

West Virginia Department of Environmental Protection
Division of Air Quality

Joe Manchin III
Governor

Stephanie R. Timmermeyer
Cabinet Secretary

General Permit Registration



Pursuant to
Title V
of the Clean Air Act

Columbia Gas Transmission Corporation
Hubball Compressor Station
R30-NGGP-2007-04300002
Effective Date: November 19, 2007

John A. Benedict
Director

Date Signed: November 1, 2007

Registration Number: **R30-NGGP-2007-04300002**
Permittee: **Columbia Gas Transmission Corporation**
Facility Name: **Hubball Compressor Station**
Mailing Address: **1700 MacCorkle Avenue, SE**
Charleston, WV 25314
Permit Contact: **Kasey Gabbard, NiSource EH&S**
Phone: (304) 357-2079 Fax: (304) 357-2770

This Registration is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45CSR30 — Requirements for Operating Permits. The permittee identified at the above-referenced facility is authorized to operate the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this Registration and of Permit Number R30-NGGP-2007.

Facility Location:	Hubball, Lincoln County, West Virginia
Mailing Address:	Route 3, Box 465, Branchland, WV 25506
Telephone Number:	(304) 778-7576
Type of Business Entity:	Corporation
Facility ID #:	043-00002
Facility Description:	Natural Gas Transmission Facility
SIC Codes:	4922
UTM Coordinates:	395.9 km Easting • 4228.7 km Northing • Zone 17

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

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

Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description (Make, Model, Serial No.)	Year Installed	Design Capacity	Control Device	Applicable Natural Gas General Permit (R30-NGGP-2007) Sections
Facility-wide						Section 2.0. Sections 3.1.1 to 3.1.8, 3.1.12 to 3.1.15, 3.2, 3.3, 3.4, 3.5 & 3.7. Section 18.0
BLR1*	BL1	Dehydrator Reboiler; BS&B	1965	1.25 MMBTU/hr	N/A	Section 4.0
BLR2*	BL2	Heating System Boiler; Weil-McLain Model J-34	1965	4.13 MMBTU/hr	N/A	Section 4.0
01601*	E01	Reciprocating Engine/Integral Compressor; Ingersoll-Rand 48KVS; 4-cycle, lean burn	1966	1,320 HP	N/A	R13-2479B Sections 6.2.2, 6.2.3, 6.3.1, 6.4.1
01602*	E02	Reciprocating Engine/Integral Compressor; Ingersoll-Rand 48KVS; 4-cycle, lean burn	1966	1,320 HP	N/A	R13-2479B Sections 6.2.2, 6.2.3, 6.3.1, 6.4.1
01603*	E03	Reciprocating Engine/Integral Compressor; Clark RA-6; 2-cycle, lean burn	1948	600 HP	N/A	R13-2479B Sections 6.2.2, 6.2.3, 6.3.1, 6.4.1
016A1*	AC1	Reciprocating Engine/Air Compressor; Wisconsin THD; 4-cycle, rich burn	1984	12 HP	N/A	None
016G2*	G2	Reciprocating Engine/Generator; Waukesha VSG11GSI-F11GSI; 4-cycle rich burn	2000	229 Hp	N/A	R13-2479B Sections 6.2.2, 6.2.3, 6.3.1, 6.4.1
TEGDEHY1*	FL1	TEG Dehydrator; BS&B	1965	1.46 MMCF/hr 35.1 MMscf/d	FL1	R13-2479B Sections 12.1.1, 12.1.7(b), 12.2, 12.3, 12.4.1 to 12.4.7, 12.5
FLLP1*	FL1	Dehydrator Flare; NATCO, Model SHV-2.5	1998	1.00 MMBtu/hr	N/A	Sections 12.1.2 to 12.1.6

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

**45CSR13/14 permits, Consent Orders and Other Specific Requirements not included in
Title V General Permit:**

- 1. R13-2479B**
- 2. CO-R1-C-2007-4A**

Permit R13-2479B
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This permit will supercede and replace Permit R13-2267, R13-2479, and R13-2479A.

Facility Location: Branchland, Lincoln County, West Virginia

Mailing Address: 1700 MacCorkle Avenue, Charleston, WV 25314

Facility Description: Natural gas compressor station.

