COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Northern Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

Transcontinental Gas Pipe Line Company, LLC
Transco Compressor Station 180
Orange County, Virginia
Permit No. NRO-40782

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Transcontinental Gas Pipe Line Company, LLC has applied for a Title V Operating Permit for its Compressor Station 180 in Orange County, VA. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact: _____ Date: 12/11/14
Justin Wilkinson
(703) 583-3820

Air Permit Manager: _____ Date: 12/11/14
James B. LaFratta

Regional Director: _____ Date: 12-11-14
Thomas A. Faha

FACILITY INFORMATION

Permittee
Transcontinental Gas Pipe Line Company, LLC ("Transco")
2800 Post Oak Boulevard
Houston, Texas 77056

Facility
Transco Compressor Station 180
7444 Everona Road
Unionville, Virginia 22567
(Orange County)

County-Plant Identification Number: 51-137-0027

SOURCE DESCRIPTION

NAICS Code: NAICS 486210 – Pipeline Transportation of Natural Gas

Transcontinental Gas Pipe Line Company, LLC (Transco) is an interstate natural gas transmission company. Transco's 1,900 mile pipeline system transports natural gas from production areas in the Gulf Coast region to customers along the eastern seaboard. Transco's compressor stations are used to compress and move the gas through the system. Compressor Station 180 utilizes fourteen (14) mainline natural gas-fired, reciprocating internal combustion engines (M/L 1 through M/L 14) to drive the gas compressors which boost the pressure of natural gas in the transmission line and move the natural gas through thepipeline system. The facility has three (3) natural gas-fired reciprocating auxiliary electric power generators (AUX01 through AUX03) for use when electric power is unavailable to the facility from the electric power utility or when the electric utility requests the facility to provide its own station power.

The facility is a Title V major source of volatile organic compounds (VOCs), oxides of nitrogen (NOx), carbon monoxide (CO), hazardous air pollutants (HAPs), and greenhouse gas (GHG) emissions as provided in Attachment A of the Title V renewal application This source is a PSD "major stationary source" located in an area, which is classified as "attainment or unclassified" for all pollutants.

The facility is currently permitted under a Minor NSR Permit, issued on November 8, 2002, to construct and operate a high pressure fuel gas injection system on one natural gas fired engine (M/L 9), and a State Operating Permit issued on February 13, 2007, and amended on April 10, 2012, to make the NOx reduction provisions of the EPA's NOx SIP Call Phase II state and federally enforceable. The facility was issued its initial Title V federal operating permit on July 13, 2001. Prior to the expiration date of the permit, Transco submitted a timely and complete Title V Renewal Application per 9 VAC 5-80-80.C. Consequently, Transco has been operating under the terms and conditions of the July 13, 2001, Title V Permit and will do so until the Title V Renewal Permit is issued.

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit,was most recently completed on April 2, 2013. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of thefollowing:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
M/L 1	01	Clark BA-8, 1800 hp natural gas, 2 stroke, lean burn (2SLB) spark ignited, internal combustion reciprocating compressor engine (Constructed before 1972)	16.6×10^6 Btu/hr (heat input)	None	None	None	None
M/L 2	02	Clark BA-8, 1800 hp natural gas, 2 stroke, lean burn (2SLB) spark ignited, internal combustion reciprocating compressor engine (Constructed before 1972)	16.6×10^6 Btu/hr (heat input)	None	None	None	None
M/L 3	03	Clark BA-8, 1800 hp natural gas, 2 stroke, lean burn (2SLB) spark ignited, internal combustion reciprocating compressor engine (Constructed before 1972)	16.6×10^6 Btu/hr (heat input)	None	None	None	None
M/L 4	04	Clark BA-8, 1800 hp natural gas, 2 stroke, lean burn (2SLB) spark ignited, internal combustion reciprocating compressor engine (Constructed before 1972)	16.6×10^6 Btu/hr (heat input)	None	None	None	None
M/L 5	05	Clark BA-8, 1800 hp natural gas, 2 stroke, lean burn (2SLB) spark ignited, internal combustion reciprocating compressor engine (Constructed before 1972)	16.6×10^6 Btu/hr (heat input)	None	None	None	None

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
M/L 6	06	Clark BA-8, 1800 hp natural gas, 2 stroke, lean burn (2SLB) spark ignited, internal combustion reciprocating compressor engine (Constructed before 1972)	16.6 x 10^6 Btu/hr (heat input)	None	None	None	None
M/L 7	07	Clark BA-8, 1800 hp natural , 2 stroke, lean burn (2SLB) spark ignited, internal combustion reciprocating compressor engine (Constructed before 1972)	16.6 x 10^6 Btu/hr (heat input)	None	None	None	None
M/L 8	08	Clark TLA-6, 2100 hp natural gas, 2 stroke, lean burn (2SLB) spark ignited, internal combustion reciprocating compressor engine (Constructed before 1972)	17.2 x 10^6 Btu/hr (heat input)	None – See Note 1	None	NOx	February 13, 2007 amended April 10, 2012
M/L 9	09	Clark TLA-6, 2100 hp natural gas, 2 stroke, lean burn (2SLB) spark ignited, internal combustion reciprocating compressor engine (Constructed before 1972)	17.2 x 10^6 Btu/hr (heat input)	High pressure fuel injection**	None	NOx CO	November 8, 2002
M/L 10	10	Clark TLA-6, 2100 hp natural gas, 2 stroke, lean burn (2SLB) spark ignited, internal combustion reciprocating compressor engine (Constructed before 1972)	17.2 x 10^6 Btu/hr (heat input)	None – See Note 1	None	NOx	February 13, 2007 amended April 10, 2012
M/L 11	11	Clark TCV-10, 3400 hp natural gas, 2 stroke, lean burn (2SLB) spark ignited, internal combustion reciprocating compressor engine (Constructed before 1972)	26.0 x 10^6 Btu/hr (heat input)	None	None	None	None

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
M/L 12	12	Clark TCV-10, 3400 hp natural gas, 2 stroke, lean burn (2SLB) spark ignited, internal combustion reciprocating compressor engine (Constructed before 1972)	27.8 x 10^6 Btu/hr (heat input)	None	None	None	None
M/L 13	13	Clark TCV-10, 3400 hp natural gas internal combustion reciprocating compressor engine (Constructed before 1972)	27.8 x 10^6 Btu/hr (heat input)	None	None	None	None
M/L 14	14	Clark TCV-16, 5500 hp natural gas internal combustion reciprocating compressor engine (Constructed before 1972)	43.0 x 10^6 Btu/hr (heat input)	None – See Note 1	None	NOx	February 13, 2007 amended April 10, 2012
AUX01	15	Ingersoll-Rand PVG-8, 370 hp natural gas internal combustion reciprocating auxiliary electric power generator (Constructed before 1972)	5.5 x 10^6 Btu/hr (heat input)	None	None	None	None
AUX02	16	Ingersoll-Rand PVG-8, 370 hp natural gas internal combustion reciprocating auxiliary electric power generator (Constructed before 1972)	5.5 x 10^6 Btu/hr (heat input)	None	None	None	None
AUX03	17	Ingersoll-Rand PVG-8, 370 hp natural gas internal combustion reciprocating auxiliary electric power generator (Constructed before 1972)	5.5 x 10^6 Btu/hr (heat input)	None	None	None	None

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
A/C 1	18	Caterpillar 3306, 145 hp natural gas internal combustion reciprocating emergency air compressor (Constructed before 1998)	1.0×10^6 Btu/hr (heat input)	None	None	None	None

*The Size/Rated Capacity is provided for informational purposes only, and is not an applicable requirement.

