

**COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Valley Regional Office**

STATEMENT OF LEGAL AND FACTUAL BASIS

Columbia Gas Transmission LLC
Bickers Compressor Station – Green County, Virginia
Permit No. VRO-40083

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, Columbia Gas Transmission Corporation has applied for a renewal of its Title V Operating Permit for its Bickers Compressor Station facility. The Department has reviewed the application and has prepared a Title V Operating Permit.

Engineer/Permit Contact: *Signed original* Date: 10/17/12
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Air Permit Manager: *Signed original* Date: 10/17/12
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FACILITY INFORMATION

Permittee

Columbia Gas Transmission LLC
P.O. Box 1273
Charleston, West Virginia 25325

Facility

Bickers Compressor Station
2567 Celt Road
Stanardsville, Virginia 22973

County-Plant Identification Number: 51-079-0006

SOURCE DESCRIPTION

NAICS Code: NAICS 486210 – Natural Gas Transmission

The Bickers Compressor Station (BCS) is a natural gas transmission facility. Natural gas (NG) is received via pipelines from an upstream compression station, is compressed, and is pumped into outlet pipelines for transmission downstream. The BCS utilizes four natural gas-fired stationary reciprocating internal combustion engines (RICE), each nominally rated at 3,200 horsepower (hp) to drive the natural gas compressors. Auxiliary equipment at the facility includes one natural gas-fired boiler rated at 2.1 MMBtu/hr heat input, one natural gas pipeline heater rated at 4.0 MMBtu/hr, one natural gas fired generator rated at 82 Hp, one natural gas-fired generator nominally rated at 375 Hp, and numerous insignificant activities.

The facility is a Title V major source of nitrogen dioxide, carbon monoxide, and formaldehyde emissions. This source is located in an attainment area for all pollutants, and is a PSD major source. The facility operates under two NSR Permits issued on 5/25/90, and 4/29/97. The facility has an exemption to operate a basement water evaporator system which vents through the compressor engine exhaust stacks.

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, has been conducted on February 22, 2012. 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 at this time.

CHANGES TO EXISTING TITLE V PERMIT

Since the original Columbia Gas' Title V permit, the following changes were made to the renewal Title V permit:

- *Permit Formatting and General Conditions:* The format of the permit was updated to reflect changes made to the Title V boilerplate since Columbia Gas' permit was issued.
- *Condition 16:* The condition was revised to reflect that monitoring has begun and is a continuation of the monitoring. The initial six month period has occurred and does not need to be repeated.
- *40 CFR Part 63 Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engine:* Changes to Subpart ZZZZ have been promulgated since the current permit issuance that affect the existing emergency generators. The applicable permit conditions were added for the two existing emergency generators (002G1 and 002G2). The four compressor engines (00201, 00202, 00203, and 00204) are subject to 40 CFR Part 63 Subpart ZZZZ; however, there are no specific requirements as described on Page 7.

EMISSION UNIT (EU) AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following:

Emission Unit (EU) ID	Stack ID	EU Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
00201	E01	Cooper Bessemer GMWH-8V-275 (Constructed 1990)	31.8 MMBtu/hr, 3,200 horsepower nominal, 3,710 horsepower during periods of low ambient temperature	--	--	--	05/25/90
00202	E02	Cooper Bessemer GMWH-8V-275 (Constructed 1990)	31.8 MMBtu/hr, 3,200 horsepower nominal, 3,710 horsepower during periods of low ambient temperature	--	--	--	05/25/90
00203	E03	Cooper Bessemer GMWH-8V-275 (Constructed 1990)	31.8 MMBtu/hr, 3,200 horsepower nominal, 3,710 horsepower during periods of low ambient temperature	--	--	--	05/25/90
00204	E04	Cooper Bessemer GMWH-8V-275 (Constructed 1997)	31.8 MMBtu/hr, 3,200 horsepower nominal, 3,712 horsepower during periods of low ambient temperature	--	--	--	04/29/97
002G1	G1	Waukesha VGF-18GL natural gas fired Spark Ignition (SI) Emergency Generator (constructed 1990)	375 horsepower nominal; 412.5 horsepower maximum short-term rating.	--	--	--	04/29/97
002G2	G2	Natural gas fired spark ignition (SI) emergency generator (constructed pre-2006)	82 horsepower nominal	--	--	--	--

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

EMISSIONS INVENTORY

A copy of the 2011 annual emission update is attached. Emissions are summarized in the following tables.