SIC Codes: 4922

UTM Coordinates: 395.9 km Easting • 4228.6 km Northing • Zone 17

Permit Type: Class I Administrative Update

Description of Change:

Correct typographical errors involving hourly throughput for the dehydration unit (TEGDEHY1) and VOC emission limits for the flare (FLLP1).

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

The source is subject to 45CSR30. The permittee has the duty to update the facility's Title V (45CSR30) permit application to reflect the changes permitted herein.

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1.0 Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
01601	E01	Reciprocating Engine/Integral Compressor, Ingersoll-Rand 48KVS; 4 cycle, lean burn	1966	1320 hp	N/A
01602	E02	Reciprocating Engine/Integral Compressor, Ingersoll-Rand 48KVS; 4 cycle, lean burn	1966	1320 hp	N/A
01603	E03	Reciprocating Engine/Integral Compressor, Clark RA-6; 2-cycle, lean burn	1948	600 hp	N/A
TEGDEHY1	FL1	TEG Dehydrator, BS&B 6-tray	1965	1.46 MMscf/hr	FL1
FLLP1	FL1	Dehydration Flare; NATCO, Model SHV-2.5	1998	1.00 MMBtu/hr	N/A
016G2	G2	Reciprocating Engine/Generator, Waukesha VSG11GSI-F11GSI	2000	229 hp	N/A
BLR1	BL1	Glycol Reboiler	1965	1.25 MMBtu/hr	N/A

2.0. General Conditions

2.1. Definitions

- 2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.
- 2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.
- 2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45 CSR § 30-2.12.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.

2.2. Acronyms

CAAA	Clean Air Act Amendments	NO_x	Nitrogen Oxides
CBI	Confidential Business Information	NSPS	New Source Performance Standards
CEM	Continuous Emission Monitor	PM	Particulate Matter
CES	Certified Emission Statement	PM_{2.5}	Particulate Matter less than 2.5µm in diameter
C.F.R. or CFR	Code of Federal Regulations	PM₁₀	Particulate Matter less than 10µm in diameter
CO	Carbon Monoxide	Ppb	Pounds per Batch
C.S.R. or CSR	Codes of State Rules	pph	Pounds per Hour
DAQ	Division of Air Quality	ppm	Parts per Million
DEP	Department of Environmental Protection	Ppmv or ppmv	Parts per million by volume
dscm	Dry Standard Cubic Meter	PSD	Prevention of Significant Deterioration
FOIA	Freedom of Information Act	psi	Pounds per Square Inch
HAP	Hazardous Air Pollutant	SIC	Standard Industrial Classification
HON	Hazardous Organic NESHAP	SIP	State Implementation Plan
HP	Horsepower	SO₂	Sulfur Dioxide
lbs/hr	Pounds per Hour	TAP	Toxic Air Pollutant
LDAR	Leak Detection and Repair	TPY	Tons per Year
M	Thousand	TRS	Total Reduced Sulfur
MACT	Maximum Achievable Control Technology	TSP	Total Suspended Particulate
MDHI	Maximum Design Heat Input	USEPA	United States Environmental Protection Agency
MM	Million	UTM	Universal Transverse Mercator
MMBtu/hr or mmbtu/hr	Million British Thermal Units per Hour	VEE	Visual Emissions Evaluation
MMCF/hr or mmcf/hr	Million Cubic Feet per Hour	VOC	Volatile Organic Compounds
NA	Not Applicable	VOL	Volatile Organic Liquids
NAAQS	National Ambient Air Quality Standards		
NESHAPS	National Emissions Standards for Hazardous Air Pollutants		

West Virginia Department of Environmental Protection • Division of Air Quality

2.3. Authority

This permit is issued in accordance with West Virginia Air Pollution Control Law W.Va. Code §§22-5-1 et seq. and the following Legislative Rules promulgated thereunder:

- 2.3.1. 45CSR13 – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation;*

2.4. Term and Renewal

- 2.4.1. This permit supercedes and replaces previously issued Permit R13-2267, R13-2479, and R13-2479A. This permit shall remain valid, continuous and in effect unless it is revised, suspended, revoked or otherwise changed under an applicable provision of 45CSR13 or any applicable legislative rule.

