West Virginia Department of Environmental Protection
Division of Air Quality

Title V Operating Permit Revision

Earl Ray Tomblin
Governor

Randy C. Huffman
Cabinet Secretary

For Significant Modification Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Action Number: SM02 **SIC:** 4922
Name of Permittee: Columbia Gas Transmission, LLC
Facility Name/Location: Lost River Compressor Station
County: Hardy
Facility Address: Route 20, Box 70, Mathias WV 26812

Description of Permit Revision: The purpose of this modification is for the addition of two (2) new Solar Mars 100 turbines, one (1) process heater, 48 catalytic heaters and the removal of one (1) existing Clark HRA-8T Compressor engine. Additionally, the synthetic minor limit for greenhouse gas (GHG) emissions on the two (2) existing Solar Taurus 70 turbines will be removed.

Title V Permit Information:
Permit Number: R30-03100002-2012
Issued Date: October 31, 2012
Effective Date: November 14, 2012
Expiration Date: October 31, 2017

Directions To Facility: Traveling on I-81 (in VA), take Exit 257 to US Route 11. Take left on US 11 to State Route 259. Travel North on SR 259 to Mathias, WV. Turn right on Upper Cove and travel 1/4 mile toward Basore. Entrance to facility is on the left.

THIS PERMIT REVISION IS ISSUED IN ACCORDANCE WITH THE WEST VIRGINIA AIR POLLUTION CONTROL ACT (W.VA. CODE §§ 22-5-1 ET SEQ.) AND 45CSR30 - "REQUIREMENTS FOR OPERATING PERMITS." THE PERMITTEE IDENTIFIED AT THE FACILITY ABOVE IS AUTHORIZED TO OPERATE THE STATIONARY SOURCES OF AIR POLLUTANTS IDENTIFIED HEREIN IN ACCORDANCE WITH ALL TERMS AND CONDITIONS OF THIS PERMIT.

William F. Durham
Director

September 20, 2016
Date Issued

Permit Number: **R30-03100002-2012**
Permittee: **Columbia Gas Transmission, LLC**
Facility Name: **Lost River Compressor Station**
Permittee Mailing Address: 1700 MacCorkle Avenue, SE
Charleston, WV 25314

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

Facility Location:	Upper Cove Road, Mathias, Hardy County, West Virginia
Telephone Number:	(304) 548-1674
Type of Business Entity:	LLC
Facility Description:	Natural Gas Transmission Facility
SIC Codes:	4922
UTM Coordinates:	685.5 km Easting • 4,305.1 km Northing • Zone 17

Permit Writer: Natalya V. Chertkovsky-Veselova

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

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

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1.0 Emission Units and Listing of Applicable Requirements

Please note that not all sections of this permit may be applicable to this facility. The applicable requirements column in the table below indicates which of the requirements in Sections 2.0 through 24.0 of this permit are applicable to each emissions unit.

Emission Unit ID	Emission Point ID	Emission Unit Description (Make, Model, Serial No.)	Year Installed	Design Capacity	Control Device	Applicable Requirements
Facility-wide						**Sections 2.0, 3.0, 23.0**
001-03 (1)	BL2	Wastewater Evaporator Boiler	1997	0.20 MMBtu/hr	N/A	**Section 4.0**
001-02 (1)	HTR1	Fuel Gas Heater #1; NATCO SBW20-8D	1990	0.72 MMBtu/hr	N/A	**Section 4.0** **Section 17.0 - 40 C.F.R. 63 Subpart DDDDD, specifically 40 C.F.R. §§ 63.7485, 63.7490(a)(1),(d), 63.7495(b)(3),(d), 63.7499(l), 63.7500(a)(1)(Table 3, Work Practice Standards, line 1 and 4), (a)(3),(e); 63.7530~~(d)~~,(e),(f); 63.7540~~(a)(2)~~,(a)(12)(< 5MMBTU/hr and burn gas 1 – tune-up once per 5 years), (a)(13); 63.7545(b)(initial notification no later than 120 days after January 31, 2013), (e)(1),(e)(8),(f)(alternative fuel use); 63.7550(b)(1),(c)(1), (c)(5),(h) (reporting); 63.7555(a),(c),(h) (recordkeeping); 63.7560** **45CSR34**
001-04 (1)	HTR2	Fuel Gas Heater #2	2013	0.75 MMBtu/hr	N/A	**Section 4.0** **Section 17.0 - 40 C.F.R. 63 Subpart DDDDD, specifically 40 C.F.R. §§ 63.7485, 63.7490(a)(2),(b), 63.7495(a)(4),(d), 63.7499(l), 63.7500(a)(1)(Table 3, Work Practice Standards, line 1 ~~and 4~~), (a)(3),(e); 63.7530~~(d),(e),~~(f); 63.7540~~(a)(2),~~(a)(12)(< 5MMBTU/hr and burn gas 1 – tune up once per 5 years), (a)(13); 63.7545(c)(initial notification no later than 15 days after the start-up date),(e)(1),(e)(8), (f)(alternative fuel use); 63.7550(b)(1),(c)(1),(c)(5),(h) (reporting); 63.7555(a),(c),(h)**
001-05 (1)	HTR3	Fuel Gas Heater #3	2013	0.25 MMBtu/hr	N/A	