2011 Actual Emissions

Emission Unit	2011 Criteria Pollutant Emission in Tons/Year				
	VOC	CO	SO ₂	PM ₁₀	NO _x
00201	5.84	19.25	2.7E-02	1.32	19.38
00202	1.95	6.44	9.0E-03	0.44	6.49
00203	4.91	16.16	2.3E-02	1.11	16.27
00204	9.20	18.42	2.5E-02	1.25	11.50
002G1	1.8E-03	2.2E-02	9.0E-06	3.7E-04	0.03
002G2	1.9E-03	2.3E-02	9.5E-06	3.9E-04	3.2E-02
Total	21.91	60.32	8.4E-02	4.12	53.71

2011 Facility Hazardous Air Pollutant Emissions

Pollutant	2011 Hazardous Air Pollutant Emission in Tons/Yr
Formaldehyde	5.91

**EMISSION UNIT (EU) APPLICABLE REQUIREMENTS - Internal Combustion
Compressor Engine Requirements (EU 00201, 00202, 00203, and 00204)**

Limitations

The following limitations are requirements from the Minor NSR Permit issued on May 25, 1990:

Specific Condition 4, limits horsepower rating for the compressor engines (00201, 00202, and 00203) and limits the maximum NO_x emission rate.

Specific Condition 5, limits operating hours for compressor engines (00201, 00202, and 00203).

Specific Condition 6, limits emissions from compressor engines (00201, 00202, and 00203) in grams per brake horsepower hour, pounds per hour, and tons per year.

Specific Condition 7, limits visible emissions from compressor engines (00201, 00202, and 00203).

Specific Condition 9, allows natural gas to be burned in the three compressor engines (00201, 00202, and 00203).

The following limitations are requirements from the Minor NSR Permit issued on April 29, 1997:

Condition 3, requires NO_x, CO, and VOC emissions from the fourth Cooper Bessemer GMWH-8V-275C2 compressor engine (00204) to be controlled through proper operation and maintenance of the engine, installation of clean burn pre-combustion chamber technology, installation of a turbocharger, and installation of an air cooler shall be used to control engine emissions. Condition 3 also limits annual average NO_x emission rate.

Condition 4, limits horsepower rating for the compressor engine (00204) and limits the maximum NO_x emission rate.

Condition 5, allows natural gas to be burned in the compressor engine (00204).

Condition 8, limits operating hours for the compressor engine (00204).

Condition 10, limits emissions from the compressor engine (00204).

Condition 12, limits visible emissions from the compressor engine (00204).

Condition 20, requires a maintenance schedule and maintenance records to be maintained.

Each engine (00201, 00202, 00203, and 00204) is a reciprocating two-stroke lean-burn (2SLB) engine as defined by 40 CFR 63.6675. Each engine was constructed prior to June 12, 2006. The engines are subject to 40 CFR Part 63 Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. Although these units are subject by definition, no specific requirements apply in accordance with 40 CFR 63.6590(b)(3)(i). The engines are not required to meet the requirements of the subpart, including the initial notification requirements. Therefore, only language stating that the units are subject to MACT Subpart ZZZZ has been included in the permit. Since the units were constructed prior to June 12, 2006, the units are not subject to the requirements of 40 CFR 60 Subpart JJJJ, as per 40 CFR 60.4230(a)(4).

Monitoring and Recordkeeping

The permit includes provisions for maintaining records of all required emission data and operating parameters necessary to demonstrate compliance. These records include: the scheduled and unscheduled maintenance on the engines, and periodic NO_x, O₂, and CO measurements. Additionally, the permittee must maintain written operating procedures for the engines and must train all operators on the proper operation of the equipment.

Compliance with the emission limits established for NO_x, CO and VOC is achieved by proper operation and maintenance of the engines, and by abiding by the annual limitations on work produced by each engine (bhp-hr). The permit requires the permittee to develop an inspection and maintenance schedule for the engines and to maintain records of all scheduled and non-scheduled maintenance. The permit also requires all operators to be trained on the proper operation of the process. Records of the training shall be maintained.

The permit requires periodic testing to be performed on the exhaust stream of each engine. The testing is required to be conducted on each engine once a year. The testing will be conducted using procedures approved by the DEQ; these procedures will not necessarily entail use of EPA reference methods. The purpose of the testing is to provide a reasonable assurance of compliance with emission limits. The testing will likely involve use of portable gas analyzers to measure the NO_x, CO, and diluent O₂ concentrations in the exhaust of each engine. Carbon monoxide monitoring will serve as a surrogate method for monitoring VOC emissions generated by the engines. When incomplete combustion of fuel occurs, both CO and VOC concentrations will increase in the exhaust products of combustion units.