2.5. Duty to Comply

- 2.5.1. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Application R13-2267, R13-2479, R13-2479A and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to; [45CSR§§13-5.11 and 13-10.3]
- 2.5.2. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA;
- 2.5.3. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7;
- 2.5.4. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses and/or approvals from other agencies; i.e., local, state and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

2.6. Duty to Provide Information

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

2.7. Duty to Supplement and Correct Information

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

2.8. Administrative Update

The permittee may request an administrative update to this permit as defined in and according to the procedures specified in 45CSR13.
[45CSR§13-4]

2.9. Permit Modification

The permittee may request a minor modification to this permit as defined in and according to the procedures specified in 45CSR13.
[45CSR§13-5.4.]

2.10. Major Permit Modification

The permittee may request a major modification to this permit as defined in and according to the procedures specified in 45CSR14 or 45CSR19, as appropriate.
[45CSR§14-7 or 45CSR§19-14]

2.11. Inspection and Entry

The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

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

2.12. Emergency

- 2.12.1. An "emergency" means any situation arising from sudden and reasonable unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.
- 2.12.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of Section 2.12.3 are not met.
- 2.12.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
- a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
 - b. The permitted facility was at the time being properly operated;
 - c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and,
 - d. The permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice must contain a detailed description of the emergency, any steps taken to mitigate emission, and corrective actions taken.
- 2.12.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.
- 2.12.5. The provisions of this section are in addition to any emergency or upset provision contained in any applicable requirement.

2.13. Need to Halt or Reduce Activity Not a Defense

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

2.14. Suspension of Activities

In the event the permittee should deem it necessary to suspend, for a period in excess of sixty (60) consecutive calendar days, the operations authorized by this permit, the permittee shall notify the Secretary, in writing, within two (2) calendar weeks of the passing of the sixtieth (60) day of the suspension period.

2.15. Property Rights

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

2.16. Severability

The provisions of this permit are severable and should any provision(s) be declared by a court of competent jurisdiction to be invalid or unenforceable, all other provisions shall remain in full force and effect.

2.17. Transferability

This permit is transferable in accordance with the requirements outlined in Section 10.1 of 45CSR13. [45CSR§13-10.1]

2.18. Notification Requirements

The permittee shall notify the Secretary, in writing, no later than thirty (30) calendar days after the actual startup of the operations authorized under this permit.

2.19. Credible Evidence

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

3.0. Facility-Wide Requirements

3.1. Limitations and Standards

- 3.1.1. **Open burning.** The open burning of refuse by any person, firm, corporation, association or public agency is prohibited except as noted in 45CSR§6-3.1.
[45CSR§6-3.1.]
- 3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause, suffer, allow or permit any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.
[45CSR§6-3.2.]
- 3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them.
[40CFR§61.145(b) and 45CSR§15]
- 3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.
[45CSR§4-3.1 State-Enforceable only.]
- 3.1.5. **Permanent shutdown.** A source which has not operated at least 500 hours in one 12-month period within the previous five (5) year time period may be considered permanently shutdown, unless such source can provide to the Secretary, with reasonable specificity, information to the contrary. All permits may be modified or revoked and/or reapplication or application for new permits may be required for any source determined to be permanently shutdown.
[45CSR§13-10.5.]
- 3.1.6. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45 C.S.R. 11.
[45CSR§11-5.2.]

3.2. Monitoring Requirements

[Reserved]

3.3. Testing Requirements

- 3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit

and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

- a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63 in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4 or 45CSR§13-5.4 as applicable.
- b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4 or 45CSR§13-5.4 as applicable.
- c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.

[WV Code § 22-5-4(a)(15)]

3.4. Recordkeeping Requirements

- 3.4.1. **Retention of records.** The permittee shall maintain records of all information (including monitoring data, support information, reports and notifications) required by this permit recorded in a form suitable and readily available for expeditious inspection and review. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation. The files shall be maintained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. Where appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.

- 3.4.2. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.
[45CSR§4. State-Enforceable only.]

