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Cranberry Pipeline Corporation
Horsemill Compressor Station
Glasgow / Sissonville District, West Virginia
Title V Operating Permit Renewal Application

SLR Ref: 116.00400.00137

September 2016



Title V Operating Permit Renewal Application

Prepared for:

Cranberry Pipeline Corporation
c/o Cabot Oil & Gas Corporation
900 Lee Street East
Suite 1500
Charleston, West Virginia 25301

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, reading "Chris Boggess".

Chris Boggess
Associate Engineer

A handwritten signature in blue ink, reading "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

**Horsemill Compressor Station, Plant ID No. 039-00075
Glasgow / Sissonville District, West Virginia**

Cranberry Pipeline Corporation
c/o Cabot Oil & Gas Corporation
900 Lee Street East, Suite 1500
Charleston, West Virginia

September 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 sections: 1. Name of Applicant, 2. Facility Name or Location, 3. DAQ Plant ID No., 4. Federal Employer ID No. (FEIN), 5. Permit Application Type, 6. Type of Business Entity, 7. Is the Applicant the, 8. Number of onsite employees, 9. Governmental Code, 10. Business Confidentiality Claims

11. Mailing Address		
Street or P.O. Box: 900 Lee Street East, Suite 1500		
City: Charleston	State: WV	Zip: 25301
Telephone Number: (304) 347-1642	Fax Number: (304) 347-1635	

12. Facility Location		
Street: Horsemill Hollow Rd	City: Cedar Grove	County: Kanawha
UTM Easting: 461.620 km	UTM Northing: 4,232.351 km	Zone: <input checked="" type="checkbox"/> 17 or <input type="checkbox"/> 18
Directions: Travelling South on U.S. Rt 60, bear left onto CR 8/1 (Kellys Creek) for approximately 0.1 mile. Turn left onto Horsemill Hollow Rd. and travel approximately 1.3 miles. Station is 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). 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: Brody Webster		Title: Manager, Safety and Environment
Street or P.O. Box: 900 Lee St. East, Suite 1500		
City: Charleston	State: WV	Zip: 25301
Telephone Number: (304) 347-1642	Fax Number: (304) 347-1635	
E-mail address: brody.webster@cabotog.com		
Environmental Contact: Brody Webster		Title: Manager, Safety and Environment
Street or P.O. Box: 900 Lee St. East, Suite 1500		
City: Charleston	State: WV	Zip: 25301
Telephone Number: (304) 347-1642	Fax Number: (304) 347-1635	
E-mail address: brody.webster@cabotog.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 Processing	Crude Petroleum and Natural Gas	211111	1311

Provide a general description of operations.

Horsemill Compressor Station is a natural gas gathering and compression facility covered by Standard Industrial Classification (SIC) Code 1311. 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 one (1) 600 hp natural gas compressor engine, one (1) 800 hp natural gas compressor engine and a dehydration unit consisting of a still column and a reboiler

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 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 reboiler 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 reboiler at this facility is less than 10 mmBtu/hr; Hence Subpart Dc is not applicable in accordance with 60.40c(a)

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 June 12, 2006.

40 CFR 60 Subpart OOOO – *Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution*: This subpart does not apply to the facility since the facility is a gathering facility that does not have gas wells, centrifugal compressors, reciprocating compressors, and/or pneumatic controllers, or storage vessels constructed, modified, or reconstructed after August 23, 2011 in accordance with 60.5365(e).

40 CFR 60 Subpart OOOOa – *Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification, or Reconstruction Commenced after September 18, 2015*. The GHG and VOC requirements defined by this NSPS are not applicable to this site because there were no affected sources that commenced constructed prior to September 18, 2015 in accordance with [40CFR§60.5365a]

40 CFR 63 Subpart HHH – *National Emission Standards for Hazardous Air Pollutants from Natural gas Transmission and Storage Facilities*: This subpart does not apply to the facility since it is not a major source of HAPs as defined in 40CFR§63.1270(a).

40 C.F.R. 63 Subpart DDDDD; *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters*: This subpart does not apply to the facility since it is not a major source of HAPs as defined in 40CFR§63.7575.

40 C.F.R. 63 Subpart JJJJJJ; *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*: This subpart does not apply to the facility since there are no steam generating or hot water boiler affected sources utilized at this site as defined in 40CFR§63.11195(e).

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 17-3.1 – Fugitive PM Emissions shall not cause statutory air pollution
- 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 – 3.5.1 – 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 CSR§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 – 3.7 – 45 CSR 30-5.6 – Permit Shield
- T5 – 3.8 – 45 CSR 30-12.7 – Emergency Operating Scenarios

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 – 3.3.1 – 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 CSR§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 – 3.8 – 45 CSR 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

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

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

21. Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance MM/DD/YYYY	List any Permit Determinations that Affect the Permit <i>(if any)</i>
R30-03900075-2012(MM01)	06/03/2013	None
R13-2808B	05/10/2013	None
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22. Inactive Permits/Obsolete Permit Conditions

Permit Number	Date of Issuance	Permit Condition Number
None	_ / _ / ____	
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Section 3: Facility-Wide Emissions