The periodic testing will serve several purposes. First, the testing will be used to demonstrate that proper operation and maintenance of the engines achieve compliance with the established permit limits for NO_x, CO, and VOC. Additionally, the periodic testing for CO will provide a measure of the engine operation and combustion efficiency. Second, the measurements will be used to confirm the emission factors which will be employed to demonstrate compliance with annual permit limits.

If the periodic monitoring indicates an exceedance of an emission standard, the permittee is required to take corrective action to correct any equipment which is not operating properly. If corrective action does not eliminate the emissions exceedance, the permittee is required to conduct an EPA reference method test or other test method approved by the DEQ for the pollutant that exceeds the standard. The reference method test will be used to determine the compliance status of the engine(s) with respect to the emission standard and short term (hourly) emission limit. It is worth noting that an exceedance of an emission standard which is measured using a portable gas analyzer may be considered credible evidence of a violation, however, it does not necessarily establish or correspond to a violation of the permit.

Pollutant-specific emission factors will be used to calculate annual emissions on a monthly basis for each engine. Emission rates will be calculated using the results of a 1991 40 CFR 60, Appendix A stack test on compressor engine EU 00201 and a 1998 40 CFR 60, Appendix A stack test on compressor engine EU 00204 (See Attachment F).

The use of these emission factors provides a reasonable assurance of compliance with emission limitations and underscores that the operational and work (bhp-hr) produced limitations are the controlling parameters limiting emissions from the engines. The periodic measurement of NOx and CO emissions will serve as a check on the continued representativeness of the emission factors derived from stack tests.

Annual emissions from the operation of each engine will be calculated on a monthly basis using the following equation:

$$E_i = EF_{i,j} \times C \times O \times \frac{1}{453.593}$$

where:

E_i = Emissions of pollutant i, in lbs/time period
 $EF_{i,j = 1, 2, 3}$ = DEQ approved emission factors for emissions of pollutant i from engine j (00201, 00202, and 00203) measured in grams/brake-horsepower-hours (g/bhp-hr). The $EF_{i,j}$ value is derived from the results of a 1991 emissions compliance test for EU 00201. See Attachment F, Table 6-1 for a copy of the test results.

- 1.49 g/hp-hr for NOx
- 0.918 g/hp-hr for CO
- 0.285 g/hp-hr for NMHC (VOC)

$EF_{NO_x, j = 4}$ = DEQ Approved Emission Factor for emissions of NO_x from engine j (00204) measured in grams/brake-horsepower-hours (g/bhp-hr). The $EF_{NO_x, j}$ value is derived from the stack test results of a 1998 emissions test of EU 00204. See Attachment F for a copy of the test results.

- 0.84 g/hp-hr for NO_x

C = Capacity rating of engine, in horsepower (hp).
O = Operating hours for the time period.
453.593 = conversion factor, grams per pound

Although the DEQ or EPA may request the engine emission units be tested for compliance purposes at any time, the periodic monitoring required by the draft Title V permit also specifies when stack testing for compliance purposes may be conducted. Condition 15 states if corrective action has been performed on the engine emission unit and the portable emission monitor continues to show an exceedance of the emission standard (g/bhp-hr), then a compliance test shall be conducted on the engine in accordance with condition 15.c. The compliance test shall be conducted in accordance with test methods outlined in 40 CFR 60, Appendix A or a DEQ approved test method. The compliance test results may be used to revise the emission factors ($EF_{i,j}$) used to calculate annual NO_x, CO and VOC emission limits. The new emission factor must be DEQ approved.

9 VAC 5-80-110E.2 requires periodic monitoring to yield reliable data from the relevant time period that is representative of the source's compliance with the permit. The following permit conditions include periodic monitoring requirements as well as previously defined periodic monitoring required in new source review permits.

The permit requires documentation of training provided to operators of EU 00201, 00202, 00203, and 00204 and written operating procedures, inspection schedules and maintenance schedules for EU 00201, 00202, 00203, and 00204.

The permit requires that each of the EU 00201, 00202, 00203, and 00204 shall be equipped with monitoring devices that provide appropriate data to be used in calculating the work performed by each engine in units of horsepower-hours (hp-hrs) and a device to measure or calculate each engine's load in horsepower, hours of operation, and speed.

Periodic monitoring includes the collection of data to determine the emission rates of NO_x (measured as nitrogen dioxide (NO₂)), CO and O₂. Portable emission monitors are used to determine pollutant concentration in the gas stream. At a minimum, periodic monitoring of stack emissions shall be conducted once annually for each engine emission unit.