****Per 40 CFR 64.1, this device is not considered a control device and the requirements of 40 CFR Part 64 do not apply, however, it is listed above as a control device per the permit dated November 8, 2002 where it is identified as such.

Note 1: There is no pollution control device. However, there is the following Ozone Season NOx SIP Call Control Strategy: high pressure fuel injection (HPFi™) or operational limitations.

EMISSIONS INVENTORY

A summary of the 2013 annual emission update for the significant emission units at the facility is included as Attachment A. These emissions are detailed in the following tables.

2013 Actual Emissions

Emission Unit	2013 Criteria Pollutant Emission in Tons/Year					
	VOC	CO	SO_2	PM_{10}	$PM_{2.5}$	NO_x
M/L 1	0.193	1.387	0.003	0.055	0.055	5.292
M/L 2	0.155	1.116	0.002	0.045	0.045	4.257
M/L 3	0.130	0.935	0.002	0.037	0.037	3.567
M/L 4	0.130	1.015	0.002	0.041	0.041	3.873
M/L 5	0.029	0.211	0.001	0.008	0.008	0.250
M/L 6	0.053	0.382	0.001	0.015	0.015	0.452
M/L 7	0.056	0.402	0.001	0.016	0.016	1.534
M/L 8	0.414	0.210	0.003	0.050	0.050	0.498
M/L 9	0.415	0.044	0.002	0.044	0.044	0.730
M/L 10	0.414	0.210	0.003	0.050	0.050	0.666
M/L 11	0.005	0.032	0.000	0.001	0.001	0.030
M/L 12	0.164	1.161	0.003	0.049	0.049	1.095
M/L 13	0.151	1.065	0.003	0.045	0.045	1.005
M/L 14	0.031	0.126	0.001	0.008	0.008	0.094
AUX01	0.014	0.733	0.000	0.001	0.001	0.112
AUX02	0.016	0.794	0.000	0.001	0.001	0.121
AUX03	0.007	0.346	0.000	0.001	0.001	0.053
Total	2.377	10.169	0.027	0.467	0.467	23.629

2012 Facility Hazardous Air Pollutant Emissions*

Pollutant	2012 Hazardous Air Pollutant Emission in Tons/Yr
Formaldehyde	23
Acrolein	3.2
Acetaldehyde	3.2
Total HAPs	29.4

*Acrolein and acetaldehyde emissions not reported in CY2013 annual emissions statement, therefore the CY2012 values have been included. Facility-wide formaldehyde emissions for CY2013 were reported to be 0.516 tons per year.

EMISSION UNIT APPLICABLE REQUIREMENTS

Transco's Station #180 is required to meet the 82% NOx reduction mandated by EPA's NOx SIP Call Phase II Regulation for the compressor engines M/L 8, M/L 10, and M/L 14. Transco elected to meet the NOx reductions by adding high pressure fuel injection (HPFI™), which also may involve one or more of the following: changes to the piston crown and cylinder heads, improved turbochargers and intercoolers, improved instrumentaton, and improved control

systems to the affected stationary reciprocating internal combustion engine (SRICE). The February 13, 2007 State Operating Permit (SOP), as amended April 10, 2012, is a source specific State Implementation Plan (SIP) Revision tomake the NOx reduction provisions of the EPA's NOx SIP Call Phase II state and federally enforceable. The requirements of the SOP are included in the Title V permit section "**NOX SIP Call Phase II - (M/L 08, M/L 10, and M/L14)**". These engines are not subject to NSPS Subpart JJJJ and MACT Subpart ZZZZ (see the **Permit Shield/Inapplicable Requirements** section below).

NOX SIP Call Phase II Fuel Burning Equipment Requirements - (M/L 8, M/L 10, and M/L14)

Limitations

The NOx SIP Call Rule (63 FR 57356, October 27, 1998 and 69 FR 21604, April 21, 2004), addresses the interstate transport of ozone. This rule requires twentyone States and the District of Columbia to eliminate those amounts of NOx emissions that contribute significantly to downwind nonattainment of the 1-hour ozone standard. Phase II of the Rule requires a 90% reduction for existing electrical cogeneration units with heat input capacity greater than 250 MMBtu/hr and an 82% reduction for large stationaryinternal combustion engines. The NOx SIP Call and the permit dated February 13, 2007 (as amended April 12, 2012) identified Unit Ref. No M/L 14 as an affected unit and required the reduction ofthe ozone season NOx emissions by 82% from the 1995 ozone season NOx emissions. In the 1995 Ozone Season, the affected SRICE emitted 158.66 tons of NOx. With a 98% growth factor and an 82% reduction, this engine would be allowed to emit 29.99 tons of NOx during an ozone season beginning in 2007 (127.55 ton/yr reduction). The NOx SIP Call and the permit dated February 13, 2007 (as amended April 12, 2012) incorporated Units Ref. Nos. M/L 08 and M/L10in addition to Unit Ref. No. M/L 14, requiring a reduction of NOx emissions from all three SRICE's during the ozone season to achieve an equivalent 82% reduction in ozone season NOxemissions for Unit Ref. No. M/L 14. Transco has elected to meet the NOx reduction by adding high pressure fuel injection (HPFI™) to the three SRICE's (Unit Ref. Nos. M/L 08, M/L 10, and M/L14), which also may involve one or more of the following: changes to the piston crown and cylinder heads,improved turbochargers and intercoolers, instrumentation, and control systems. These requirements, as summarized below, are incorporated into the Title V permit (Note: The applicable February 13, 2007 (as amended April 12, 2012) permit condition is stated in italic font):

- Condition 2, requires that Unit Ref. Nos. M/L 08, M/L 10, and M/L14 be operated in accordance with the permit dated February 13, 2007 (as amended April 10, 2012) during the ozone season (see *Condition III.A.2*).
- Condition 3, specifies that any changes to Unit Ref. Nos. M/L 08, M/L 10, and M/L14 which alter the impact air quality may require a permit or permit revision(see *Condition III.A.3*).
- Conditions 4 and 5, specify the affected units that shall meet the NOX SIP Call Phase II emission reduction requirements and how the emissions reductions shall be met(see *Conditions III.B.1* and *III.B.2*).
- Conditions 6, 7, and 8, specify the ozone season hours of operation limits, ozone season NOx hourly emission rates, the ozone season NOx total emission rates, and approved fuel for each of the affected units (see *Conditions III.E.1, III.E.2,* and *III.E.3*).

- Condition 9, requires the facility to take specific measures in order to minimize the duration and frequency of excess emissions from the affected units (see *Condition III.I.4*).