23. Facility-Wide Emissions Summary [Tons per Year]	
Criteria Pollutants	Potential Emissions
Carbon Monoxide (CO)	24.43
Nitrogen Oxides (NO _x)	202.89
Lead (Pb)	-
Particulate Matter (PM _{2.5}) ¹	0.48
Particulate Matter (PM ₁₀) ¹	0.48
Total Particulate Matter (TSP)	0.48
Sulfur Dioxide (SO ₂)	0.03
Volatile Organic Compounds (VOC)	50.07
Hazardous Air Pollutants ²	Potential Emissions
Benzene	0.88
Toluene	3.07
Ethylbenzene	2.51
Xylene	3.60
n-Hexane	0.85
Formaldehyde	2.51
Regulated Pollutants other than Criteria and HAP	Potential Emissions
CO ₂ e	7,583.6

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 checked="" 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.															
<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" data-bbox="321 1392 1214 1549"> <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>001-06</td> <td>0.000</td> <td>0.43</td> </tr> <tr> <td>001-07</td> <td>0.000</td> <td>1.42</td> </tr> <tr> <td>001-08</td> <td>0.151</td> <td>1324.04</td> </tr> <tr> <td>Totals:</td> <td>0.15</td> <td>1325.89</td> </tr> </tbody> </table>	<i>Emission Point</i>	<i>VOC Emissions (lb/hr)</i>	<i>VOC Emissions (lb/yr)</i>	001-06	0.000	0.43	001-07	0.000	1.42	001-08	0.151	1324.04	Totals:	0.15	1325.89
<i>Emission Point</i>	<i>VOC Emissions (lb/hr)</i>	<i>VOC Emissions (lb/yr)</i>														
001-06	0.000	0.43														
001-07	0.000	1.42														
001-08	0.151	1324.04														
Totals:	0.15	1325.89														

24. Insignificant Activities (Check all that apply)	
<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 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 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 VOC or HAP.
<input type="checkbox"/>	26. Fire suppression systems.
<input type="checkbox"/>	27. Firefighting equipment and the equipment used to train firefighters.
<input type="checkbox"/>	28. Flares used solely to indicate danger to the public.
<input 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 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 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

24. Insignificant Activities (Check all that apply)	
	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 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.
<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 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: Brody Webster

Title: Manager, Safety and Environment

Responsible official's signature:

Signature:



Signature Date:

09/21/16

(Must be signed and dated in blue ink)

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

<input checked="" type="checkbox"/>	ATTACHMENT A: Area Map
<input checked="" type="checkbox"/>	ATTACHMENT B: Plot Plan(s)
<input checked="" type="checkbox"/>	ATTACHMENT C: Process Flow Diagram(s)
<input checked="" type="checkbox"/>	ATTACHMENT D: Equipment Table
<input checked="" type="checkbox"/>	ATTACHMENT E: Emission Unit Form(s)
<input type="checkbox"/>	ATTACHMENT F: Schedule of Compliance Form(s)
<input type="checkbox"/>	ATTACHMENT G: Air Pollution Control Device Form(s)
<input type="checkbox"/>	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/dag, requested by phone (304) 926-0475, and/or obtained through the mail.