The following data shall be recorded during the stack emissions monitoring: an hourly average

concentration of NO_x (measured as nitrogen dioxide (NO₂)), CO and O₂; work (hp-hr) performed by the engine during the test; calculated exhaust gas dry volume flow rate; and duration of the test. Using the data collected, emissions may be calculated in units of grams per brake horsepower-hour and pounds per hour for comparison with emission standards and hourly emission limits in Conditions 6 through 8.

Source selected, DEQ approved portable measurement devices will be used to monitor NO_x (measured as nitrogen dioxide (NO₂)), CO and O₂ in the engine exhaust stacks. A test protocol for the initial periodic monitoring procedure will be submitted to the DEQ for approval. Subsequent changes to the protocol must be approved by the DEQ.

Periodic monitoring measurements will be taken at least once semi-annually. The permittee will select and conduct periodic monitoring on two emission units for a six-month period. During the next six-month period the permittee will conduct periodic monitoring on the remaining two emission units. Periodic monitoring will be applied to each EU a minimum of once each calendar year. The DEQ reserves the right to change the frequency of periodic monitoring emission tests.

Periodic monitoring for EU 00204 will consist of two measurements for NO_x emissions during a six-month period. At least one NO_x periodic monitoring measurement will be conducted while EU 00204 is operating in ambient up-rating mode (approaching 3712 hp). If EU 00204 does not operate in ambient up-rating mode during a calendar year, then a periodic monitoring measurement during ambient uprating of EU 00204 is not required that year. If ambient uprating of EU 00204 occurs in a calendar year, and a valid ambient uprating periodic monitoring measurement is not obtained in the calendar year, compliance with the annual average standard of performance for EU 00204 shall be calculated by substituting the maximum emission rate of 2.0 g NO_x/bhp-hr for the missing data point.

Carbon monoxide periodic monitoring serves as surrogate periodic monitoring for VOC, therefore periodic monitoring of VOC is not required. In fuel burning equipment, the change in the emission rate of VOC typically increases or decreases as CO emissions increase or decrease. Incomplete combustion of fuel increases emissions of CO and VOC. Proper operation of the engines results in complete combustion of fuel which decreases both CO and VOC emissions. As explained in Condition 15.c, if periodic monitoring results indicate an exceedance of the CO emission standard and the exceedance cannot be corrected, the engine emission unit shall be tested for compliance with both the CO and the VOC emission standard.

The permit specifies the course of action to be taken when a periodic monitoring measurement, conducted in accordance with Condition 16, results in a calculated emission rate in excess of the engine's emission standard or hourly emission limit. When an exceedance of the emission standard in grams/brake horsepower-hours for NO_x or CO occurs, the source is required to apply corrective action to the affected engine. Following completion of corrective action, the source

repeats the periodic monitoring method contained in Condition 14 to demonstrate the exceedance has been corrected. If the exceedance has not been corrected, the permittee is required to conduct a stack test to determine compliance. Compliance test shall be conducted in accordance with 40 CFR 60, Appendix A methods or other methods as approved by the DEQ.

CO periodic monitoring is a surrogate measure of VOC emissions. The condition requires that engine emission units that are stack tested to determine compliance with CO emission limits shall also be stack tested to determine compliance with VOC emission limits.

The permit specifies the frequency and method to be used for maintenance and calibration of the periodic monitoring and parametric monitoring equipment.

The permittee shall maintain and calibrate the portable NO_x, CO and O₂ emissions monitoring test equipment in accordance with the manufacturer's specifications and recommended calibration frequency. The calibration specifications and calibration frequency may be changed upon request or approval of the DEQ.

Periodic monitoring of the opacity of each engine exhaust stack is required in the permit. Monitoring shall occur once each calendar week for a brief time to determine if normal visible emissions are present. Normal visible emissions for engines burning natural gas would be little (less than five percent opacity) or no visible emissions. Condition 17 requires a Method 9 visible emissions test be conducted if the cause of excess visible emissions cannot be corrected. Excess opacity emissions, its cause, and corrective measures taken to eliminate excess opacity shall be documented.

Recording requirements include parametric measurements used to calculate hourly and annual emissions; summary of annual emissions calculated monthly as the sum of each consecutive twelve months; DEQ approved pollutant specific emission factors and equations used to calculate annual emissions; periodic monitoring results; and opacity monitoring results. The recordkeeping requirements contained in Condition 16 of the 04/29/97 Permit and Specific Condition 11 of the 05/25/90 Permit have been modified to meet Part 70 requirements.

Condition 19 allows periodic monitoring data and calculated values which show an exceedance of applicable emission standards to be considered credible evidence of violation of the permit.