Monitoring and Recordkeeping

The Ozone Season parametric monitoring requirements in the February13, 2007 (as amended April 12, 2012) permit only apply during the period of May 1 to September 30each year. These requirements, as summarized below, are incorporated into the Title V permit (Note: The applicable February 13, 2007 (as amended April 12, 2012) permit condition is stated in italic font):

- Condition 10, requires a parametric monitoring system (PMS)be installed on each affected engine to monitor the selected permitted engine performance indicators (parameters) for NOx emissions, and data for these engine parameters has been collected since 2007 (see *Condition III.C.1*).
- To correlate the engine operating parameters and NOx emission limits, the following requirements in the February 13, 2007 (as amended April 12, 2012) permithave been initially completed by Transco:
    - Initial performance testing was conducted for each affected engine using reference method 7(E) to determine compliance with the ozone season allowable NOx emission limits (see *Condition II.F.1*). This testing was conducted between August 24, 2006 and August 20, 2006. Results were submitted to and reviewed by DEQ staff, and deemed satisfactory to meet all of the applicable requirements of the February 13, 2007 (as amended April 12, 2012) permit (testing was conducted prior to the issued permit which was in draft form at the time of the testing). Also, the constants "A, B and C" used in the equation in *Condition III.F.2* were determined based on these performance tests.
    - Condition 15, a "Relative Accuracy Test" was performed for each affected engine (see *Condition II.F.2*). This test consists of a series of nine emissions test runs to establish a correlation between the engine operating parameters and NOx emissions using the equation in *Condition II.F.2*. This test maps the engine's emissions under various loads. This condition in the Title V permit is also combined with *Condition III.F.4* and requires that if any affected engine is changed in a manner that results in significant changes in the parameters established, the permittee shall repeat the testing required to reestablish the correlation between parameter levels that indicate proper operation of the affected engine (Ref. M/L 8, M/L 10 and M/L 14) and assure compliance with the NOx limit (see *Condition III.F.3).*
- Two of the critical engine operating parameters are "actual air manifold pressure (AMP_{ACT}, inches Hg)" and "critical air manifold pressure (AMP_C, inches Hg)". The AMP_{ACT} is expected to be greater than the AMP_C. If the monitoring does not show this, the following actions are required as delineated below:
    - Condition 11, if any one-hour average of AMP_{ACT} of any affected engine is less than the AMP_C for the same engine during the ozone season, the source shall report a deviation from normal operation (see *Condition III.C.2*).
    - Condition 12, if the three (3) hour average AMP_{ACT} of any affected engine is less than the AMP_C for the same engine, the source shall take timely corrective action such that the affected engine resumes normal operation (see *Condition III.C.3*).

- Condition 13, if the three (3) hour average AMP_{ACT} of any affected engine is less than the AMP_C for the same engine for three (3) times during any ozone season, the permittee shall repeat the engine testing requirements of the February 13, 2007 (as amended April 12, 2012) permit (i.e., *Conditions III.F.1, F.2, F.3 and F.4*) to re-establish the correlation between operating parameter levels that indicate proper operation of the affected engine and assure compliance with the NOx limit (see *Condition III.C.4*).

- Condition 14, the validity of the PMS, and therefore the complance to the permitted ozone season NOx emission limit, is demonstrated by the periodic monitoring(see *Condition III.D*). Beginning with the 2008 Ozone Season, at least once per ozone season, the affected engine (Ref. M/L 14), and at least one of theaffected engines of the same model number (Ref. M/L 8 or M/L 10)will be tested with a portable analyzer to demonstrate the validity of the PMS and compliance to the permitted ozone season NOx emission limit. This condition also establishes analyzer's capability and calibration requirements, engine operating requirements and submittal of testing protocol. Also, the compliance testing for any one engine shall not be repeated until both engines of the same model number have been subjected to seasonal testing cycle.

The recordkeeping requirements of the February 13, 2007 (as amended April 12, 2012) permit (see *Condition III.H*) are included in Condition 17 of the Title V permit.

Testing
The February 13, 2007 (as amended April 12, 2012) permit requiresthe following testing and testing related requirements:

- Initial testing (see *Condition III.F.1*);
- Relative Accuracy Test (see *Condition III.F.2*)(Condition 15);
- Future Testing (see *Condition III.F.4)*(Condition 14); and
- Testing protocol (see *Condition III.F.3)*(Condition 16).

The testing requirements were discussed above in the **Monitoring and Recordkeeping** section. Testing can also be required by the DEQ to demonstrate complianceper 9 VAC 5-40-30, 9 VAC 5-50-30 (which have been incorporated and required by Condition50 in the Title V permit).

Reporting
The February 13, 2007 (as amended April 12, 2012) permit requires an annual summary report documenting the total NOx emissions during the ozone season for the affected units and it is required to be submitted to the Department of Environmental Quality's Northern Regional Office (DEQ-NRO) by October 31 (see *Condition III.G.1*). These requirements are included in the Title V permit, Condition 18.

General
Conditions III.I.10 and *III.I.11* from the February 13, 2007 (as amended April 12, 2012) permit are included in the Title V permit as general conditions, Conditions 19 and 20, to document the approval, change or repeal of the of theFebruary 13, 2007 (as amended April 12, 2012) permit. There are no associated monitoring, recordkeeping or reporting requirements.

Streamlined Requirements

The following conditions in the State Operating Permit dated February 13, 2007 (as amended April 12, 2012) have not been included in the Title V permit for the reasons provided:

- *Condition III.F.1* required an initial NOx emissions test on the affected units prior to May 1, 2007. This requirement has been completed, therefore was streamlined out of the Title V.
- *Condition III.I.1* contains right of entry requirements which is contained in the Title V General Conditions section and found in Condition 78.
- *Condition III.I.2* contains notification requirements for facility or control equipment malfunctions, which are contained in the Title V General Conditions section and found in Condition 66.
- *Condition III.I.3* of the February 13, 2007 (as amended April 12, 2012) permitaddresses the facility's level of operation to avoid violating primary ambient air quality standards. *Condition 17 of* the November 8, 2002 permit addresses the same requirements. Therefore, these conditions are combined in a Title V facility wide general permit Condition 51.
- *Conditions III.I.5, III.I.6, III.I.8, III.I.9, and III.I.12,* address requirements specific to the February 13, 2007 (as amended April 12, 2012) permit therefore they have been streamlined from the Title V permit. In addition, the Title V permit contains similar requirements which are specific to the Title V permit (Conditions 68, 80, 81, 82, and 83).
- *Condition III.I.7* requires the facility to maintain emissions data that shall be promptly provided to DEQ upon request. This condition has been addressed by condition72 in the Title V permit.

Non-NOx Sip Call Phase II Fuel Burning Equipment Requirements– Compressor Engine Requirements – (Unit ID Nos. M/L 1 through M/L 14)

Limitations

On November 8, 2002, the facility received a minor new source review permit to install a high-pressure fuel injection (HPFi) on one of the compressor engines (Ref. M/L 9). This project was proposed by the facility as a supplemental environmental project (SEP)as part of a settlement process in an enforcement action issued to address outstanding air permitting issues at Transco Station 185 located in Manassas, VA. These requirements, as summarized below, are incorporated into the Title V permit (Note: The applicable November 8, 2002, permit condition is stated in italic font):

- Condition 21 requires that NOx and CO emissions on the compressor engine (Ref. M/L 9) be controlled by HPFi, and shall be installed, maintained, and calibrated in accordance with approved procedures (see *Conditions 3* and *4).*
- Condition 22 specifies that the approved fuel for the compressor engine (Ref. M/L 9) is pipeline quality natural gas (see *Condition 5*). This condition was combined with Condition III. E. 3 of April 10, 2012 permit, and also what is specified in the Title V permit application, therefore compressor engines M/L 1 through M/L 14 are all addressed by Condition 22.

- Condition 25 specifies hourly and annual emission limits for NOx, CO, VOCs, and PM (see *Condition 7*).
- Condition 27 specifies the visible emissions for the compressor engine (Ref. M/L 9)(see *Condition 8*).
- Condition 29 provides an annual natural gas throughput limitation for the compressor engine (Ref. M/L 9) (see *Condition 6*).

The compressor engines are subject to the SO_2 emissions limit of 2.64K per 9 VAC 5-40-280 (Condition 23). Sulfur dioxide emissions from all such units are limited to the following:

$$S = 2.64K$$

where:

S = allowable emission of sulfur dioxide expressed in lbs/hr.
K = actual heat input at total capacity expressed in Btu x 10^6 per hour. Total capacity is the sum of the rated capacities of all fourteen (14) mainline compressor engines.