Emission Unit ID	Emission Point ID	Emission Unit Description (Make, Model, Serial No.)	Year Installed	Design Capacity	Control Device	Applicable Requirements
						(recordkeeping); 63.7560 **Section 21.0 – R14-0013~~D~~E (4.1.1, 4.1.~~8~~6, 4.1.8, ~~4.2.5,~~ 4.4.1, 4.4.5, 4.5.2)** **45CSR34**
001-06[(1)]	SH1	40 Catalytic Heaters	2013	Each 0.072 MMBtu/hr (Total 2.88 mmBtu/hr)	N/A	~~**Section 4.0**~~ **Section 21.0 – R14-0013 ~~D~~E (4.1.1, 4.1. ~~8~~6, ~~4.2.5,~~ 4.4.1)**
006-01 [(1)]	WE1	Water Evaporator Unit	2009	50,000 gal/yr	None	**Section 4.0**
~~002-01 [(1)]~~	~~E01~~	~~Reciprocating Engine/ Compressor; Clark HRA-8T; 2-cycle, lean burn~~	~~1953~~	~~1,320 HP~~	~~N/A~~	~~**Sections 6.4.1, 20 and 21;**~~ ~~**R14-0013D (4.1.1, 4.1.2, 4.1.3, 4.2.1, 4.2.2, 4.2.3, 4.3.1, 4.4.1, 5);**~~ ~~**CO-R1-C-2007-4A (2005);**~~ ~~**45CSR§40-90**~~
~~002-02 [(1)(2)]~~	~~E02~~	~~Reciprocating Engine / Compressor; Clark HRA-8T; 2-cycle, lean burn~~	~~1953~~	~~1,320 HP~~	~~N/A~~	~~**Sections 6.4.1, 20 and 21;**~~ ~~**R14-0013D (4.1.1, 4.1.2, 4.2.1, 4.2.2, 4.2.3, 4.3.1, 4.4.1);**~~ ~~**CO-R1-C-2007-4A (2005);**~~ ~~**45CSR§40-90**~~
~~002-04 [(1)(2)]~~	~~E04~~	~~Reciprocating Engine / Compressor; Clark HRA-8T; 2-cycle, lean burn~~	~~1953~~	~~1,320 HP~~	~~N/A~~	
~~002-05 [(1)(2)]~~	~~E05~~	~~Reciprocating Engine / Compressor; Clark HRA-8T; 2-cycle, lean burn~~	~~1954~~	~~1,320 HP~~	~~N/A~~	
002-07 [(1)]	E07	Reciprocating Engine / Compressor; Clark TLA-8; 2-cycle, lean burn	1969	2,700 HP	N/A	**Sections 6.4.1, 20 and 21;** **R14-0013 ~~D~~E (4.1.1, 4.1.~~4~~2, 4.2.1, 4.2.2, ~~4.2.3,~~ 4.3.1, 4.4.1);** **CO-R1-C-2007-4A (2005);** **45CSR§40-90**
002-08 [(1)]	E08	Reciprocating Engine / Compressor; Clark TLA-8; 2-cycle, lean burn	1969	2,700 HP	N/A	
002-09 [(1)]	E09	Reciprocating Engine / Compressor; Clark TLA-8; 2-cycle, lean burn	1970	2,700 HP	N/A	
002-10 [(1)]	E10	Reciprocating Engine / Compressor; Clark TLAD-10; 2-cycle lean burn	1991	4,640 HP	N/A	**Sections 6.2.1, 6.3.1, 6.4.1, 20, 21, 22.2.1 and 22.3.1;** **R14-0013 ~~D~~E (4.1.1, 4.1.~~5~~3, ~~4.2.1, 4.2.2, 4.4.1~~);** **CO-R1-C-2007-4A (2005);** **45CSR§40-90**