ATTACHMENT A

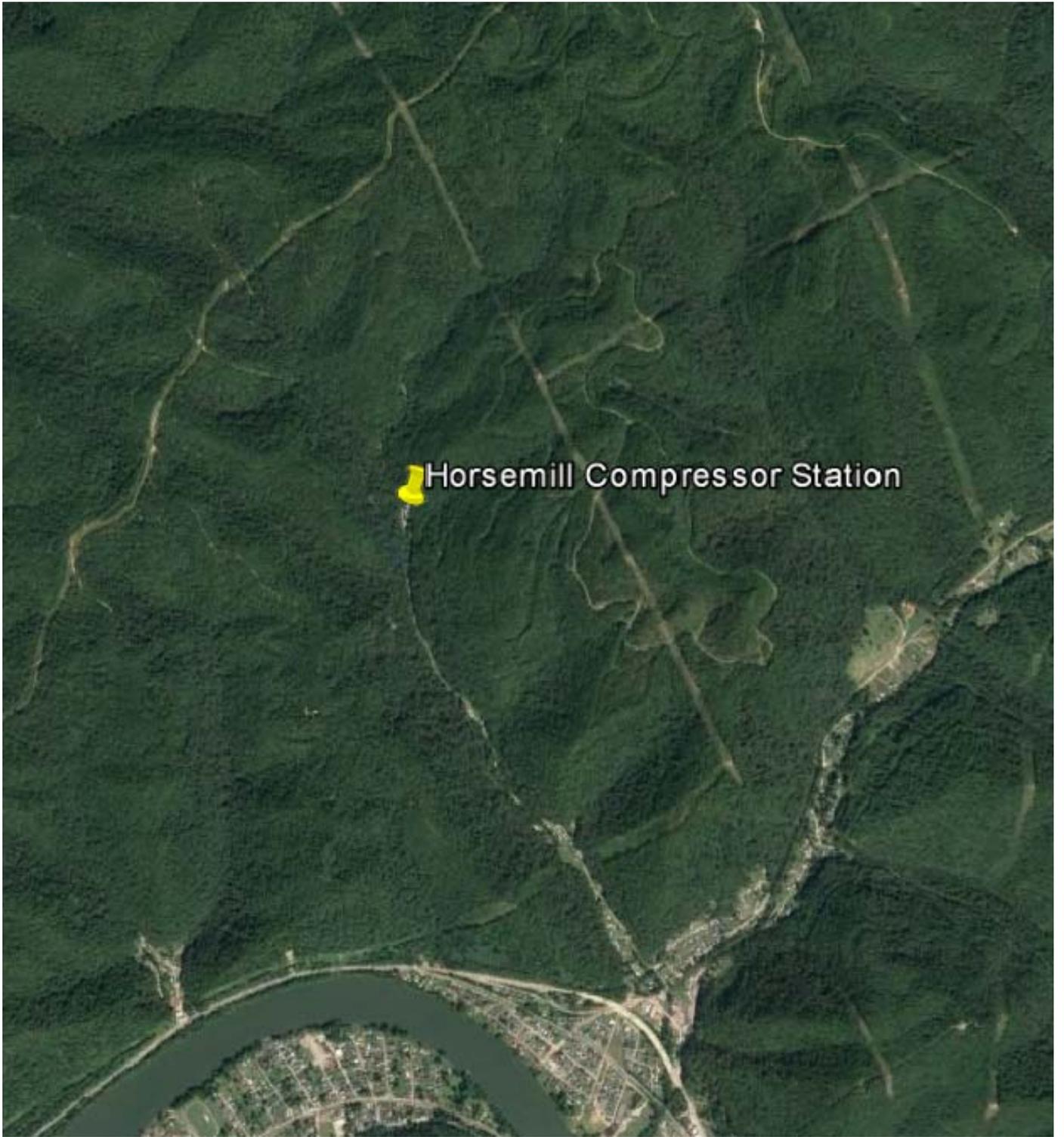
AREA MAP

Title V Operating Permit Renewal Application

**Horsemill Compressor Station, Plant ID No. 039-00075
Glasgow / Sissonville District, West Virginia**

Cranberry Pipeline Corporation
c/o Cabot Oil & Gas Corporation
900 Lee Street East, Suite 1500
Charleston, West Virginia

September 2016



Horsemill Compressor Station

GPS Coordinates of Sites:

Lat: 38.23834, Long: -81.43856

UTM Coordinates of Sites:

Easting: 461.620 km, Northing: 4,232.351 km, Zone: 17

Cranberry Pipeline Corporation
c/o Cabot Oil & Gas Corporation
900 Lee Street East, Suite 1500
Charleston, WV 25301

Report

Title V Operating Permit Renewal Application
Horsemill Compressor Station (ID No. 039-00075)