For the mainline compressor engines (M/L 1 through M/L 14), the heat input at total capacity, K = 292.4. Thus, S = 776.16 lbs/hr.

The maximum SO2 emissions have been established (SCC #20200252) from testing during the development of AP42, Section 3.2, Natural Gas-fired Reciprocating Engines, dated 7/00 to be 5.88 x 10^{-4} lb/MMBtu, based on an assumed fuel sulfur content of 2,000 gr/10^6 scf. This emission rate is in compliance with the 2.64 lb/MM Btu limit per 9 VAC 540-280. The use of natural gas in these SRICE meets the SO2 emission standards The Title V permit contains a condition with the allowable SO2 emissions limits.

The exhaust of engines (M/L 1 through M/L 14) are subject to the15 gr/100 ft^3 H_2S emission limit per 9 VAC 5-40-290 (Condition 24). The H_2S emission rate from each SRICE (Ref. M/L1 through M/L 14) is a function of the sulfur content of the fuel. The maximum H_2S emission has been calculated (using the SO_2 emission factor from AP42, Section 3.2, the estimated fuel consumption (43.0 MMBtu/hr) at 920 Btu/ft^3 and exhaust gas volume of a Clark TCV-16 engine (Ref. M/L 14) rated at 5,500 HP power output, (47,445 acfm)) to be:

$$H_2S = \frac{5.88 \times 10^{-4} \text{ lb/MM Btu} \times 43.0 \text{ MM Btu/hr} \times 100 \times 7{,}000 \text{ gr/lb} \times (34/64)}{60 \text{ min/hr} \times 47{,}445 \text{ ft}^3_{exh}/\text{min}} = 0.0035 \text{ gr/100 ft}^3_{exh}$$

The highest expected H_2S emission rate from the compressor engines (Ref. M/L 1 through M/L 14) has been calculated to be 0.0035gr/100 ft^3 exh which is in compliance with the 15 gr/100 ft^3 limit per 9 VAC 5-40-290. The use of natural gas in these compressor engines meets the H_2S emission standards.

The visible emissions standard for existing sources (i.e., 9 VAC 5-40-80) is included in the Title V permit for mainline compressor engines (M/L 1 through M/L 8, and M/L 10 through M/L 14) (Condition 26). The startup, shut down, and malfunction opacity exclusion listed in 9 VAC 5-40-20A.4 cannot be included in a Title V permit. This portion of the regulation is not part of the

federally approved state implementation plan. The opacity standard applies to existing sources at all times including startup, shutdown, and malfunction. Opacity exceedances during malfunction can be affirmatively defended provided all requirements of the affirmative defense section of this permit are met. Opacity exceedances during startup and shut down will be reviewed with enforcement discretion using the requirements of 9 VAC 5-40-20 E, which state that "At all times, including periods of startup, shutdown, soot blowing and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions."

Condition 28, specifies the emissions from the compressor engines (Ref. Nos. M/L 1 through M/L 14) shall be controlled by proper operation and maintenance, which includes operator training.

Monitoring

Periodic monitoring (Condition 30) is included in the Title V permit to demonstrate compliance with the opacity limit for an existing source, along with recordkeeping requirements for the visual emissions observation log. This periodic monitoring and recordkeeping is considered sufficient monitoring for demonstrating compliance with the visible emissions limits. The regulatory SO2 and H2S emission limitations will be demonstrated by use of natural gas as the only approved fuel (Condition 22) and by proper operation and maintenance of the affected units (Condition 28).

Maintenance/Operating Procedures

The Tile V permit requires maintenance and operating procedures (Condition 31) on the compressor engine (Unit Ref. M/L 9) which incorporates the requirements of *Condition 18.* The associated recordkeeping is required by Condition 32. This condition has additional requirements not fully encompassed in the proper operation and maintenance condition (Condition 28) which applies to compressor engines (Ref. Nos. M/L 1 through M/L 14), therefore, it was included in addition to Condition 28.

Recordkeeping

The Title V permit requires recordkeeping (Condition 32) to address non-NOx SIP call identified requirements, other than the visual emissions records: annual throughput of fuel consumption and annual hours of operation for each SRICE (Ref. M/L 1 through M/L 14) emissions calculations; maintenance records; operator training and copies of notifications. This condition also includes the record keeping requirements of *Condition 12* of the November 8, 2002 permit.

Testing

The Title V permit does not require additional source testing beyond what's required by the NOx SIP Call Permit. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Condition 9 requires the facility to be modified in a manner as to allow for emissions testing and monitoring. This condition has been incorporated into the **Facility Wide Conditions** section of the Title V permit (Condition 49).

Condition 11 requires the facility, upon request by DEQ, to conduct performance tests in accordance with methods and procedures approved by DEQ. This condition was combined with the requirements of 9 VAC 5-40-30 and 9 VAC 5-50-30 and incorporated into the **Facility Wide Conditions** section of the Title V permit (Condition 50).

Streamlined Requirements

The following conditions in the minor new source review permit dated November 8, 2002 have not been included in the Title V permit for the reasons provided:

- *Condition 1* states that the affected equipment identified in the November 8, 2002 permit shall be constructed and operated in accordance with the applicable permit applications and permit, and that any changes which may alter air emissions at the facility may require a permit. Condition 70 of the Title V permit encompasses these requirements; therefore this condition has been streamlined from the Title V permit.
- *Condition 2* specifies the equipment that is subject to the November 8, 2002 permit. This equipment is identified in the **Emissions Units** section of the Title V permit.
- *Condition 3* requires the use of HPFI to control emissions of NOx and CO and requires initial performance testing for NOx, CO, and VOC emissions. The emissions controls requirements from this condition were combined with *Condition 4* and are located in Condition 21 of the Title V permit. The initial performance testing requirements from this condition have been streamlined out because the requirements have been fulfilled by the facility.
- *Condition 10* requires initial performance testing for NOx, VOC, and CO emissions on the compressor engine (Unit Ref. No. M/L 9). The facility completed this testing on May 22, 2003. All requirements of this condition were satisfied by the facility and therefore it will be streamlined out of the Title V permit.
- *Condition 13* requires initial notifications subsequent to the installation of the HPFI on the compressor engine (Unit Ref. M/L 9). These notification requirements have been fulfilled by the facility and have been streamlined out of the Title V permit.
- *Condition 14* contains notification requirements for facility or control equipment malfunctions which are contained in the Title V General Conditions section and found in Condition 66.
- *Condition 15* addresses permit invalidation requirements specific to the November 8, 2002 permit, and has been streamlined from the Title V permit.
- *Condition 16* contains right of entry requirements, which are contained in the Title V General Conditions section and found in Condition 78.
- *Condition 17* permit addresses the facility's level of operation to avoid violating primary ambient air quality standards. *Condition III.I.3* of the February 13, 2007 (as amended April 12, 2012) permit addresses the same requirements. Therefore, these condtions are combined in a Title V facility wide general permit Condition 51.

- *Conditions 19, 20,* and *22* address requirements specific to the November 8, 2002 permit and have been streamlined from the Title V permit. In addition, the Title V permit contains similar requirements which are specific to the Title V permit (Conditions 80, 82, 88).
- *Condition 21* requires the facility to maintain emissions data that shall be promptly provided to DEQ upon request. This condition has been addressed by condition72 in the Title V permit.

Fuel Burning Equipment Requirements – Auxiliary Electric Power Generators – (AUX01 through AUX03, and A/C 1)

Limitations

The Title V permit requires that the auxiliary electric generatorsand the emergency air compressor (AUX01 through AUX03 and A/C 1) burn pipeline quality natural gas (Condition 33) as specified in the facility's Title V application.