Testing

Condition 20 requires that the permittee shall use test methods in accordance with procedures approved by the DEQ. 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 15 specifies an emissions stack test shall be required when periodic monitoring of the engines indicates an uncorrectable emission limit exceedance is present.

The permit does not require source tests. 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.

Reporting

Condition 23 requires the permittee to report emission exceedances of the applicable emissions standards, in accordance with Condition 48. Compliance tests results shall be provided to the Air Compliance Manager of DEQ within 30 days of conducting the test.

Additional reporting requirements are as specified in General Conditions 44 - 49 of the permit.

EMISSION UNIT APPLICABLE REQUIREMENTS – Auxiliary Generator Requirements (EU 002G1 and 002G2)

The auxiliary generator is limited by permit, dated April 29, 1997, with respect to non-emergency operating hours and is subject to opacity limitations. Permit limitations for the Auxiliary Generator (002G1) are included in the Title V permit. In addition to the April 29, 1997 NSR permit, the auxiliary generators (002G1 and 002G2) are subject to the requirements of the MACT, 40 CFR 63, Subpart ZZZZ.

Limitations

The following limitations are requirements from the Minor NSR Permit issued on April 29, 1997:

Condition 9, allows natural gas to be burned in the auxiliary generator (002G1) and requires operation only for providing power during interruption of service from the normal power supplier and allows operation of no more than 500 hours per year to demonstrate reliability.

Condition 20, requires a maintenance schedule and maintenance records to be maintained for the auxiliary generator (002G1).

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-50-80, New Source Standard for Visible Emissions

Visible emissions shall not exceed 20 percent opacity except for one six-minute period of not more than 30 percent opacity.

The auxiliary generators (002G1 and 002G2) are spark-ignition (SI) reciprocating internal combustion engines (RICE), which were each constructed and installed before June 12, 2006. Each generator is considered an emergency generator and the power rating for each is less than 500 horsepower. In addition to the conditions specified in the NSR permit for generator 002G1, dated April 29, 1997, the two generators (002G1 and 002G2) are subject to the requirements of the MACT, 40 CFR 63, Subpart ZZZZ.

In accordance with the MACT, 40 CFR 63 Subpart ZZZZ, the following conditions are applicable to the emergency generators (002G1 and 002G2):

Condition 26 establishes that the emergency generators (002G1 and 002G2) must be operated in accordance with MACT, Subpart ZZZZ, except where the Title V permit is more restrictive.

Condition 27 establishes the hourly operational conditions for the emergency stationary RICE.

Condition 28 states that by October 19, 2013, the SI engines (002G1 and 002G2) shall meet the applicable work practice standards specified in 40 CFR 63, Subpart ZZZZ (NESHAP for Stationary RICE).

Condition 29 states that by October 19, 2013 for SI engines, during periods of startup the permittee must minimize the time spend at idle for the emergency engines (002G1 and 002G2) and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply, in accordance with Table 2c of the MACT, Subpart ZZZZ.

Condition 24 of the permit was revised to include the emergency generator (002G2) to ensure that it is classified as an emergency generator for purposes of the MACT Subpart ZZZZ. The MACT establishes maintenance requirements for the generators (002G1 and 002G2) as specified above. Additionally, the MACT establishes the operational conditions that define emergency operation. Condition 29 of the Title V permit establishes a limitation on the amount of time the emergency engines (002G1 and 002G2) can spend at idle.

Monitoring and Recordkeeping

The monitoring and recordkeeping requirements in the April 29, 1997, NSR permit have been modified to meet Part 70 requirements.

Condition 33 requires the source to monitor and record the number of hours of non-emergency operation of the auxiliary generator (002G1), calculated monthly as the sum of each consecutive 12-month period. The auxiliary generator is operated occasionally to determine its readiness for emergency operation. Conditions 33 a and b also serve to meet the recordkeeping requirements for demonstrating compliance with the hour limitations established in Condition 27; therefore the emergency generator (002G1) was not included in section d of the condition.

Secondly, the condition requires annual recordkeeping of hours of operation of the auxiliary generator (002G1) as a result of interruption of service from the normal power supplier. There are no emission limits associated with emergency operation of the unit, therefore, an annual sum of hours of operation are adequate for recordkeeping. The purpose of the monitoring is to demonstrate the emission unit is utilized for emergency situations and not for regular service, such as peak-shaving.

Additional periodic monitoring is not necessary since this emission unit is an insignificant emissions unit and the unit burns natural gas.