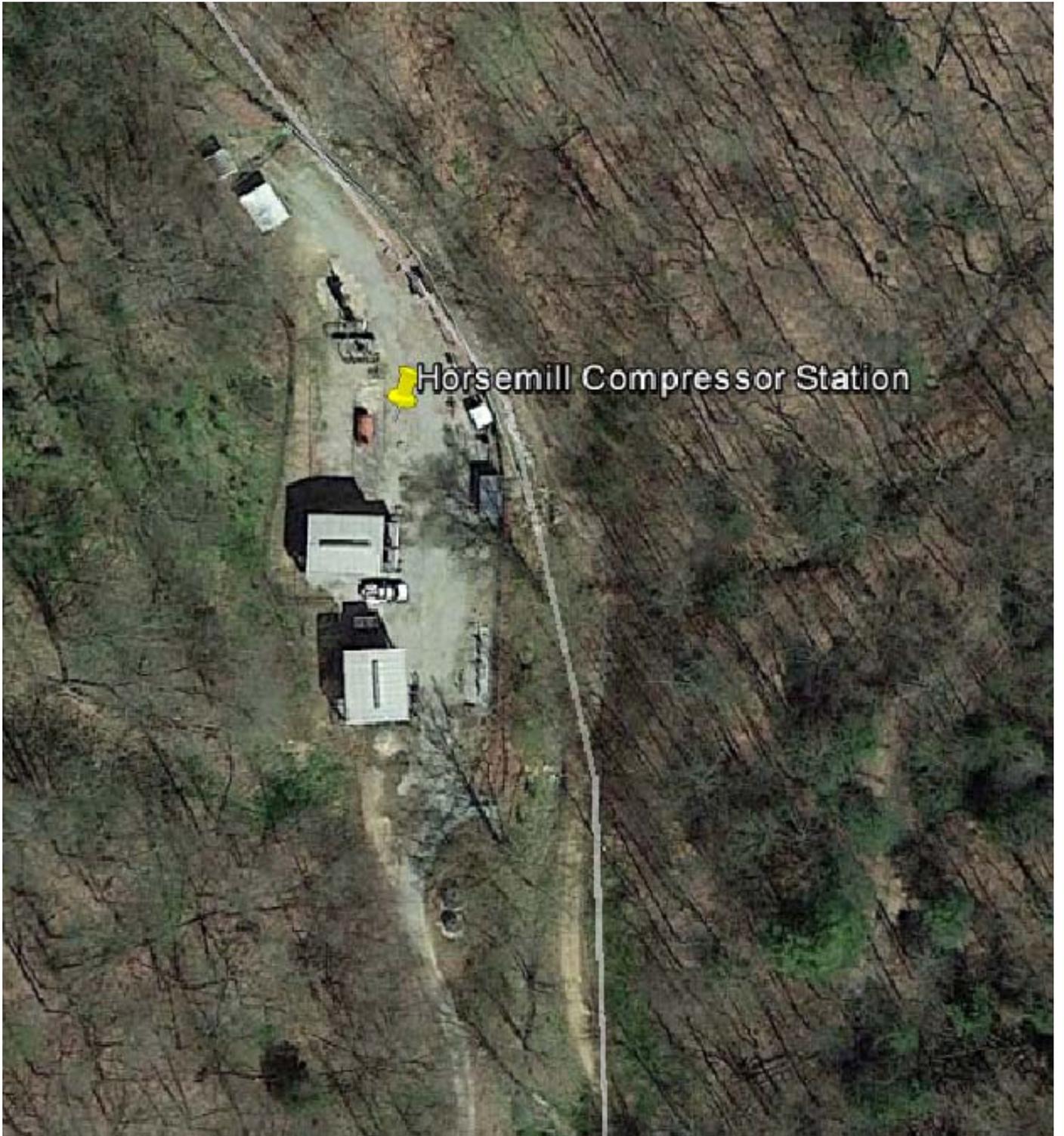
Drawing

Attachment A - Area Map

Date: May 2016

Drawn By: CLB

Project: 116.00400.00137



GPS Coordinates of Sites:
 Lat: 38.23834, Long: -81.43856

UTM Coordinates of Sites:
 Easting: 461.620 km, Northing: 4,232.351 km, Zone: 17

Cranberry Pipeline Corporation
 c/o Cabot Oil & Gas Corporation
 900 Lee Street East, Suite 1500
 Charleston, WV 25301

Report
 Title V Operating Permit Renewal Application
 Horsemill Compressor Station (ID No. 039-00075)

Drawing
 Attachment A - Area Map

Date: May 2016

Drawn By: CLB

Project: 116.00400.00137



ATTACHMENT B

PLOT PLAN

Title V Operating Permit Renewal Application

**Horsemill Compressor Station, Plant ID No. 039-00075
Glasgow / Sissonville District, West Virginia**

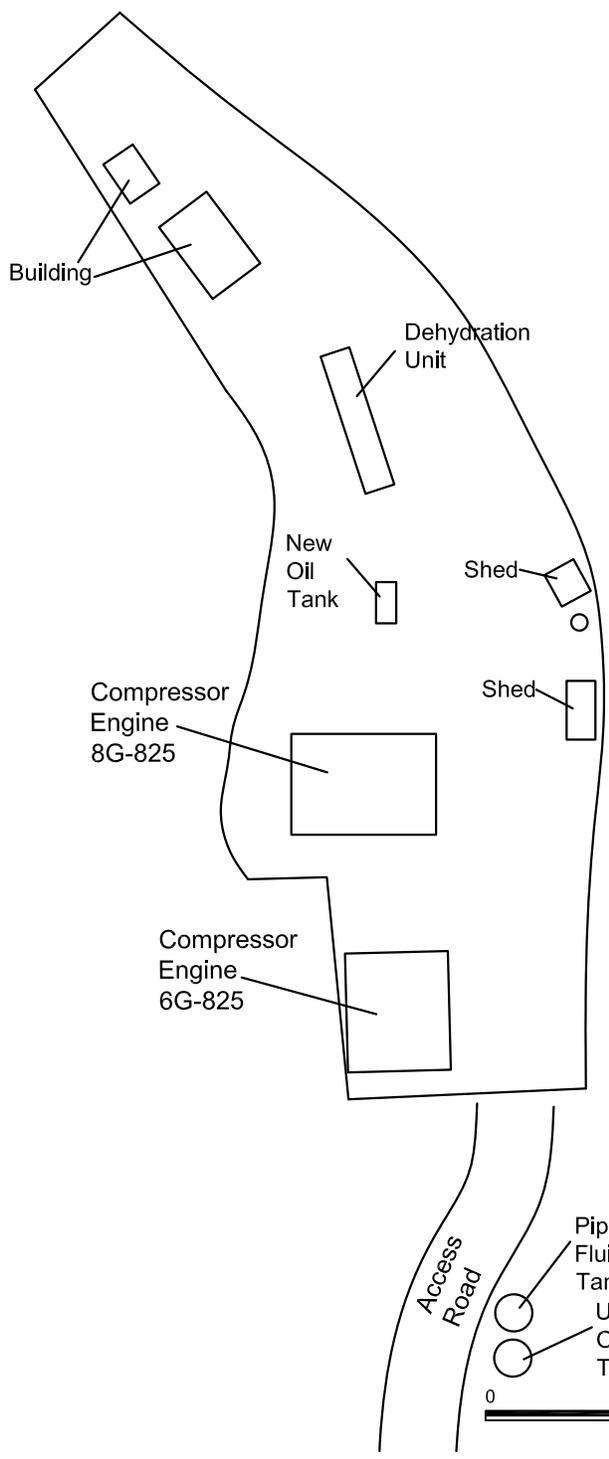
Cranberry Pipeline Corporation
c/o Cabot Oil & Gas Corporation
900 Lee Street East, Suite 1500
Charleston, West Virginia

September 2016



UTM REFERENCE

EASTING 461.620 KM
NORTHING 4,232.351 KM
ZONE 17



GPS Coordinates of Well Site
Lat: 38.23834 Long: -81.43856

Cranberry Pipeline Corporation
c/o Cabot Oil & Gas Corporation
900 Lee St. East, Suite 1500
Charleston, WV 25301

DRAWING LEGEND

	O/H Electric Line		Storage Tank
	Utility Pole		Secondary Containment Area
	Piping (above ground)		Direction of Surface Runoff
	Piping (under ground)		Well Head
	Valve		Meter
	Plug		Separator
	Tree/Brush line		Drain
	Crushed Stone Pad		Compressor
			Residential Meter
			Drip Tank