Emission Unit ID	Emission Point ID	Emission Unit Description (Make, Model, Serial No.)	Year Installed	Design Capacity	Control Device	Applicable Requirements
002-12 (1)	G3	Reciprocating Engine / Emergency Generator; Waukesha VGF-48GL; 4-cycle, lean burn	2008	1,063 HP	N/A	**Section 6.0,** **Section 10.0 - 40 C.F.R. 63 Subpart ZZZZ, specifically 40 C.F.R. §§ 63.6595(a)(3), 63.6605, 63.6640, 63.6645(f);** **Sections 20 and 21;** **R14-0013 ~~D~~E (4.1.1, 4.1.~~9~~7, 4.2.5, 4.2.6, ~~4.2.7,~~ 4.3.4, 4.4.1, 4.4.~~6~~4, 4.5.1)** **45CSR34, 45CSR§40-90**
002-13 (1)	E11	Reciprocating Engine / Compressor; Caterpillar G3616; 4-cycle lean burn	2008	4,735 HP	OC1 (OxCat)	**Section 10.0 - 40 C.F.R. 63 Subpart ZZZZ, specifically 40 C.F.R. §§ 63.6595(a)(3), 63.6600(b) (emission limits in Table 2a, item 2, and the operating limitations in Table 2b, item 1), 63.6610 (a) (Table 4), 63.6615 (Table 3, items 1 and 3), 63.6620, 63.6625 ((a), (b) and (h)), 63.6630 (Table 5), 63.6605, 63.6635, 63.6640 (Table 6), 63.6645, 63.6655 (except (c), (e),(f)), 63.6650 (except (g));** **Section 11.0 - 40 C.F.R. 60 Subpart JJJJ, specifically 40 C.F.R. § 60.4233(e) & emission limits on Line 5 of Table 1 of 40 C.F.R. 60 Subpart JJJJ, 40 C.F.R. §§ 60.4234, 60.4243(b)(2)(ii), 60.4244, 60.4245, 60.4246;** **Sections 20 and 21;** **R14-0013 ~~D~~E (4.1.1, 4.1.~~6~~4, 4.1.~~10~~9, ~~4.2.1, 4.2.2,~~ 4.2.~~7~~6, 4.3.4, 4.4.1, 4.4.2, 4.4.3, 4.4.~~6~~4, 4.5.1);** **45CSR16, 45CSR34, 45CSR§40-90**

Emission Unit ID	Emission Point ID	Emission Unit Description (Make, Model, Serial No.)	Year Installed	Design Capacity	Control Device	Applicable Requirements
003-01(1)	T01	Turbine #1, Solar Taurus 70	2013	9,236 hp @ 59° F 11,557 hp @ 0° F 83.89 MMBtu/hr	N/A	**Section 6.0** **Section 8.0 - 40 C.F.R. 60 Subpart KKKK, specifically 40 C.F.R. §§60.4300; 60.4305; 60.4320 (NOx - Table 1, 3rd line: "New turbine firing natural gas") ; 60.4330(a)(2)(SO_2); 60.4333(a); 60.4340(a)(NOx annual tests); 60.4360 (sulfur content monitoring); 60.4365(a); 60.4370(b); 60.4375; 60.4395; 60.4400** ~~**Section 9.0 - 40 C.F.R. 63 Subpart YYYY, specifically 40 C.F.R. §§63.6085; 63.6090(a)(2); 63.6100 (Tables 1 and 2 (line 2) – formaldehyde and operating limitations); 63.6105, 63.6110(Table 4, initial compliance), 63.6115 (Table 3 – annual performance tests); 63.6120; 63.6125(b); 63.6130 (Table 4); 63.6135; 63.6140 (Table 5, line 2); 63.6145 (Initial notification); 63.6150 (Table 6, line 1) (reporting); 63.6155, 63.6160 (recordkeeping); 63.6165**~~ **Section 21.0 – R14-0013 ~~D~~E (4.1.1, 4.1.~~7~~5, 4.2.~~4~~3, 4.2.~~7~~6, 4.3.2, 4.3.3, 4.3.4, 4.4.1, 4.4.~~6~~4, 4.5.1)** **45CSR16~~, 45CSR34~~**
003-02(1)	T02	Turbine #2, Solar Taurus 70	2013	9,236 hp @ 59° F 11,557 hp @ 0° F 83.89 MMBtu/hr	N/A	
003-03(1)	T03	Turbine #3, Solar Mars 100	2017	15,067 hp @ 32° F	N/A	**Section 6.0** **Section 8.0 - 40 C.F.R. 60 Subpart KKKK, specifically 40 C.F.R. §§60.4300; 60.4305; 60.4320 (NOx - Table 1, 3rd line: "New turbine firing natural gas") ; 60.4330(a)(2)(SO_2); 60.4333(a); 60.4340(a)(NOx annual tests);**
003-04(1)	T04	Turbine #4, Solar Mars 100	2017	15,067 hp @ 32° F	N/A	