The auxiliary electric generators and the emergency air compressor (AUX01 through AUX03 and A/C 1) are subject to the SO_2 emissions limit of 2.64K per 9 VAC 5-40-280 (Condition 34), sulfur dioxide emissions from all three (3) auxiliary electric generators (AUX01 through AUX03) and one (1) emergency air compressor (A/C 1)are limited to the following:

$$S = 2.64K$$

where:

S = allowable emission of sulfur dioxide expressed in lbs/hr.
K = actual heat input at total capacity expressed in Btu x 10^6 per hour. Total capacity is the sum of the rated capacities of all three (3) auxiliary electric power generators.

For the auxiliary electric generators and the emergency air compressor (AUX01 through AUX03 and A/C 1), the heat input at total capacity,
K = 17.5. Thus, S = 46.2 lbs/hr.

The maximum SO2 emissions have been established (SCC #20200252) from testing during the development of AP42, Section 3.2, Natural Gas-fired Reciprocating Engines, dated 7/00 to be 5.88 x 10^{-4} lb/MMBtu, based on an assumed fuel sulfur content of 2,000 gr/10^6 scf. This emission rate is in compliance with the 2.64 lb/MM Btu limit per 9 VAC 5-40-280. The use of natural gas in these SRICE meets the SO2 emission standards.

The exhaust of the auxiliary electric generators and the emergency air compressor (AUX01 through AUX03 and A/C 1) are subject to the15 gr/100 ft^3 H_2S emission limit per 9 VAC 5-40-290 (Condition 35). The H_2S emission rate from each auxiliary electric generator and the emergency air compressor (AUX01 through AUX03, and A/C 1) is a function of the sulfur content of the fuel.

The visible emissions standard for existing sources (i.e., 9 VAC 5-40-80) is included in the Title V permit (Condition 36) for the auxiliary electric generators and the emergency air compressor

(AUX01 through AUX03 and A/C 1). The startup, shut down, and malfunction opacity exclusion listed in 9 VAC 5-40-20A.4 cannot be included in a Title V permit. This portion of the regulation is not part of the federally approved state implementation plan. The opacity standard applies to existing sources at all times including startup, shutdown, and malfunction. Opacity exceedances during malfunction can be affirmatively defended provided all requirements of the affirmative defense section of this permit are met. Opacity exceedances during startup and shut down will be reviewed with enforcement discretion using the requirements of 9 VAC 540-20 E, which state that "At all times, including periods of startup, shutdown, soot blowing and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions."

Condition 37, specifies the emissions from the auxiliary electric generators and the emergency air compressor (AUX01 through AUX03 and A/C 1) shall be controlled by proper operation and maintenance, which includes operator training.

Monitoring

Periodic monitoring (Condition 38) is included in the Title V permit to demonstrate compliance with the opacity limit for an existing source, along with recordkeeping requirements for the visual emissions observation log. This periodic monitoring and recordkeeping are considered sufficient monitoring for demonstrating compliance with the visible emissions limits.

Testing

The permit does not require source tests. The Department has the authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard per 9 VAC 5-40-30, 9 VAC 5-50-30 (which have been incorporated and required by Condition 50 in the Title V permit).

Recordkeeping

The permit includes requirements for maintaining records (Condition 39) of all monitoring and testing required by the permit. These records include:

- The annual throughput of natural gas for each auxiliary electric generator and the emergency air compressor;
- The annual hours of operation of each auxiliary electric generator and emergency air compressor;
- Supporting documentation for sulfur content of the natural gas;
- Maintenance records; and
- The visible emissions observation records required by Condition 38.

Reporting

The Title V general permit reporting requirements apply. There are no specific non-NOx SIP Call reporting requirements for the auxiliary electric generators.

National Emissions Standards for Hazardous AirPollutants (NESHAP) MACT Subpart ZZZZ Requirements – (Ref. Nos. AUX01 through AUX03, and A/C 1)

Limitations

The three auxiliary electric generators (Ref. Nos. AUX01 through AUX03) and one emergency air compressor (A/C 1) are subject to the requirements of 40 CFR 63, Subpart ZZZZ given that the auxiliary engine generators and emergency air compressor are stationary reciprocating internal combustion engines (RICE) located at a major stationary source of hazardous air pollutant (HAP) emissions per 40 CFR 63.6585. The following applicable requirements from MACT Subpart ZZZZ are incorporated into the Title V:

- Condition 40, specifies hours of operation limitations under specific scenarios for the affected units while maintaining emergency generator status in accordance with MACT ZZZZ.
- Condition 41, requires that the facility limit the affected engine's time spent at idle during startup to minimize the affected engine's startup time needed for appropriate and safe loading of the engine, not to exceed 30 minutes, in accordance with 40 CFR 63.6640.
- Condition 42, outlines specific maintenance and inspection responsibilities as incorporated from 40 CFR 63.6602.
- Condition 43, requires the affected units to be equipped with non-resettable hour meters per 40 CFR 63.6625(f).
- Condition 44, specifies that the affected units are subject to proper operation and maintenance in accordance with 40 CFR 63.6625(e) and 40 CFR 63.6640(a).

Recordkeeping

The Title V permit requires recordkeeping (Condition 45) to address the record keeping requirements of MACT ZZZZ for the affected units. This condition requires the facility to keep all applicable records as required by 40 CFR 63.6655 needed to demonstrate continuous compliance with each applicable limitation of Subpart ZZZZ.

Notifications/Reporting

The facility is required to submit the applicable notification requirements of 40 CFR 63.6645 and 40 CFR 63, Subpart A (Condition 46). Condition 47 also incorporates the requirement to submit the applicable compliance report as required by Table 7 in MACT ZZZZ per the requirements of 40 CFR 63.6650(a), submitted according to the schedule in 40 CFR 63.6650(b).

General

Table 8 of MACT ZZZZ identifies general provisions the facility must comply with, as applicable. Condition 48 of the Title V permit incorporates these requirements.

FACILITY WIDE CONDITIONS

Testing

The Title V permit incorporates portions of 9 VAC 5-40-30 and 9 VAC 5-50-30, which require the facility be constructed in a manner that, at any time,would allow emissions testing using appropriate methods and, upon request of DEQ, test ports to be installed at appropriate locations (Condition 49). (Also see Condition 9 of the minor new source review permit dated November 8, 2002)

Condition 50 requires the facility, upon request by DEQ, to conduct performance tests in accordance with methods and procedures approved by DEQ. This condition incorporates the requirements of 9 VAC 5-40-30, 9 VAC 5-50-30, and Condition 11 of the minor new source review permit dated November 8, 2002.

General

The Title V permit incorporates the requirements of 9 VAC 5-20-180(I), which requires the facility to reduce the level of operation, to include shutdown of equipment, if DEQ determines that it is necessary to prevent a violation of any primary air quality standard (Condition 51). This condition is also prescribed in Condition III.I.3 of the state operating permit dated February 13, 2007 (as amended April 10, 2012) and Condition 17 of the minor new source review permit dated November 8, 2002, and has been combined and incorporated into the Title V permit.