The NSR permit lacks opacity periodic monitoring for the auxiliary emergency generator (002G1), therefore the permit requires in Condition 30 that the source monitor the exhaust stack of EU 002G1 for opacity emissions at least once semi-annually. An observation is not required if the emission unit does not operate during a semi-annual period. Periodic monitoring consists of briefly observing the exhaust stack for signs of normal visible emissions. If above normal visible emissions are present, the source is required to take corrective action or perform a 40 CFR 60, Appendix A, Method 9 visible emissions evaluation. The source shall record the date and results of each periodic monitoring observation or Method 9 evaluation.

In addition to the monitoring and recordkeeping requirements from the NSR permit, outlined above, the facility has multiple generators subject to NSPS and MACT requirements. The following monitoring and recordkeeping conditions were established to determine compliance with the NSPS and MACT limitations:

Condition 31 establishes that by 10/19/13 for SI engines, the permittee must install non-resettable hour meters on the emergency RICE in accordance with 40 CFR 63.6625(f) for the emergency generators (002G1 and 002G2). The hour meter shall be provided with adequate access for inspection.

Condition 32 establishes that by 10/19/13 for SI engines, the permittee shall develop a maintenance plan that provides to the extent practicable for the maintenance and operation of each engine in a manner consistent with good air pollution control practice for minimizing emissions, for the emergency generators (002G1 and 002G2) in accordance with 40 CFR 63.6625(e).

Condition 33 establishes that by 10/19/13 for SI engines, the permittee must keep records of all maintenance conducted on the emergency generators (002G1 and 002G2) as well as hours of operation that are recorded on the hour meter.

The requirements for installation of non-resettable hour meters, provided in Condition 31, establishes the means of determining compliance with the hour limitations specified in Conditions 27 and 28. The facility is required to keep records of the hours of operation of each generator to ensure the limitations of Conditions 27 and 28 are met.

The required maintenance and operating plans assure compliance with MACT requirements to maintain and operate the engine in accordance with the manufacturer's written instructions. The maintenance and operating plans, as well as records of all scheduled and unscheduled maintenance and operator training will also help to establish reasonable assurance of compliance with the emission limits and visible emission standards established in the permit. The facility is also required to maintain hours of operation for each of the emergency generators (002G1 and 002G2), after 10/19/13, to ensure that each continues to meet the definition of emergency-use, as found in the Virginia Regulations and the MACT. The NSR permit, dated April 29, 1997,

includes recordkeeping requirements for the hour usage of the emergency generator (002G1); instances where the MACT recordkeeping for the unit (002G1) were duplicative of the NSR recordkeeping requirements were not included in the permit.

Testing

Condition 35 requires that upon request, test ports shall be provided on the auxiliary generator exhaust stack (Stack ID G1) to allow for emissions testing.

The permit does not require source tests. 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.

Reporting

General reporting requirements are as specified in General Conditions 44 through 49 of the permit. Reports of emission exceedances of applicable emissions standards are to be reported in accordance with Condition 48. Compliance tests results shall be provided to the Air Compliance Manager of DEQ within 30 days of conducting the test.

The generators (002G1 and 002G2) are exempt from notification requirements under 40 CFR 63.6645(a)(5), therefore there are no initial notification or reporting requirements associated with the MACT.

Streamlined Requirements

The following conditions in the April 29, 1997 NSR permit have not been included in the Title V permit for the reasons provided.

Condition 1:

The source has been constructed and is already operating under the conditions of the new source review permit. The Title V permit has its own regulatory requirement (9 VAC 5-80-50) which requires the source to obtain an operating permit. Condition 1 has been streamlined from the permit since the basis of the Title V permit is the Title V permit application.

Condition 2:

The equipment specified in Condition 2 has already been constructed. The equipment to be operated is also identified in the Title V permit application. The requirements of this condition have been met; therefore the condition is streamlined from the draft permit.

Condition 10 and 11:

The formaldehyde limitation in Condition 10 has been rescinded effective August 2002 and is streamlined from the draft permit. (See Attachment D - Letter from DEQ, dated August 23, 2002, rescinding conditions.)

Condition 11 of the April 29, 1997 permit has been rescinded effective August 2002 and is streamlined from the draft permit. (See Attachment D - Letter from DEQ, dated August 23, 2002, rescinding conditions.)

Justification for the rescission of formaldehyde limitations is contained in 9 Virginia Administrative Code (VAC) 5-60-300.C.4 and C.5 of 9 VAC 5 Chapter 60 Part II Article 5, Emission Standards for Toxic Pollutants from New and Modified Sources (Rule 6-5). 9 VAC 5-60-300.C.4 states that Article 5 (Rule 6-5) shall not apply to a stationary source in a source category that is regulated by an emission standard or other requirement pursuant to §112 of the federal Clean Air Act and subject to a source category schedule for standards. The source is subject to the source category schedule for standards (40 CFR Part 63, Subpart ZZZZ, Stationary Reciprocating Internal Combustion Engines MACT Standards) established pursuant to §112(d) of the federal Clean Air Act. Therefore, 9 VAC 5 Chapter 60, Part, II Article 5 (Rule 6-5) does not apply to this source.

