the control of the boiler/process heater owner/operator.
	d. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage.
	e. A review of the facility's energy management program and provide recommendations for improvements consistent with the definition of energy management program, if identified.

¹Table 3, Item 4 pertaining to the energy assessment does not apply to BL3 since it is a new boiler.

- (3) At all times, you must operate and maintain any affected source (as defined in §63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[40 CFR§§63.7500(a)(1) and (3)]

- 6.1.4. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity of less than or equal to 5 million Btu per hour must complete a tune-up every 5 years as specified in §63.7540. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory are not subject to the emission limits in Tables 1 and 2 or 11 through 13 to this subpart, or the operating limits in Table 4 to this subpart.

[40 CFR§63.7500(e)]

- 6.1.5. For existing affected sources (as defined in §63.7490), you must complete an initial tune-up by following the procedures described in §63.7540(a)(10)(i) through (vi) no later than the compliance date specified in §63.7495, except as specified in paragraph (j) of this section. You must complete the one-time energy assessment specified in Table 3 to this subpart no later than the compliance date specified in §63.7495 (January 31, 2016).

[40 CFR§63.7510(e)](H1)

- 6.1.6. For new or reconstructed affected sources (as defined in 40CFR§63.7490), the permittee must demonstrate initial compliance with the applicable work practice standards in Table 3 to 40CFR63, Subpart DDDDD within the applicable annual, biennial, or 5-year schedule as specified in 40CFR§63.7515(d) following the initial compliance date specified in 40CFR§63.7495(a). Thereafter, the permittee is required to complete the applicable annual, biennial, or 5-year tune-up as specified in 40CFR§63.7515(d).

[45CSR34; 40 CFR§63.7510(g)] (BL3)

6.1.7. The permittee must conduct the tune-up while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up.

- a. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection. 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). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection;
- d. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NOX requirement to which the unit is subject;
- e. Measure the concentrations in the effluent stream of 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; and
- f. Maintain on-site and submit, if requested by the Administrator, a report containing the following information:
 1. The concentrations of CO 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;
 2. A description of any corrective actions taken as a part of the tune-up; and
 3. The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit.

[45CSR34; 40 CFR§63.7540(a)(10)]

6.1.8. If the permittee's boiler or process heater has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour and the unit is in the units designed to burn gas 1; units designed to burn gas 2 (other); or units designed to burn light liquid subcategories, or meets the definition of limited-use boiler or process heater in 40CFR§63.7575, the permittee must conduct a tune-up of the boiler or process heater every 5 years as specified in condition 6.1.5 to demonstrate continuous compliance. The permittee may delay the burner inspection specified in condition 6.1.5.a until the next scheduled or unscheduled unit shutdown, but the permittee must inspect

each burner at least once every 72 months. If an oxygen trim system is utilized on a unit without emission standards to reduce the tune-up frequency to once every 5 years, set the oxygen level no lower than the oxygen concentration measured during the most recent tune-up.

[45CSR34; 40 CFR§63.7540(a)(12)]

6.2. Monitoring Requirements

6.2.1. Reserved

6.3. Testing Requirements

6.3.1. If you are required to meet an applicable tune-up work practice standard, you must conduct an annual, biennial, or 5-year performance tune-up according to §63.7540(a)(10), (11), or (12), respectively. Each annual tune-up specified in §63.7540(a)(10) must be no more than 13 months after the previous tune-up. Each biennial tune-up specified in §63.7540(a)(11) must be conducted no more than 25 months after the previous tune-up. Each 5-year tune-up specified in §63.7540(a)(12) must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed affected source (as defined in §63.7490), the first annual, biennial, or 5-year tune-up must be no later than 13 months, 25 months, or 61 months, respectively, after April 1, 2013 or the initial startup of the new or reconstructed affected source, whichever is later.

[40 CFR§63.7515(d)]

6.4. Recordkeeping Requirements

6.4.1. 6.4.1. The permittee must keep a copy of each notification and report that you submitted to comply with 40 C.F.R. 63, Subpart DDDDD, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that you submitted, according to the requirements in 40CFR§63.10(b)(2)(xiv).