3.5. Reporting Requirements

- 3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.
- 3.5.2. **Confidential information.** A permittee may request confidential treatment for the submission of reporting required by this permit pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.
- 3.5.3. **Correspondence.** All notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class with postage prepaid to the address(es) set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

If to the DAQ:

Director
WVDEP
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304-2345

If to the USEPA:

Associate Director
Office of Enforcement and Permits Review
(3AP12)
U. S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

3.5.4. Operating Fee.

- 3.5.4.1. In accordance with 45CSR30 – Operating Permit Program, the permittee shall submit a Certified Emissions Statement (CES) and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality. A receipt for the appropriate fee shall be maintained on the premises for which the receipt has been issued, and shall be made immediately available for inspection by the Secretary or his/her duly authorized representative.
- 3.5.5. **Emission inventory.** At such time(s) as the Secretary may designate, the permittee herein shall prepare and submit an emission inventory for the previous year, addressing the emissions from the facility and/or process(es) authorized herein, in accordance with the emission inventory submittal requirements of the Division of Air Quality. After the initial submittal, the Secretary may, based upon the type and quantity of the pollutants emitted, establish a frequency other than on an annual basis.

4.0. Source-Specific Requirements

4.1. Limitations and Standards

- 4.1.1. The emissions from the 1,320 horsepower Ingersoll-Rand Model 48KVS 4 - cycle lean burn reciprocating natural gas fired compressor engine with turbocharger conversion, ID No. 01601 (Emission Point ID No. E01), shall not exceed the following:

Pollutant	Pounds/Hour	Tons/Year
CO	5.56	22.14
NO _x	35.00	41.30
PM ₁₀	0.01	0.01
SO ₂	0.70	0.30
VOCs	1.44	5.73
Formaldehyde	0.64	2.57
Benzene	0.01	0.02

- 4.1.2. The emissions from the 1,320 horsepower Ingersoll-Rand Model 48KVS 4 - cycle lean burn reciprocating natural gas fired compressor engine with turbocharger conversion, ID No. 01602 (Emission Point No. E02), shall not exceed the following:

Pollutant	Pounds/Hour	Tons/Year
CO	5.56	22.14
NO _x	35	41.3
PM ₁₀	0.01	0.01
SO ₂	0.70	0.30
VOCs	1.44	5.73
Formaldehyde	0.64	2.57
Benzene	0.01	0.02

- 4.1.3. The emissions from the 600 horsepower Clark Model RA-6 2 - cycle lean burn natural gas fired compressor engine, ID No. 01603 (Emission Point ID No. E03), shall not exceed the following:

Pollutant	Pounds/Hour	Tons/Year
CO	4.1	8.1
NO _x	7.25	15.9
PM ₁₀	0.28	0.555
SO ₂	0.46	0.063
VOCs	0.87	1.73
Formaldehyde	0.4	0.8
Benzene	0.01	0.03

- 4.1.4. The 600 horsepower engine (ID No. 01603) shall be limited to 4,380 hours of operation per year. Compliance shall be determined using a 12-month rolling total. A 12-month rolling total shall mean the sum of operating hours at any given time for the previous twelve (12) calendar months.
- 4.1.5. Each of the two 1,320 horsepower Ingersoll-Rand Model 48KVS engines, ID No. 01601 and ID No. 01602, shall not exceed in any calendar month an average hourly fuel consumption of 12,197 cubic feet of natural gas per hour nor 97,130,880 cubic feet of natural gas per year each. Compliance with the hourly consumption limit shall be determined using average hourly fuel consumption determined on a per month basis. Compliance with the annual consumption limit shall be determined using a 12-month rolling total. A 12-month rolling total shall mean the sum of natural gas consumed at any given time for the previous twelve (12) calendar months.
- 4.1.6. The 600 horsepower Clark Model RA-6 engine, ID No. 01603, shall not exceed in any calendar month an average hourly fuel consumption of 7,260 cubic feet of natural gas per hour nor 28,908,000 cubic feet of natural gas per year. Compliance with the hourly consumption limit shall be determined using average hourly fuel consumption determined on a per month basis. Compliance with the annual consumption limit shall be determined using a 12-month rolling total. A 12-month rolling total shall mean the sum of natural gas consumed at any given time for the previous twelve (12) calendar months.
- 4.1.7. The 1.0 MM Btu/hr NATCO Model SHV-2.5 dehydrator flare (Equip. ID No. FLLP1; Emission Point ID No. FL1) shall be operated at all times when emissions may be vented to it.