Report: **Horsemill Compressor Station**

Drawing: **Plot Plan**

Drawn By: **CLB**

Date: December 29, 2015

ATTACHMENT B
Project #: 116.00400.00137

ATTACHMENT C

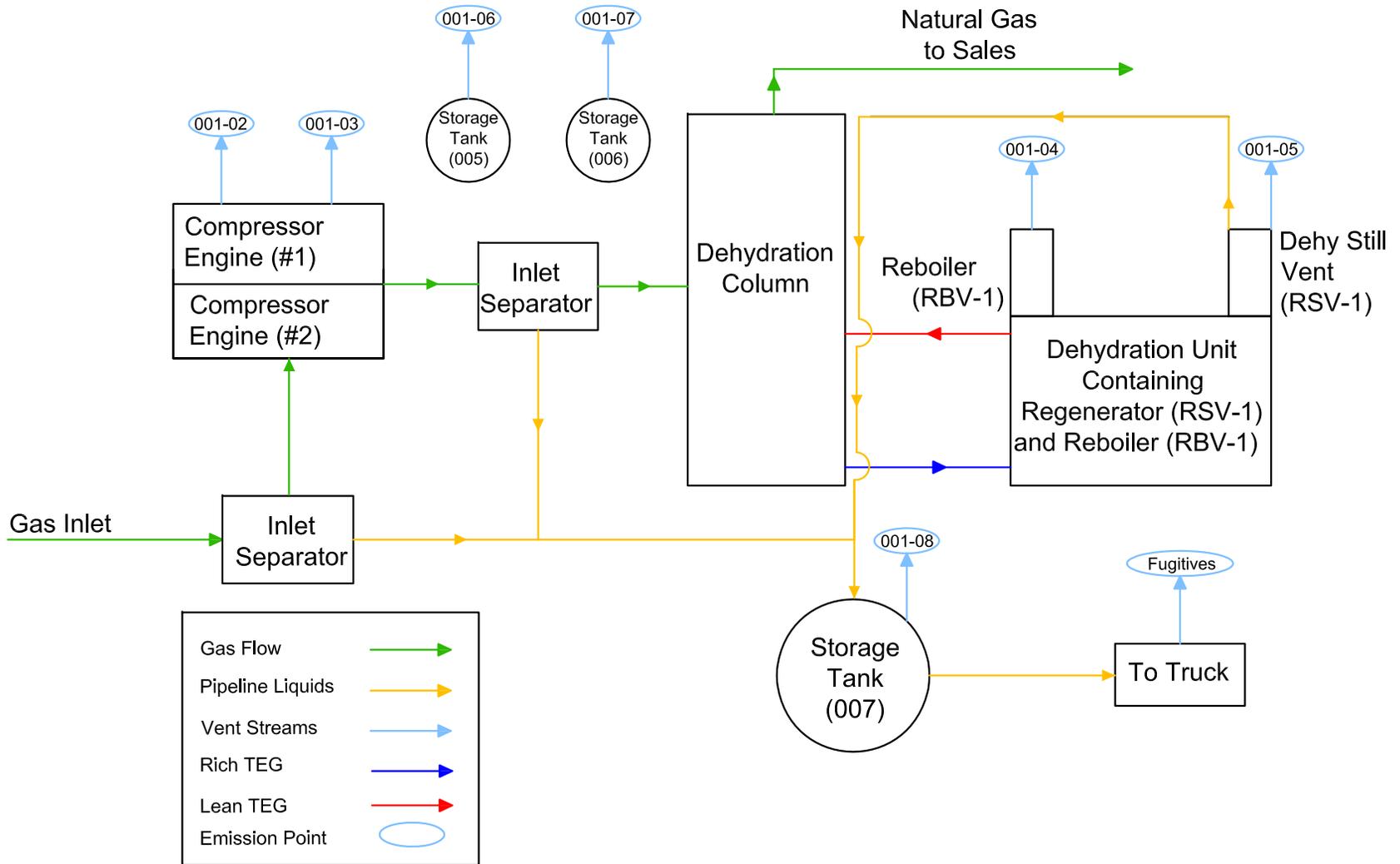
PROCESS FLOW DIAGRAM

Title V Operating Permit Renewal Application

**Horsemill Compressor Station, Plant ID No. 039-00075
Glasgow / Sissonville District, West Virginia**

Cranberry Pipeline Corporation
c/o Cabot Oil & Gas Corporation
900 Lee Street East, Suite 1500
Charleston, West Virginia

September 2016



Process Flow Diagram
Cranberry Pipeline Corporation
Horsemill Compressor Station - ID # 039 - 00075
Cedar Grove, West Virginia

ATTACHMENT D

EQUIPMENT TABLE

Title V Operating Permit Renewal Application

**Horsemill Compressor Station, Plant ID No. 039-00075
Glasgow / Sissonville District, West Virginia**

Cranberry Pipeline Corporation
c/o Cabot Oil & Gas Corporation
900 Lee Street East, Suite 1500
Charleston, West Virginia

September 2016

ATTACHMENT D - Title V Equipment Table
(includes all emission units at the facility except those designated as
insignificant activities in Section 4, Item 19 of the General Forms)

Emission Point ID ¹	Control Device ¹	Emission Unit ID ¹	Emission Unit Description	Design Capacity	Year Installed/Modified
001-02	N/A	#1*	Reciprocating Engine/ Integral Compressor; White Superior 6G825; Serial #274469	600 HP	1983
001-03	N/A	#2*	Reciprocating Engine/ Integral Compressor; White Superior 8G-825; Serial #20812	800 HP	1985
001-04	N/A	RBV-1	NATCO Model 90-200 Glycol Dehydration Unit Reboiler Vent	0.25 MMBtu/hr	2009
001-05	N/A	RSV-1	NATCO Model 90-200 Glycol Dehydration Unit Regenerator Still Vent	30 mmscf/day	2009
"Insignificant Emissions Sources from Section 4, Item 19"***					
001-06	N/A	005	Used Engine Oil Storage Tank	1,050 gallon	1986
001-07	N/A	006	New Engine Oil Storage Tank	2,000 gallon	1986
001-08	N/A	007	Pipeline Liquids Storage Tank	1,050 gallon	1986

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.