[45CSR34; 40 CFR§63.7555(a)(1)]

6.4.2. The permittee shall maintain records as follows:

- a. Records must be in a form suitable and readily available for expeditious review, according to 40CFR§63.10(b)(1).
- b. As specified in 40CFR§63.10(b)(1), the permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.
- c. The permittee must keep each record on site, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40CFR§63.10(b)(1). The permittee may keep the records off site for the remaining 3 years.

[45CSR34; 40 CFR§63.7560]

6.5. Reporting Requirements

- 6.5.1 The permittee shall demonstrate initial compliance by including with the Notification of Compliance Status a signed certification that either the energy assessment was completed according to Table 3 to this subpart, and that the assessment is an accurate depiction of your facility at the time of the assessment, or that the maximum number of on-site technical hours specified in the definition of energy assessment applicable to the facility has been expended.

You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.7545(e).

[40 CFR§63.7530(e) and (f)](H1)

- 6.5.2. If you are required to conduct an initial compliance demonstration as specified in §63.7530, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii). For the initial compliance demonstration for each boiler or process heater, you must submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of all performance test and/or other initial compliance demonstrations for all boiler or process heaters at the facility according to §63.10(d)(2). The Notification of Compliance Status report must contain all the information specified in paragraphs (e)(1) through (8) of this section, as applicable. If you are not required to conduct an initial compliance demonstration as specified in §63.7530(a), the Notification of Compliance Status must only contain the information specified in paragraphs (e)(1) and (8) of this section and must be submitted within 60 days of the compliance date specified at §63.7495(b).

(1) A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, a description of the add-on controls used on the unit to comply with this subpart, description of the fuel(s) burned, including whether the fuel(s) were a secondary material determined by you or the EPA through a petition process to be a non-waste under §241.3 of this chapter, whether the fuel(s) were a secondary material processed from discarded non-hazardous secondary materials within the meaning of §241.3 of this chapter, and justification for the selection of fuel(s) burned during the compliance demonstration.

(8) In addition to the information required in §63.9(h)(2), your notification of compliance status must include the following certification(s) of compliance, as applicable, and signed by a responsible official:

(i) “This facility completed the required initial tune-up for all of the boilers and process heaters covered by 40 CFR part 63 subpart DDDDD at this site according to the procedures in §63.7540(a)(10)(i) through (vi).”

(ii) “This facility has had an energy assessment performed according to §63.7530(e).”

(iii) Except for units that burn only natural gas, refinery gas, or other gas 1 fuel, or units that qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act, include the following: “No secondary materials that are solid waste were combusted in any affected unit.”

[40 CFR§§63.7545(e)(1) & (8)]

- 6.5.3. Unless the EPA Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report, according to paragraph (h) of this section, by the date in Table 9 to this subpart and according to the requirements in paragraphs (b)(1) through (4) of this section. For units that are subject only to a requirement to conduct subsequent annual, biennial, or 5-year tune-up according to §63.7540(a)(10), (11), or (12), respectively, and not subject to emission limits or Table 4 operating limits, you may submit only an annual, biennial, or 5-year compliance report, as applicable, as specified in

paragraphs (b)(1) through (4) of this section, instead of a semi-annual compliance report.

(5) For each affected source that is subject to permitting regulations pursuant to part 70 or part 71 of this chapter, and if the permitting authority has established dates for submitting semiannual reports pursuant to 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established in the permit instead of according to the dates in paragraphs (b)(1) through (4) of this section.

[40 CFR§63.7550(b)(5)]

6.6. Compliance Plan

6.6.1 N/A

APPENDIX C

ELECTRONIC SUBMITTAL

Title V Operating Permit Renewal Application

Ceredo Compressor Station, Facility ID No. 099-00013
Ceredo, West Virginia

Columbia Gas Transmission, LLC
1700 MacCorkle Avenue, SE
Charleston, West Virginia

April 2016