Permit Shield/Inapplicable Requirements

The inapplicable requirements listed below are identified in the Title V permit renewal application and are stated in the Title V permit Condition 53:

- 40 CFR 60 Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels - Compressor Station No. 180's volatile organic liquid storage vessels have a capacity of less than 75 m^3 and are not subject to this subpart's requirements per 40 CFR 60.110b(a.).
- 40 CFR 60 Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines - Each Unit (Ref. No. M/L 1 through M/L 14 and AUX01 through AUX03) was manufactured prior to and have not been reconstructed after June 12, 2006, and are not subject to this subpart's requirements per 40 CFR 60.4230(a)(5).
- 40 CFR 60 Subpart OOOO - Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution - Compressor Station 180 does not have any storage vessels that commenced construction, modification, or reconstruction after August 23, 2011.
- 40 CFR 63 Subpart HH - National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities - Compressor Station 180 is not located at a natural gas production site, does not include glycol dehydration, or include other affected units per 40 CFR 63.760(d).
-

This general condition cites the sections that follow:

9 VAC 5-40-50. Notification, Records and Reporting *(for existing sources)*
9 VAC 5-50-50. Notification, Records and Reporting *(for new sources)*

Permit Modification – Condition 70
This general condition cites the sections that follow:
9 VAC 5-80-50. Applicability, Federal Operating Permit for Stationary Sources
9 VAC 5-80-190. Changes to Permits.
9 VAC 5-80-260. Enforcement.
9 VAC 5-80-1100. Applicability, Permits for New and Modified Stationary Sources
9 VAC 5-80-1605. Applicability, Permits for Major Stationary Sources and Modifications Located in Prevention of Significant Deterioration Areas
9 VAC 5-80-2000. Applicability, Permits for Major Stationary Sources and Major Modifications Locating in Nonattainment Areas

Malfunction as an Affirmative Defense– Conditions 84 through 87
The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Conditions 84 through 87 and General Condition 66. For further explanation see the comments on Condition 66.

General condition 84. cites the sections that follow:
9 VAC 5-20-180. Facility and Control Equipment Maintenance or Malfunction
9 VAC 5-80-110. Permit Content

Asbestos Requirements – (Condition 91)
The Virginia Department of Labor and Industry under Section 40.1-51.20 of the Code of Virginia also holds authority to enforce 40 CFR 61 Subpart M, National Emission Standards for Asbestos.

This general condition contains a citation from the Code of Federal Regulations that follow:
40 CFR 61.145, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to demolition and renovation.
40 CFR 61.148, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to insulating materials.
40 CFR 61.150, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to waste disposal.

This general condition cites the regulatory sections that follow:
9 VAC 5-60-70. Designated Emissions Standards
9 VAC 5-80-110. Permit Content

- 40 CFR 63 Subpart HHH - National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities - Compressor Station 180 does not include glycol dehydration facilities and is not subject to this subpart's requirements per 40 CFR 63.1270(c).
- 40 CFR 63 Subpart EEEE - National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline) - Compressor Station No. 180 meets the definition of "facility" per 40 CFR 63.1271 (MACT Subpart HHH) and is not subject to 40 CFR 63 Subpart EEEE per 40 CFR 63.2334(c)(2).
- 40 CFR 63 Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines – M/L units 1 through 14 are each an 'existing' spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of more than 500 bhp located at a major HAP source. Consequently, such units arenot subject to 40 CFR 63 Subpart ZZZZ per 40 CFR 63.6590(b)(3).
- 40 CFR 64 - Compliance Assurance Monitoring - Per 40 CFR 64.2(a), the emissions units at Compressor Station No. 180 do not have add-on air pollution control devices as defined in 40 CFR 64.1.
- 40 CFR 68 - Chemical Accident Prevention Provisions – This facility is regulated under 40 CFR 192, not a stationary source per 40 CFR §68.3

GENERAL CONDITIONS

The permit contains general conditions (Conditions 54 through 94) required by 40 CFR Part 70 and 9 VAC 5-80-110 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions. In the event that the Title V Permit General Conditions are the same as the November 8, 2002 Minor New Source Review Permit and theFebruary 13, 2007 (as amended April 12, 2012) State Operating Permit General Conditions, the Title V Permit includes both regulatory citations. Comments on specific general conditions are provided as delineated below:

Permit Expiration – Conditions 55 through 60
These conditions refer to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §2.2-604 and §10.1-1185 of the *Code of Virginia,* and the "Department of Environmental Quality Agency Policy Statement No. 209".

Failure/Malfunction Reporting – Condition 66
Section 9 VAC 5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9 VAC 5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to section 9 VAC 5-20-180 including Title V facilities. A Title V facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within four daytime business hours of discovery of the malfunction.

GREENHOUSE GAS (GHG) EMISSIONS
The facility calculated the GHG emissions to be as follows:

Facility Total Potential to Emit:
Total GHG – 148,510 tpy
Total CO2e mass equivalent – 191,870 tpy

Facility 2012 Annual Emissions:
Total GHG – 46,159 tpy
Total CO2e mass equivalent – 61,067 tpy

GHG permitting requirements have not been identified for the emissions units at this facility.

STATE ONLY APPLICABLE REQUIREMENTS
There are no state only requirements in the Title V permit.

FUTURE APPLICABLE REQUIREMENTS
No future applicable requirements identified.

INSIGNIFICANT EMISSION UNITS
The insignificant emission units (shown in the table below and included in Condition 51 of the Title V permit) are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation[1] (9 VAC_)	Pollutant Emitted (5-80-720 B.)	Rated Capacity (5-80-720 C.)
IA1	2.6 MMBtu/hr Dutton 3830 natural gas-fired boiler	5-80-720 C.2	NA	< 10 MMBtu/hr natural gas-fired
IA2	5.4 MMBtu/hr Cyclotherm LN-45 natural gas-fired boiler	5-80-720 C.2	NA	< 10 MMBtu/hr natural gas-fired

Emission Unit No.	Emission Unit Description	Citation[1] (9 VAC_)	Pollutant Emitted (5-80-720 B.)	Rated Capacity (5-80-720 C.)
IA6	13,500-gallon ethylene glycol/water surge tank	5-80-720 B.2 and 5-80-720 B.5	VOC < 5 tons/yr And HAPs ≤ 1,000 lbs/yr	NA
IA7	2,100-gallon ethylene glycol/water surge tank	5-80-720 B.2 and 5-80-720 B.5	VOC < 5 tons/yr And HAPs ≤ 1,000 lbs/yr	NA
IA8	1,130-gallon ethylene glycol/water transfer tank	5-80-720 B.2 and 5-80-720 B.5	VOC < 5 tons/yr And HAPs ≤ 1,000 lbs/yr	NA
IA9	575-gallon ethylene glycol/water transfer tank	5-80-720 B.2 and 5-80-720 B.5	VOC < 5 tons/yr And HAPs ≤ 1,000 lbs/yr	NA
IA10	3,175-gallon ethylene glycol/water transfer tank	5-80-720 B.2 and 5-80-720 B.5	VOC < 5 tons/yr And HAPs ≤ 1,000 lbs/yr	NA
IA11	6,400-gallon ethylene glycol/water storage tank	5-80-720 B.2 and 5-80-720 B.5	VOC < 5 tons/yr And HAPs ≤ 1,000 lbs/yr	NA
IA12	46-gallon hydraulic oil surge tank (Ref. M/L 11)	5-80-720 C.3	NA	< 1,000 gallons
IA13	3,171-gallon used oil storage tank	5-80-720 B.2	VOC < 5 tons/yr	NA
IA14	1,500-gallon methanol storage tank	5-80-720 B.2 and 5-80-720 B.5	VOC < 5 tons/yr And HAPs ≤ 1,000 lbs/yr	NA
IA15	479-gallon lube oil fill and drain tank	5-80-720 C.3	NA	< 1,000 gallons
IA16	299-gallon lube oil fill and drain tank	5-80-720 C.3	NA	< 1,000 gallons