** This equipment has been included for completeness.

ATTACHMENT E

EMISSION UNIT FORM(S)

Title V Operating Permit Renewal Application

**Horsemill Compressor Station, Plant ID No. 039-00075
Glasgow / Sissonville District, West Virginia**

Cranberry Pipeline Corporation
c/o Cabot Oil & Gas Corporation
900 Lee Street East, Suite 1500
Charleston, West Virginia

September 2016

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: #1	Emission unit name: White Superior Reciprocating Engine	List any control devices associated with this emission unit: None.
---------------------------------------	---	---

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Reciprocating Compressor Engine; 4 Stroke Lean Burn; White Superior 6G-825; Serial #274469

Manufacturer: White Superior	Model number: 6G-825	Serial number: #274469
Construction date: N/A	Installation date: 1983	Modification date(s): N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 600 HP

Maximum Hourly Throughput: N/A	Maximum Annual Throughput: N/A	Maximum Operating Schedule: 8,760 hrs/yr
--	--	--

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: Maximum horsepower rating: 600 HP	Type and Btu/hr rating of burners: N/A
---	--

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.

This equipment combusts pipeline quality natural gas only.
Maximum Hourly Fuel Usage: N/A
Maximum Annual Fuel Usage: N/A

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Pipeline Quality Natural Gas	2,000 grains/10 ⁶ scf	N/A	1020 Btu/scf

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	2.38	10.43
Nitrogen Oxides (NO _x)	19.84	86.91
Lead (Pb)	-	-
Particulate Matter (PM _{2.5})	0.05	0.21
Particulate Matter (PM ₁₀)	0.05	0.21
Total Particulate Matter (TSP)	0.05	0.21
Sulfur Dioxide (SO ₂)	0.001	0.012
Volatile Organic Compounds (VOC)	0.26	1.16
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Total HAP's	0.34	1.48
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A	N/A	N/A
<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>AP-42, Chapter 3.2, Table 3.2-2.</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.

40 C.F.R. § 63.6603(a) and Table 2d (Line 8) – Maintenance Requirements

40 C.F.R. § 63.6605 – Operating Requirements

40 C.F.R. § 63.6625(h), and (j) – Monitoring Requirements

40 C.F.R. § 63.6640(a) and Table 6 (Line 9) – Continuous Compliance Requirements

40 C.F.R. § 63.6660 – Recordkeeping Requirements

40 C.F.R. § 63.6665 – General Requirements/Provisions

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. § 63.6603(a) and Table 2d (Line 8) – Change oil and oil filter, and inspect spark plugs, hoses, and belts every 2,160 hours of operation, or annually, whichever occurs first, and replace as necessary

40 C.F.R. § 63.6603(f) – Must meet the definition of remote stationary RICE in §63.6675 on initial compliance date of October 19, 2013 to be considered remote and then reevaluate every twelve (12) months

40 C.F.R. § 63.6605, 63.6640 and Table 6 (Line 9) – Work or Management Practices: Operate and Maintain the RICE according to the manufacturer’s instructions OR develop and follow your own maintenance plan

40 C.F.R. § 63.6625 (h) – Minimize Idle Time during Startup to not exceed 30 Minutes

40 C.F.R. § 63.6625 (j) – Oil Analysis Program in lieu of Oil change requirement in Table 2d (Line 8)

40 C.F.R. § 63.6655(a), (d), and (e)(3) – Keep records of maintenance conducted and operating schedule on the RICE

40 C.F.R. § 63.6660 – Records retained for five (5) years and readily available for expeditious review

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: #2	Emission unit name: White Superior Reciprocating Engine	List any control devices associated with this emission unit: None.
---------------------------------------	---	---

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Reciprocating Compressor Engine; 4 Stroke Lean Burn White Superior 8G-825; Serial #20812

Manufacturer: White Superior	Model number: 8G-825	Serial number: #20812
Construction date: N/A	Installation date: 1985	Modification date(s): N/A

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

Maximum Hourly Throughput: N/A	Maximum Annual Throughput: N/A	Maximum Operating Schedule: 8,760 hrs/yr
--	--	--

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: Maximum horsepower rating: 800 HP	Type and Btu/hr rating of burners: N/A
---	--

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.

This equipment combusts pipeline quality natural gas only.
Maximum Hourly Fuel Usage: N/A
Maximum Annual Fuel Usage: N/A

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Pipeline Quality Natural Gas	2,000 grains/10 ⁶ scf	N/A	1020 Btu/scf

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	3.17	13.91
Nitrogen Oxides (NO _x)	26.46	115.88
Lead (Pb)	-	-
Particulate Matter (PM _{2.5})	0.06	0.27
Particulate Matter (PM ₁₀)	0.06	0.27
Total Particulate Matter (TSP)	0.06	0.27
Sulfur Dioxide (SO ₂)	0.001	0.016
Volatile Organic Compounds (VOC)	0.35	1.55
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Total HAP's	0.45	1.97
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A	N/A	N/A
<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>AP-42, Chapter 3.2, Table 3.2-2.</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.