4.1.8. Emissions from the dehydrator flare shall not exceed the maximum hourly and annual emission rates specified below:

Pollutant	Maximum Emission Rates		
	(lb/hr)	(ton/yr) ⁽¹⁾	
Carbon Monoxide (CO)	0.37	1.62	
Nitrogen Oxide (NO _x)	0.07	0.30	
Particulate Matter less than 10 micron (PM ₁₀)	0.01	0.01	
Sulfur Dioxide (SO ₂)	0.06	0.25	
Volatile Organic Compounds (VOC)	2.09	9.15	
Hazardous Air Pollutants (HAPs)	Benzene	0.68	2.99
	Toluene	0.078	0.34
	Ethylbenzene	0.031	0.14
	Hexane	0.024	0.11
	Xylene	0.15	0.66
	Total	0.96	4.24

(1) Based on 8,760 hr/yr of operation.

4.1.9. The dehydrator flare shall be operated so as to reduce HAP emissions by 95.0 percent by weight or more. The dehydrator flare shall be operated in accordance with 40 CFR 60.18 "General Control Device Requirements" paragraphs (c) through (f).

4.1.10. The net heating value of the gas being flared by the dehydrator flare shall be 200 Btu/scf or greater.

4.1.11. The 229 hp natural gas-powered Waukesha, model VSG11GSI-F11GSI reciprocating engine/emergency generator set shall not be run greater than 1,000 hours per year (hr/yr).

- 4.1.12. Emissions from the 229 hp natural gas-powered Waukesha engine/generator set, Emission Point ID No. G2, shall not exceed the maximum hourly and annual emission rates specified below:

Pollutant	Emission Factor (lb/(hp-hr))	Safety Factor/ Multiplier	Maximum Emission Rates	
			(lb/hr)	(ton/yr) ⁽⁵⁾
NO _x	0.0209 (1)	2	9.6	4.80
CO	0.0771 (1)	2	35.3	17.64
PM	0.000243 (2)	2	0.11	0.05
SO _x	0.000476 (3)	1	0.11	0.01
	0.00004482 (4)			
VOC	0.000551 (1)	2	0.25	0.12

(1) Emission Factors from engine/generator vendor: Waukesha Performance Data EN 123825, 4/99.
 (2) AP42, uncontrolled lean-burn engines, Table 3.2-2, 10/96 at 7,500 Btu/hp-hr.
 (3) Engineering calculation based on 20 grains Sulfur/100 scf.
 (4) Engineering calculation based on 2.0 grains Sulfur/100 scf.
 (5) Based on 1,000 hours per year of operation.

- 4.1.13. Compliance with the hourly SO₂ limits set forth in Source Specific Requirements 4.1.1., 4.1.2., and 4.1.3. shall be demonstrated by maintaining an average hourly total sulfur content of fuel gas at or less than 20 grains of sulfur per 100 standard cubic feet of fuel gas.

- 4.1.14. Compliance with the SO₂ annual limits set forth in Source Specific Requirements 4.1.1., 4.1.2., and 4.1.3. shall be demonstrated by maintaining an average total sulfur content of fuel gas at or less than 2.0 grains of sulfur per 100 standard cubic feet of fuel gas. An average total sulfur content of fuel gas shall be determined once per quarter for the first 2 (two) years upon issuance of this Permit. If compliance with 2.0 grains of sulfur per 100 standard cubic feet of fuel gas is demonstrated for two consecutive years, then sulfur content of fuel gas shall be determined annually. Anytime when not in compliance with the 2.0 grains of sulfur per 100 standard cubic feet of fuel gas, then monitoring of sulfur content shall revert back to the quarterly frequency requirement and begin the progressive monitoring cycle again.

- 4.1.15. The pertinent sections of 45CSR4 applicable to this facility include, but are not limited to, the following:

§45-4-3.1.

No person shall cause, suffer, allow or permit the discharge of air pollutants which causes or contribute to an objectionable odor at any location occupied by the public.

§45-4-4.1.

Accidental and other infrequent discharge which cause or contribute to objectionable odors will be considered on an individual basis and shall be reported by the person responsible therefore to the Commission in the manner to be prescribed by the Commission.

- 4.1.16. The pertinent sections of 45CSR6 applicable to this facility include, but are not limited to, the following:

§45-6-4.6

Incinerators, including all associated equipment and grounds, shall be designed, operated and maintained so as to prevent the emission of objectionable odors.