Condition 13 and 14:

The source has successfully completed the requirements of Condition 13 which requires the source to conduct stack testing for NO₂ emissions from EU 00204. The source has successfully completed the requirements of Condition 14 which requires the source to conduct a visible emission evaluation on the stack associated with EU 00204. The requirements of these conditions have been met (testing was conducted on April 7, 1998) therefore Conditions 13 and 14 are streamlined from the draft permit.

Condition 15:

EU 00204 has been constructed, commenced operation (notification on October 27, 1997), and has been emissions tested (on April 7, 1998). The requirements of the condition have been met therefore Condition 15 is streamlined from the draft permit.

Condition 21:

The source has been constructed. The condition has been satisfied and the requirement is streamlined from the draft permit.

The following conditions in the May 25, 1990 permit have been streamlined in the Title V permit process.

Specific Condition 1:

Condition 1 specifies the name of the source and its location. There is no regulatory citation

for this condition in the new source review permit. The condition is streamlined from the draft permit.

Specific Condition 2:

The source has been constructed and is already operating under the conditions of the new source review permit. The Title V permit has its own regulatory requirement (9 VAC 5-80-50) that requires the source to obtain an operating permit. Condition 2 has been streamlined from the permit since the basis of the Title V permit is the Title V permit application.

Specific Condition 3:

The equipment specified in Condition 3 has already been constructed. The equipment to be operated is also identified in the Title V permit application. The requirements of this condition have been met therefore the condition is streamlined from the draft permit.

Specific Condition 8:

The source has successfully completed the requirements of Condition 8 which requires the source to conduct stack testing for NO₂, CO and VOC on one of the emission units. Testing was conducted on EU 00201 on February 19, 1991. The requirements of this condition have been met therefore the condition is streamlined from the draft permit.

General Condition 1:

The source has satisfied the requirements to notify the DEQ of dates of construction (June 21, 1990), anticipated start-up (December 13, 1990) and actual start-up (December 4, 1990), and emissions testing of EU 00201 through 00203 (February 19, 1991). The condition is streamlined from the draft permit.

General Condition 2:

The source has satisfied the requirement to stack test one of the three EU 00201 through 00203. The source tested EU 00201 on May 7, 1991. The condition is streamlined from the draft permit.

General Condition 3:

The engines have been constructed for emissions testing. Emissions testing has been conducted on EU 00201 (February 19, 1991) and 00204 (April 7, 1998). The requirement is streamlined from the draft permit.

General Condition 4:

This condition requires the source to retain records of all emission data and operating parameters. Conditions 12-19, 30-34, and General Conditions 44-49 in the draft Title V permit contain recordkeeping requirements related to emissions data and operating

parameters. These conditions include the recordkeeping requirements identified in General Condition 4; therefore the requirement in General Condition 4 is streamlined from the draft permit.

General Condition 5:

Condition 18 of the draft permit requires the source to develop a maintenance schedule and maintain records of maintenance. There are no add-on control devices at this facility. General Condition 5 is streamlined from the draft permit.

General Condition 9:

The source has been constructed. The condition has been satisfied and the requirement is streamlined from the draft permit.

GENERAL CONDITIONS

The permit contains general conditions 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.

Comments on General Conditions

Permit Expiration (Conditions 40 - 45)

These conditions refers 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. 2-09”.

These general conditions cite the Articles that follow:

Article 1 (9 VAC 5-80-50 et seq.), Part II of 9 VAC 5 Chapter 80. Federal Operating Permits for Stationary Sources]

This general condition cites the sections that follow:

9 VAC 5-80-80. Application

9 VAC 5-80-140. Permit Shield

9 VAC 5-80-150. Action on Permit Applications

Failure/Malfunction Reporting (Condition 51)

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. Section 9 VAC 5-80-250 is from the Title V regulations. Title V facilities are subject to both sections. A 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.

This general condition cites the sections that follow:

- 9 VAC 5-40-50. Notification, Records and Reporting
- 9 VAC 5-50-50. Notification, Records and Reporting

Permit Modification (Condition 55)

This general condition cites the sections that follow:

- 9 VAC 5-80-50. Applicability, Federal Operating Permit For Stationary Sources
- 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 69 – 72)

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 Condition 49 and Conditions 67-70. For further explanation see the comments on Condition 49.