40 C.F.R. § 63.6603(a) and Table 2d (Line 8) – Maintenance Requirements

40 C.F.R. § 63.6605 – Operating Requirements

40 C.F.R. § 63.6625(h), and (j) – Monitoring Requirements

40 C.F.R. § 63.6640(a) and Table 6 (Line 9) – Continuous Compliance Requirements

40 C.F.R. § 63.6660 – Recordkeeping Requirements

40 C.F.R. § 63.6665 – General Requirements/Provisions

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. § 63.6603(a) and Table 2d (Line 8) – Change oil and oil filter, and inspect spark plugs, hoses, and belts every 2,160 hours of operation, or annually, whichever occurs first, and replace as necessary

40 C.F.R. § 63.6603(f) – Must meet the definition of remote stationary RICE in §63.6675 on initial compliance date of October 19, 2013 to be considered remote and then reevaluate every twelve (12) months

40 C.F.R. § 63.6605, 63.6640 and Table 6 (Line 9) – Work or Management Practices: Operate and Maintain the RICE according to the manufacturer’s instructions OR develop and follow your own maintenance plan

40 C.F.R. § 63.6625 (h) – Minimize Idle Time during Startup to not exceed 30 Minutes

40 C.F.R. § 63.6625 (j) – Oil Analysis Program in lieu of Oil change requirement in Table 2d (Line 8)

40 C.F.R. § 63.6655(a), (d), and (e)(3) – Keep records of maintenance conducted and operating schedule on the RICE

40 C.F.R. § 63.6660 – Records retained for five (5) years and readily available for expeditious review

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: RBV-1	Emission unit name: Reboiler	List any control devices associated with this emission unit: N/A	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): 0.25 MMBtu/hr Heat Input			
Manufacturer: NATCO	Model number: 90-200	Serial number: N/A	
Construction date: N/A	Installation date: 2009	Modification date(s): N/A	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 0.25 MMBtu/hr Heat Input			
Maximum Hourly Throughput: N/A	Maximum Annual Throughput: N/A	Maximum Operating Schedule: 8,760 hrs/yr	
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: Design Heat Input 0.25 MMBTU/hr		Type and Btu/hr rating of burners: Natural Gas 0.25 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. Pipeline Quality Natural Gas			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Pipeline Quality Natural Gas	2,000 grains/10 ⁶ scf	NA	1,020
Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)	0.02	0.09	
Nitrogen Oxides (NO _x)	0.03	0.11	
Lead (Pb)	-	-	
Particulate Matter (PM _{2.5})	-	-	
Particulate Matter (PM ₁₀)	0.01	0.01	

Total Particulate Matter (TSP)	0.01	0.01
Sulfur Dioxide (SO ₂)	0.01	0.01
Volatile Organic Compounds (VOC)	0.01	0.01
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
	-	-
Regulated Pollutants other than Criteria and HAP	-	
	PPH	TPY
N/A	N/A	N/A
<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>AP-42, Chapter 1.4, Tables 1.4-1 through 1.4-4</p>		

<p><i>Applicable Requirements</i></p> <p>List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> 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>45 CSR§2-3.1 – Opacity Limit; shall not exceed ten (10) percent opacity</p> <p><input checked="" type="checkbox"/> Permit Shield</p> <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>45 CSR§2-3.2 – Compliance shall be determined using Method 9</p> <p>Are you in compliance with all applicable requirements for this emission unit? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If no, complete the Schedule of Compliance Form as ATTACHMENT F.</p>

ATTACHMENT E - Emission Unit Form

Emission Unit Description			
Emission unit ID number: RSV-1	Emission unit name: Dehydration Unit Still Vent	List any control devices associated with this emission unit: None.	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): Glycol Dehydration Unit, 30MMscf/day.			
Manufacturer: NATCO	Model number: Model 90-200	Serial number: N/A	
Construction date: N/A	Installation date: 2009	Modification date(s): N/A	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 30 MMscf/day throughput			
Maximum Hourly Throughput: 1.25 MMft ³ /hr	Maximum Annual Throughput: 10,950 MMscf/yr	Maximum Operating Schedule: 8,760 hrs/yr	
Fuel Usage Data (fill out all applicable fields)			
Does this emission unit combust fuel? ___ Yes <input checked="" type="checkbox"/> No		If yes, is it? ___ Indirect Fired ___ Direct Fired	
Maximum design heat input and/or maximum horsepower rating: N/A		Type and Btu/hr rating of burners: N/A	
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. N/A			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A	N/A	N/A	N/A
Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)	-	-	
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)	11.42	45.67
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	0.20	0.86
Ethylbenzene	0.58	2.51
Toluene	0.70	3.05
Xylene	0.82	3.59
n-Hexane	0.19	0.79
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A	N/A	N/A
<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>GRI-GLYCalc 4.0</p>		