Emission Unit No.	Emission Unit Description	Citation[1] (9 VAC_)	Pollutant Emitted (5-80-720 B.)	Rated Capacity (5-80-720 C.)
IA17	2,300-gallon lube oil fill and drain tank	5-80-720 B.2	VOC < 5 tons/yr	NA
IA18	3,300-gallon ethylene glycol/water transfer tank	5-80-720 B.2 and 5-80-720 B.5	VOC < 5 tons/yr And HAPs ≤ 1,000 lbs/yr	NA
IA19	270-gallon diesel fuel storage tank	5-80-720 B.2	VOC < 5 tons/yr	NA
IA20	11,744-gallon lube oil storage tank	5-80-720 B.2	VOC < 5 tons/yr	NA
IA21	446-gallon lube oil day tank	5-80-720 C.3	NA	< 1,000 gallons
IA22	514-gallon ethylene glycol/water surge tank	5-80-720 B.2 and 5-80-720 B.5	VOC < 5 tons/yr And HAPs ≤ 1,000 lbs/yr	NA
IA23	294-gallon ethylene glycol/water surge tank	5-80-720 B.2 and 5-80-720 B.5	VOC < 5 tons/yr And HAPs ≤ 1,000 lbs/yr	NA
IA24	514- gallon ethylene glycol/water surge tank (Ref. M/L 11)	5-80-720 B.2 and 5-80-720 B.5	VOC < 5 tons/yr And HAPs ≤ 1,000 lbs/yr	NA
IA25	294- gallon ethylene glycol/water surge tank (Ref. M/L 11)	5-80-720 B.2 and 5-80-720 B.5	VOC < 5 tons/yr And HAPs ≤ 1,000 lbs/yr	NA
IA26	514- gallon ethylene glycol/water surge tank (Ref. M/L 12)	5-80-720 B.2 and 5-80-720 B.5	VOC < 5 tons/yr And HAPs ≤ 1,000 lbs/yr	NA
IA27	294- gallon ethylene glycol/water surge tank (Ref. M/L 12)	5-80-720 B.2 and 5-80-720 B.5	VOC < 5 tons/yr And HAPs ≤ 1,000 lbs/yr	NA

Emission Unit No.	Emission Unit Description	Citation[1] (9 VAC_)	Pollutant Emitted (5-80-720 B.)	Rated Capacity (5-80-720 C.)
IA28	514- gallon ethylene glycol/water surge tank (Ref. M/L 13)	5-80-720 B.2 and 5-80-720 B.5	VOC < 5 tons/yr And HAPs ≤ 1,000 lbs/yr	NA
IA29	294- gallon ethylene glycol/water surge tank (Ref. M/L 13)	5-80-720 B.2 and 5-80-720 B.5	VOC < 5 tons/yr And HAPs ≤ 1,000 lbs/yr	NA
IA30	46-gallon hydraulic oil surge tank (Ref. M/L 12)	5-80-720 C.3	NA	< 1,000 gallons
IA31	40-gallon hydraulic oil surge tank (Ref. M/L 13)	5-80-720 C.3	NA	< 1,000 gallons
IA32	46-gallon hydraulic oil surge tank (Ref. M/L 14)	5-80-720 C.3	NA	< 1,000 gallons
IA33	8,820-gallon wastewater tank	5-80-720 B.2	VOC < 5 tons/yr	NA
IA34	3,171-gallon natural gas condensate storage tank	5-80-720 B.2	VOC < 5 tons/yr	NA
IA37	Piping – mechanical joints: fugitive emissions	5-80-720 B.2	VOC < 5 tons/yr	NA
IA38	Wastewater Evaporator	5-80-720 B.2	VOC < 5 tons/yr	NA
IA39	Wastewater Sump	5-80-720 B.2	VOC < 5 tons/yr	NA
IA40	Wastewater Sump	5-80-720 B.2	VOC < 5 tons/yr	NA
IA41	Wastewater Sump	5-80-720 B.2	VOC < 5 tons/yr	NA
IA42	Parts Washer	5-80-720 B.2	VOC < 5 tons/yr	NA

Emission Unit No.	Emission Unit Description	Citation[1] (9 VAC_)	Pollutant Emitted (5-80-720 B.)	Rated Capacity (5-80-720 C.)
IA43	70-gallon Oil Leak Recovery Tank	5-80-720 C.3	NA	< 1,000 gallons
IA44	165-gallon Used Oil Collection Tank	5-80-720 C.3	NA	< 1,000 gallons
IA45	74-gallon Oil Leak Recovery Tank	5-80-720 C.3	NA	< 1,000 gallons
IA46	450-gallon Wastewater Evaporator Waste Tank	5-80-720 B.2	VOC < 5 tons/yr	NA

[1]The citation criteria for insignificant activities are as follows:
9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application
9 VAC 5-80-720 B - Insignificant due to emission levels
9 VAC 5-80-720 C - Insignificant due to size or production rate

CONFIDENTIAL INFORMATION
The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

PUBLIC PARTICIPATION
A public notice was placed in the Orange County Review newspaper on October 23, 2014, for comments to be received on the proposed permit from October 24, 2014 to November 25, 2014. In addition, a copy of the notice was sent to EPA Region III staff, Maryland Department of the Environment (the one affected state), and individuals or organizations on DEQ's mailing list for Title V permits. No public comments were received. The concurrent EPA 45-day review period of the proposed permit ended on December 8, 2014. The EPA staff also did not provide any comments.

ATTACHMENTS
Attachment A: CY2013 Annual Emission Update

Registration Number: 40782

County - Plant ID: 137-00027

Plant Name: Transcontinental Gas Pipeline - Station 180

POLLUTANT EMISSIONS REPORT (PLANT) (Tons/Year)

Parameter List

Pollutant Type: All Pollutants

Years: 2008-2013

	CO	FORM	NH3	NO2	PM 10	PM 2.5	SO2	VOC
2008	1,086.394	62.628	0.018	2,230.936	54.755	54.755	3.172	236.558
2009	1,110.589	65.569	0.012	2,168.405	57.373	57.373	3.324	241.162
2010	1,018.340	60.079	0.017	1,989.849	52.570	52.570	3.045	221.553
2011	995.402	59.555	0.014	1,933.807	50.116	50.116	3.017	216.270
2012	453.690	26.081	0.000	962.443	22.504	22.504	1.319	102.601
2013	11.402	0.516	0.019	24.450	0.513	0.513	0.029	3.208

Commonwealth of Virginia
Department of Environmental Quality

Registration Number : 40782 County - Plant Id: 137-00027

Plant Name : Transcontinental Gas Pipeline - Station 180

POLLUTANT EMISSIONS REPORT (STACK/POINT) (TONS/YEAR)

Parameter List

Pollutant Type: All Pollutants
Years: 2013 - 2013

Inventory Year 2013

Stack #: 1

Point #: 1	CO	FORM	NO2	PM 10	PM 2.5	SO2	VOC
Segment #: 1	0.000	0.056	0.000			0.003	0.000
Segment #: 2	1.387		5.292	0.055	0.055		0.193
	1.387	0.056	5.292	0.055	0.055	0.003	0.193

Stack #: 2

Point #: 2	CO	FORM	NO2	PM 10	PM 2.5	SO2	VOC
Segment #: 1	0.000	0.047	0.000			0.002	0.000
Segment #: 2	1.116		4.257	0.045	0.045		0.155
	1.116	0.047	4.257	0.045	0.045	0.002	0.155

Stack #: 3

Point #: 3	CO	FORM	NO2	PM 10	PM 2.5	SO2	VOC
Segment #: 1	0.000	0.038	0.000			0.002	0.000
Segment #: 2	0.935		3.567	0.037	0.037		0.130
	0.935	0.038	3.567	0.037	0.037	0.002	0.130