This general condition 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 76)

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

STATE ONLY APPLICABLE REQUIREMENTS

None were identified by the facility.

FUTURE APPLICABLE REQUIREMENTS

None were identified by the facility.

INAPPLICABLE REQUIREMENTS

The provisions of 40 CFR Part 98 – Mandatory Greenhouse Gas Reporting require owners and operators of general stationary fuel combustion sources that emit 25,000 metric tons CO_{2e} or more per year in combined emissions from such units, to report greenhouse gas (GHG) emissions, annually. The definition of “applicable requirement” in 40 CFR 70.2 and 71.2 does not include requirements such as those included in Part 98, promulgated under Clean Air Act (CAA) section 114(a)(1) and 208. Therefore, the requirements of 40 CFR Part 98 are not applicable under the Title V permitting program.

As a result of several EPA actions regarding GHG under the CAA, emissions of GHG must be addressed for a Title V permit renewed after January 1, 2011. The current state minor NSR (or PSD) permit for the Columbia Gas facility contains no GHG-specific applicable requirements and there have been no modifications at the facility requiring a PSD permit. Therefore, there are no applicable requirements for the facility specific to GHG.

Columbia Gas did not identify any inapplicable requirements in their application. Therefore, no inapplicable requirements are included in the permit.

40 CFR 64, the Compliance Assurance Monitoring (CAM) rule does not currently apply to Bickers Compressor Station. CAM applies to pollutant-specific emission units with pre-control device emissions of regulated pollutants exceeding major source thresholds. The units must have control devices in place and applicable requirements for the subject pollutant. The rule requires sources to monitor the operation and maintenance of the control devices to ensure compliance with applicable requirements. The Bickers Compressor Station does not have any controls on its

emission units. Therefore, the Compliance Assurance Monitoring Rules do not apply.

40 CFR 60, Subpart JJJJ, the Standards of Performance for Stationary Spark Ignition Internal Combustion Engines do not apply to the engines at Bickers Compressor Station; each engine was constructed before the June 12, 2006 applicability date.

INSIGNIFICANT EMISSION UNITS

The insignificant emission units 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	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
BLR1	Boiler #1, Heating System Boiler (natural gas-fired)	9 VAC 5-80-720 C	NO _x , CO, SO ₂ , PM-10, formaldehyde	2.1 MMBtu/hr
HTR1	Heater #1, Line Heater (natural gas-fired)	9 VAC 5-80-720 C	NO _x , CO, SO ₂ , PM-10, formaldehyde	4.0 MMBtu/hr
A01	Lube Oil Tank	9 VAC 5-80-720 B	VOC	8,000 gallons
A02	Used Oil Tank	9 VAC 5-80-720 B	VOC	8,000 gallons
A03	Glycol Tank	9 VAC 5-80-720 B	VOC	8,000 gallons
A04	Water Mixture Tank (Glycol/Water Mixture)	9 VAC 5-80-720 B	VOC	8,000 gallons
A05	Water Mixture Tank (Waste Water)	9 VAC 5-80-720 B	VOC	8,000 gallons
A06	Pipeline Liquids Tank	9 VAC 5-80-720 B	VOC	8,000 gallons
A07	Gasoline Tank	9 VAC 5-80-720 B	VOC	600 gallons/hr
A08	Diesel Fuel Tank	9 VAC 5-80-720 B	VOC	400 gallons
BWIS	Wastewater Evaporator #1 WE1	9 VAC 5-80-720 B	VOC, PM-10	900 gallons

¹The 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

The proposed permit was placed on public notice in *The Greene County Record* on August 30, 2012; public comments were accepted from August 31, 2012 through October 1, 2012. No comments were received.

West Virginia, the only affected state, was sent a copy of the public notice via email on August 31, 2012. All persons on the Title V mailing list were also sent a copy of the public notice via either letter or email dated August 31, 2012.

The 45-day EPA review period ran concurrent to the public comment period. The EPA was notified of the public notice and sent a copy of the Statement of Basis and draft permit on August 28, 2012. The EPA review period ended on October 16, 2012; no comments were received.

ATTACHMENTS

- Attachment A: 2011 Emission Inventory
- Attachment B: Minor NSR Permit (dated May 25, 1990)
- Attachment C: Minor NSR Permit (dated April 29, 1997)
- Attachment D: State Toxics Condition Rescission Letter Dated August 23, 2002
- Attachment E: Emission Calculations
- Attachment F: Summary of Emission Testing Results