<p><i>Applicable Requirements</i></p> <p>List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> 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>40 C.F.R. § 63.764 (e)(1)(ii) – Less than one (1) ton of Benzene Exemption</p> <p>40 C.F.R. § 63.772 – Compliance Procedures</p> <p>40 C.F.R. § 63.774 – Recordkeeping Requirements</p> <p>40 C.F.R. § 63.775 – Reporting Requirements</p> <p>45 C.S.R. 13, Permit R13-2808B</p> <p>Condition 5.1.1 – Throughput Limitation; The maximum wet natural gas throughput for the dehydration unit shall not exceed 30 mmscf/d. Compliance with this limitation shall be determined using an average of the 12 month rolling total</p> <p>Condition 5.1.2 – Emission Limitation; Maximum emissions shall not exceed the following:</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Emissions (lb/hr)</th> <th>Emissions (ton/yr)</th> </tr> </thead> <tbody> <tr> <td>VOCs</td> <td>10.42</td> <td>45.67</td> </tr> <tr> <td>Benzene</td> <td>0.197</td> <td>0.86</td> </tr> <tr> <td>Ethylbenzene</td> <td>0.572</td> <td>2.51</td> </tr> <tr> <td>Toluene</td> <td>0.696</td> <td>3.05</td> </tr> <tr> <td>Xylenes</td> <td>0.820</td> <td>3.59</td> </tr> <tr> <td>n-Hexane</td> <td>0.181</td> <td>0.79</td> </tr> </tbody> </table> <p>Condition 5.1.3 – For purposes of determining HAP emissions, the methods specified in 40 CFR 63 Subpart HH shall be used</p>			Pollutant	Emissions (lb/hr)	Emissions (ton/yr)	VOCs	10.42	45.67	Benzene	0.197	0.86	Ethylbenzene	0.572	2.51	Toluene	0.696	3.05	Xylenes	0.820	3.59	n-Hexane	0.181	0.79
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x 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. § 63.772(b)(2) – Permittee shall determine actual average Benzene emissions by using GRI-GLYCalc Version 3.0 or higher or by determining an average mass rate of benzene emissions in kg/hr through direct measurement.

40 C.F.R. § 63.774(d)(i) – Maintain records of actual average Benzene emissions

40 C.F.R. § 63.775(c)(8) – TEG Units located at an area source meeting the criteria found in 63.764(e)(1)(ii) are exempt from the reporting requirement

45 C.S.R. 13, Permit R13-2808B

Condition 5.2.1 – In order to demonstrate compliance with Condition 5.1.2, the permittee shall have the option of using GRI-GLYCalc Version 3.0 or higher to estimate emissions from the glycol dehydration unit. However, to exercise this option the glycol dehydration unit must be accurately defined by monitoring and recording actual operating parameters associated with the emission unit. With the exception of wet gas composition, the permittee shall monitor and record bi-monthly the actual operating parameters listed below;

- Natural Gas Flowrate including number of days operated per year, annual daily average (mmscf/d) and maximum design capacity (mmscf/d)
- Absorber temperature and pressure
- Lean glycol circulation rate
- Glycol pump type
- Flash tank temperature and pressure, if applicable
- Stripping Gas flow rate, if applicable
- Wet gas composition (upstream of the absorber – dehydration column) Sampled in accordance with GPA method 2166 and analyzed consistent with GPA extended method 2286 as well as the procedures presented in the GRI-GLYCalc Technical Reference User Manual and Handbook V4.
- Wet gas water content shall be measured with a dew point meter at a location prior to the contactor column, but after the last liquid knock out pot.
- Dry gas water content shall be measured with a dew point meter at a location after the contactor column.

Condition 5.3.1 – At least once per calendar year upon issuance of this permit, the permittee shall determine the contents of the wet natural gas stream by analyzing the sample using GPA Method 2286 extended analysis.

Condition 5.4.1 – Permittee shall maintain a record of the monthly wet natural gas through the dehydration unit to demonstrate compliance with Condition 5.1.1.

Condition 5.4.2 – For the purposes of demonstrating compliance with the limits set forth in Condition 5.1.2, the permittee shall maintain records of the flow rate measurements and wet gas analysis made during the initial compliance determination or subsequent compliance determinations in accordance with Section 5.3

Condition 5.4.3 – Permittee shall maintain records of the GLYCalc analysis as required by Condition 5.2.1. Said records shall include a printout of the aggregate calculations report which shall include emissions reports, equipment reports and stream reports. Bi-monthly records of the input parameters shall be maintained as required in Section 5.2

Condition 5.4.4 – Records required under conditions 5.4.1 – 5.4.3 shall be retained for five (5) years and readily available for expeditious review

Condition 5.5.1 – If the results of the compliance determination conducted predict emissions to be greater than 9.4 tpy of any single HAP or a combined total of HAPs greater than 24.4 tpy, the permittee shall submit such determination and all supporting documentation to the Director within 15 days after making such determination

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

**Horsemill Compressor Station, Plant ID No. 039-00075
Glasgow / Sissonville District, West Virginia**

Cranberry Pipeline Corporation
c/o Cabot Oil & Gas Corporation
900 Lee Street East, Suite 1500
Charleston, West Virginia

September 2016

ATTACHMENT G

**AIR POLLUTION CONTROL DEVICE FORM (NOT
APPLICABLE)**

Title V Operating Permit Renewal Application

**Horsemill Compressor Station, Plant ID No. 039-00075
Glasgow / Sissonville District, West Virginia**

Cranberry Pipeline Corporation
c/o Cabot Oil & Gas Corporation
900 Lee Street East, Suite 1500
Charleston, West Virginia

September 2016

ATTACHMENT H

COMPLIANCE ASSURANCE MONITORING FORM (NOT APPLICABLE)

Title V Operating Permit Renewal Application

**Horsemill Compressor Station, Plant ID No. 039-00075
Glasgow / Sissonville District, West Virginia**

Cranberry Pipeline Corporation
c/o Cabot Oil & Gas Corporation
900 Lee Street East, Suite 1500
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