Stack #: 4

Point #: 4	CO	FORM	NO2	PM 10	PM 2.5	SO2	VOC
Segment #: 1	0.000	0.045	0.000			0.002	0.000
Segment #: 2	1.015		3.873	0.041	0.041		0.141
	1.015	0.045	3.873	0.041	0.041	0.002	0.141

Stack #: 5

Registration Number : 40782 County - Plant Id: 137-00027

Plant Name : Transcontinental Gas Pipeline - Station 180

POLLUTANT EMISSIONS REPORT (STACK/POINT) (TONS/YEAR)

Parameter List

Pollutant Type: All Pollutants
Years: 2013 - 2013

Inventory Year 2013

Stack #: 5

Point #: 5	CO	FORM	NO2	PM 10	PM 2.5	SO2	VOC
Segment #: 1	0.000	0.011	0.000			0.001	0.000
Segment #: 2	0.211		0.250	0.008	0.008		0.029
	0.211	0.011	0.250	0.008	0.008	0.001	0.029

Stack #: 6

Point #: 6	CO	FORM	NO2	PM 10	PM 2.5	SO2	VOC
Segment #: 1	0.000	0.020	0.000			0.001	0.000
Segment #: 2	0.382		0.452	0.015	0.015		0.053
	0.382	0.020	0.452	0.015	0.015	0.001	0.053

Stack #: 7

Point #: 7	CO	FORM	NO2	PM 10	PM 2.5	SO2	VOC
Segment #: 1	0.000	0.019	0.000			0.001	0.000
Segment #: 2	0.402		1.534	0.016	0.016		0.056
	0.402	0.019	1.534	0.016	0.016	0.001	0.056

Stack #: 8

Point #: 8	CO	FORM	NO2	PM 10	PM 2.5	SO2	VOC
Segment #: 1	0.000	0.050	0.000			0.003	0.000
Segment #: 2	0.210		0.498	0.050	0.050		0.414
	0.210	0.050	0.498	0.050	0.050	0.003	0.414

Stack #: 9

Registration Number : 40782 County - Plant Id: 137-00027

Plant Name : Transcontinental Gas Pipeline - Station 180

POLLUTANT EMISSIONS REPORT (STACK/POINT) (TONS/YEAR)

Parameter List

Pollutant Type: All Pollutants
Years: 2013 - 2013

Inventory Year 2013

Stack #: 9

Point #: 9	CO	FORM	NO2	PM 10	PM 2.5	SO2	VOC
Segment #: 1	0.000	0.044	0.000			0.002	0.000
Segment #: 2	0.415		0.730	0.044	0.044		0.268
	0.415	0.044	0.730	0.044	0.044	0.002	0.268

Stack #: 10

Point #: 10	CO	FORM	NO2	PM 10	PM 2.5	SO2	VOC
Segment #: 1	0.000	0.051	0.000			0.003	0.000
Segment #: 2	0.210		0.666	0.050	0.050		0.414
	0.210	0.051	0.666	0.050	0.050	0.003	0.414

Stack #: 11

Point #: 11	CO	FORM	NO2	PM 10	PM 2.5	SO2	VOC
Segment #: 1	0.000	0.002	0.000			0.000	0.000
Segment #: 2	0.032		0.030	0.001	0.001		0.005
	0.032	0.002	0.030	0.001	0.001	0.000	0.005

Stack #: 12

Point #: 12	CO	FORM	NO2	PM 10	PM 2.5	SO2	VOC
Segment #: 1	0.000	0.053	0.000			0.003	0.000
Segment #: 2	1.161		1.095	0.049	0.049		0.164
	1.161	0.053	1.095	0.049	0.049	0.003	0.164

Stack #: 13

Registration Number : 40782 County - Plant Id: 137-00027

Plant Name : Transcontinental Gas Pipeline - Station 180

POLLUTANT EMISSIONS REPORT (STACK/POINT) (TONS/YEAR)

Parameter List

Pollutant Type: All Pollutants
Years: 2013 - 2013

Inventory Year 2013

Stack #: 13

Point #: 13	CO	FORM	NO2	PM 10	PM 2.5	SO2	VOC
Segment #: 1	0.000	0.054	0.000			0.003	0.000
Segment #: 2	1.065		1.005	0.045	0.045		0.151
	1.065	0.054	1.005	0.045	0.045	0.003	0.151

Stack #: 14

Point #: 14	CO	FORM	NO2	PM 10	PM 2.5	SO2	VOC
Segment #: 1	0.000	0.016	0.000			0.001	0.000
Segment #: 2	0.126		0.094	0.008	0.008		0.031
	0.126	0.016	0.094	0.008	0.008	0.001	0.031

Stack #: 15

Point #: 15	CO	FORM	NO2	PM 10	PM 2.5	SO2	VOC
Segment #: 1	0.000		0.000	0.001	0.001	0.000	0.000
Segment #: 2	0.733	0.002	0.112				0.014
	0.733	0.002	0.112	0.001	0.001	0.000	0.014

Stack #: 16

Point #: 16	CO	FORM	NO2	PM 10	PM 2.5	SO2	VOC
Segment #: 1	0.000		0.000	0.001	0.001	0.000	0.000
Segment #: 2	0.794	0.002	0.121				0.016
	0.794	0.002	0.121	0.001	0.001	0.000	0.016

Stack #: 17

Registration Number : 40782 County - Plant Id: 137-00027

Plant Name : Transcontinental Gas Pipeline - Station 180

POLLUTANT EMISSIONS REPORT (STACK/POINT) (TONS/YEAR)

Parameter List

Pollutant Type: All Pollutants
Years: 2013 - 2013

Inventory Year 2013

Stack #: 17

Point #: 17	CO	FORM	NO2	PM 10	PM 2.5	SO2	VOC
Segment #: 1	0.000		0.000	0.001	0.001	0.000	0.000
Segment #: 2	0.346	0.001	0.053				0.007
	0.346	0.001	0.053	0.001	0.001	0.000	0.007

Stack #: 18

Point #: 18	CO	FORM	NO2	PM 10	PM 2.5	SO2	VOC
Segment #: 1	0.000		0.000	0.002	0.002	0.000	0.003
Segment #: 2	0.364	0.004	0.227				
	0.364	0.004	0.227	0.002	0.002	0.000	0.003

Stack #: 19

Point #: 19	CO	FORM	NO2	PM 10	PM 2.5	SO2	VOC
Segment #: 1	0.000		0.000	0.000	0.000	0.000	0.000
Segment #: 2	0.000	0.000	0.000				
	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Stack #: 20

Point #: 20	CO	NH3	NO2	PM 10	PM 2.5	SO2	VOC
Segment #: 1	0.269	0.010	0.320	0.024	0.024	0.002	0.018
	0.269	0.010	0.320	0.024	0.024	0.002	0.018

Stack #: 21

Registration Number : 40782

County - Plant Id: 137-00027

Plant Name : Transcontinental Gas Pipeline - Station 180

POLLUTANT EMISSIONS REPORT (STACK/POINT) (TONS/YEAR)

Parameter List

Pollutant Type: All Pollutants
Years: 2013 - 2013

Inventory Year 2013

Stack #: 21

Point #: 21	CO	NH3	NO2	PM 10	PM 2.5	SO2	VOC
Segment #: 1	0.231	0.009	0.275	0.021	0.021	0.002	0.015
	0.231	0.009	0.275	0.021	0.021	0.002	0.015

Stack #: 22

Point #: 22	VOC
Segment #: 1	0.930
	0.930