§45-6-6.1

No person shall construct, modify or relocate any incinerator without first obtaining a permit in accordance with the provisions of W. Va. Code §§22-5-1 et seq. and 45CSR13.

§45-6-8.2

Due to unavoidable malfunction of equipment, emissions exceeding those provided for in this rule may be permitted by the Director for periods not to exceed five (5) days upon specific application to the Director. Such application shall be made within twenty-four (24) hours of the malfunction. In cases of major equipment failure, additional time periods may be granted by the Director provided a corrective program has been submitted by the owner or operator and approved by the Director.

- 4.1.17. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.

[45CSR§13-5.11.]

4.2. Monitoring Requirements

- 4.2.1. The 1.0 MM Btu/hr NATCO Model SHV-2.5 dehydrator flare's pilot flame shall be electronically monitored with spark recognition.

4.3. Testing Requirements

- 4.3.1. In order to demonstrate compliance with the 45CSR10-5.1, an annual fuel gas sampling analysis for hydrogen sulfide shall be obtained. Said records shall be maintained on site for a period of five (5) years, and shall be made available to the Director of the Division of Air Quality or his/her duly authorized representative upon request and shall be certified by a responsible official upon the submittal. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. When appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.

- 4.3.2. In order to demonstrate compliance with Source Specific Requirements 4.1.13. and 4.1.14., sampling analyses for total sulfur shall be obtained. Said records shall be maintained on site for a period of five (5) years, and shall be made available to the Director of the Division of Air Quality or his/her duly authorized representative upon request and shall be certified by a responsible official upon the submittal. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. When appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.
- 4.3.3. Upon request, tests to determine compliance with the emission limitations set forth in this permit shall be conducted in accordance with the methods as set forth below. The Director may require a different test method or approve an alternative method in light of any technology advancements that may occur. Compliance testing shall be conducted at, or near, 100% of the peak load. The permittee may request an alternative test procedure with a written submittal (protocol) to the Director.
- a) Tests to determine compliance with NO_x emission limits shall be conducted in accordance with Method 7, 7A, 7B, 7C, 7D, or 7E as set forth in 40 CFR 60, Appendix A.
 - b) Tests to determine compliance with CO emission limits shall be conducted in accordance with Method 10, 10A, or 10B as set forth in 40 CFR 60, Appendix A.
 - c) Tests to determine compliance with VOC emission limits shall be conducted in accordance with Method 25, or 25A as set forth in 40 CFR 60, Appendix A.
- 4.3.4. With regard to the emissions testing required by the WV Division of Environmental Protection, Division of Air Quality (DAQ), the permittee shall submit to the Director of the DAQ a test protocol detailing the proposed test methods, date, and time testing is to take place, testing locations, and any other relevant information. The test protocol must be received by the Director no less than thirty (30) days prior to the date the testing is to take place. The Director shall be notified at least fifteen (15) days in advance of the actual dates and times during which the tests will be conducted. The results of emissions testing shall be submitted to the DAQ within thirty (30) days of completion of testing.

4.4. Recordkeeping Requirements

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

- 4.4.2. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.
- 4.4.3. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:
- The equipment involved.
 - Steps taken to minimize emissions during the event.
 - The duration of the event.
 - The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

- The cause of the malfunction.
 - Steps taken to correct the malfunction.
 - Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.
- 4.4.4. For the purposes of determining compliance with the operation hour limitation for the 600 horsepower Clark Model RA-6 engine set forth in Source Specific Requirements 4.1.4., the permittee shall maintain accurate records of the hours of operation of the engine. Said records shall be maintained on site for a period of five (5) years, and shall be made available to the Director of the Division of Air Quality or his/her duly authorized representative upon request and shall be certified by a responsible official upon the submittal. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. When appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.
- 4.4.5. For the purposes of determining compliance with the maximum fuel usage limit set forth in Source Specific Requirements 4.1.5. and 4.1.6., the permittee shall maintain accurate records of the hours of operation, brakehorsepower and the amount of natural gas consumed by each of the two 1,320 horsepower Ingersoll-Rand Model 48KVS engines and the 600 horsepower Clark Model RA-6 engine. Said records shall be maintained on site for a period of five (5) years. Said records shall be made available to the Director of the Division of Air Quality or his/her duly authorized representative upon request and shall be certified by a responsible official upon the submittal. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. When appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.

- 4.4.6. For the purpose of determining compliance with the requirements set forth in Source Specific Requirements 4.2.1. and 4.1.8., the permittee shall record on a monthly basis all periods during which the pilot flame was lost, and operating times for the flare, pilot flame monitoring equipment, and the dehydrator.
- 4.4.7. The permittee shall maintain records of daily, monthly, and annual hours of operation for the 229 hp natural gas-powered reciprocating engine/emergency generator set described in Source Specific Requirements 4.1.12. Said records shall be maintained on site for a period of five (5) years. Certified copies of these records shall be made available to the Chief of the Office of Air Quality or his/her duly authorized representative upon request. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. When appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.

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CERTIFICATION OF DATA ACCURACY

I, the undersigned, hereby certify that, based on information and belief formed after reasonable inquiry, all information contained in the attached _____, representing the period beginning _____ and ending _____, and any supporting documents appended hereto, is true, accurate, and complete.

Signature¹ _____ Date _____
(please use blue ink) Responsible Official or Authorized Representative

Name and Title _____ Title _____
(please print or type) Name

Telephone No. _____ Fax No. _____

- ¹ This form shall be signed by a "Responsible Official." "Responsible Official" means one of the following:
- a. For a corporation: The president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:
 - (i) the facilities employ more than 250 persons or have a gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), or
 - (ii) the delegation of authority to such representative is approved in advance by the Director;
 - b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;
 - c. For a municipality, State, Federal, or other public entity: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of USEPA); or
 - d. The designated representative delegated with such authority and approved in advance by the Director.

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1. Columbia Gas Transmission is an owner or operator of two large NO_x SIP Call engines which emitted more than one ton per day of NO_x in West Virginia during the 1995 ozone season. These large NO_x SIP Call engines are part of the NO_x SIP Call engine inventory:
 - a. Lanham Compressor Station - WV ID# 039-00047 - Point ID 008
 - b. Ceredo Compressor Station - WV ID# 099-00013 - Point ID 009.
2. Columbia Gas Transmission is subject to Phase II of the NO_x SIP Call because the company owned and operated a large NO_x SIP Call engine during the 1995 ozone season.
3. Columbia Gas Transmission is therefore subject to the Requirements for Stationary Internal Combustion Engines pursuant to 45CSR§1-90 and must demonstrate a reduction in ozone season NO_x emissions of 235 tons from 1995 levels, beginning in the 2007 ozone season and each ozone season thereafter, as required under 45CSR§1-90.3.
4. "Ozone season" means the period beginning May 1 of a year and ending on September 30 of the same year, inclusive.
5. Pursuant to 45CSR§1-90.4, such ozone season NO_x emission reductions must be demonstrated under the requirements of an ozone season NO_x Compliance Plan approved by the Director.
6. Pursuant to 45CSR§1-90.4.c, the compliance plan shall demonstrate quantifiable and enforceable ozone season NO_x emission reductions equal to or greater than 235 tons.
7. The NO_x Compliance Plan is limited to creditable ozone season reductions achieved after 1995 and to controls that were not part of the NO_x SIP Call engine inventory.
8. Such creditable reductions in NO_x emissions shall be quantifiable and enforceable through limitations included in a federally enforceable permit or compliance order as set forth in 45CSR§1-90.4.k.
9. Pursuant to 45CSR§1-90.4.d, the NO_x Compliance Plan may include and affect some or all stationary internal combustion engines or other significant NO_x emitting equipment at an individual facility, at several facilities, or at all facilities in West Virginia that are controlled by the same owner or operator.
10. On December 13, 2005, Columbia Gas Transmission submitted a NO_x Compliance Plan to the Division of Air Quality. On December 15, 2005, the Director approved the submitted NO_x Compliance Plan under Compliance Order No. CO-R1-C-2005-29.
11. Pursuant to 45CSR§1-90.4.l, any owner or operator with an approved compliance plan under subsection 90.4 may amend the plan with written approval of the Director. Any NO_x emission rate or limitation included in such an amendment must be reflected in a federally enforceable permit or compliance order.

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12. On February 27, 2007, and pursuant to 45CSR§1-90.4.1, Columbia Gas Transmission submitted an amended NO_x Compliance Plan to the Director for the purpose of including an emission limit reflected in a federally enforceable permit.
13. Columbia Gas Transmission is the owner or operator of the following affected facilities identified in the submitted NO_x Compliance Plan:
 - a. Flat Top Compressor Station - WV ID# 89-00004
 - b. Clendenin Compressor Station - WV ID# 039-00048
 - c. Hubball Compressor Station - WV ID# 043-00002
 - d. Lost River Compressor Station - WV ID# 031-00002
 - e. Smithfield Compressor Station - WV ID# 103-00010.
14. Ceredo (WV ID# 099-00013) and Lanham (WV ID# 039-00047) compressor stations are not affected facilities under the Columbia Gas Transmission NO_x Compliance Plan or this Order.
15. This Order does not make any finding of violation against Columbia Gas Transmission.

ORDER FOR COMPLIANCE

And now, this 1st day of March 2007, and in accordance with Chapter 22, Article 5, Section 4(a)(5) of the West Virginia Code, it is hereby ORDERED by the Director:

1. To realize and demonstrate a reduction in ozone season NO_x emissions of 235 tons as required under 45CSR§1-90.3, Columbia Gas Transmission will take all measures to comply with all terms and conditions of 45CSR§1-90, the NO_x Compliance Plan, this Order, and applicable permits. Beginning in the 2007 ozone season and each ozone season thereafter, Columbia Gas Transmission will reduce emissions of NO_x at the facilities below using the following methods. Columbia Gas Transmission will quantify such reductions using mathematical calculations for each facility demonstrated in the NO_x Compliance Plan:
 - a. Flat Top Compressor Station - WV ID# 089-00004 - Ozone season NO_x emissions will be reduced by permanent retirement of all existing reciprocating internal combustion engines at the facility. Historic load capacity of the permanently retired reciprocating internal combustion engines will be replaced solely by the existing Solar Taurus 60-T7000 turbine.
 - b. Clendenin Compressor Station - WV ID# 039-00048 - Ozone season NO_x emissions will be reduced by shifting historic ozone season load capacity from one or more of the existing Cooper-Bessemer LSV engines to the existing Solar Centaur T-4500 turbine.
 - c. Hubball Compressor Station - WV ID# 043-00002 - Ozone season NO_x emissions will be reduced by creditable reductions resulting from the 2001 installation of low-NO_x controls on two existing Ingersoll-Rand 48 KVS engines which resulted in a lower NO_x emission rate and reduced NO_x emissions.

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- d. Lost River Compressor Station - WV ID# 031-00002 - Ozone season NO_x emissions will be reduced by shifting historic load capacity from one or more of the existing Clark HRA-8T and/or Clark TLA-8 engines to the existing Clark TLAD-10 clean burn engine.
 - e. Smithfield Compressor Station - WV ID# 103-00010 - Ozone season NO_x emissions will be reduced by shifting historic load capacity from one or more of the existing Ingersoll-Rand 412 KVGB engines to the existing Solar Taurus 60-T7300 turbine.
2. Pursuant to 45CSR§1-90.7.c, Columbia Gas Transmission will submit an ozone season NO_x Compliance Plan Report to the Director by October 31 of each year, beginning in 2007. The report will demonstrate and certify compliance with the required ozone season NO_x reduction of 235 tons set forth in 45CSR§1-90.3. The report will quantify and total all creditable ozone season NO_x reductions from the affected facilities using the methodologies contained in the NO_x Compliance Plan, in accordance with 45CSR§1-90 and this Order.
 3. Columbia Gas Transmission will satisfy all performance test, monitoring and recordkeeping and reporting requirements under 45CSR§1-90 and the NO_x Compliance Plan.

OTHER PROVISIONS

1. Compliance with the terms and conditions of this Order shall not in any way be construed as relieving Columbia Gas Transmission of the obligation to comply with any applicable law, permit, other order, or any other requirement otherwise applicable. Violations of the terms and conditions of this Order may subject Columbia Gas Transmission to penalties and injunctive relief in accordance with the applicable law.
2. The provisions of this Order are severable and should a court or board of competent jurisdiction declare any provisions to be invalid or unenforceable, all other provisions shall remain in full force and effect.
3. This Order is binding on Columbia Gas Transmission, its successors and assigns.

This Order and the NO_x Compliance Plan shall become effective March 1, 2007.


John A. Benedict, Director
Division of Air Quality

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