Emission Unit ID	Emission Point ID	Emission Unit Description (Make, Model, Serial No.)	Year Installed	Design Capacity	Control Device	Applicable Requirements
						60.4360 (sulfur content monitoring); 60.4365(a); 60.4370(b); 60.4375; 60.4395; 60.4400 Section 21.0 – R14-0013E (4.1.1, 4.1.5, 4.2.4, 4.2.6, 4.3.2, 4.3.3, 4.3.4, 4.4.1, 4.4.4, 4.5.1) 45CSR16
001-07(1)	HTR4	Fuel Gas Heater	2017	0.50 MMBTU/hr	N/A	Section 4.0 Section 17.0 - 40 C.F.R. 63 Subpart DDDDD, specifically 40 C.F.R. §§ 63.7485, 63.7490(a)(2),(b), 63.7495(a)(4),(d), 63.7499(l), 63.7500(a)(1)(Table 3, Work Practice Standards, line 1), (a)(3),(e); 63.7530(f); 63.7540(a)(12)(< 5MMBTU/hr and burn gas 1 – tune up once per 5 years), (a)(13); 63.7545(c)(initial notification no later than 15 days after the start-up date),(e)(1),(e)(8), (f)(alternative fuel use); 63.7550(b)(1),(c)(1),(c)(5),(h) (reporting); 63.7555(a),(c),(h) (recordkeeping); 63.7560 Section 21.0 – R14-0013E (4.1.1, 4.1.6, 4.1.8, 4.4.1, 4.4.5, 4.5.2) 45CSR34
001-08(1)	SH2	26 Catalytic Heaters	2017	1.34 MMBtu/hr(2)	N/A	Section 21.0 – R14-0013E (4.1.1, 4.1.6, 4.4.1)
001-09(1)	SH3	22 Catalytic Heaters	2013	0.66 MMBtu/hr(2)	N/A	Section 21.0 – R14-0013E (4.1.1, 4.1.6, 4.4.1)

(1) All combustion equipment burns pipeline quality natural gas only.
(2) ~~Engines shall be removed from service pursuant to R14-0013D, requirement 4.1.2(c).~~ Listed design capacity is aggregate for all heaters.
(3) Compliance date January 31, 2016
(4) Compliance date January 31, 2013, or upon start-up whichever is later
N/A – Not applicable

2.0 General Conditions

2.1. Definitions

2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.

2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.

2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.12.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.

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

2.2. Acronyms

CAAA	Clean Air Act Amendments
CBI	Confidential Business Information
CEM	Continuous Emission Monitor
CES	Certified Emission Statement
C.F.R. *or* CFR	Code of Federal Regulations
CO	Carbon Monoxide
C.S.R. *or* CSR	Codes of State Rules
DAQ	Division of Air Quality
DEP	Department of Environmental Protection
FOIA	Freedom of Information Act
HAP	Hazardous Air Pollutant
HON	Hazardous Organic NESHAP
HP	Horsepower
lbs/hr *or* lb/hr	Pounds per Hour
LDAR	Leak Detection and Repair
m	Thousand
MACT	Maximum Achievable Control Technology
mm	Million
mmBtu/hr	Million British Thermal Units per Hour
mmft^3/hr *or* mmcf/hr	Million Cubic Feet Burned per Hour
NA *or* N/A	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAPS	National Emissions Standards for Hazardous Air Pollutants
NO_x	Nitrogen Oxides
NSPS	New Source Performance Standards
PM	Particulate Matter
PM_{10}	Particulate Matter less than 10µm in diameter
pph	Pounds per Hour
ppm	Parts per Million
PSD	Prevention of Significant Deterioration
psi	Pounds per Square Inch
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
TAP	Toxic Air Pollutant
TPY	Tons per Year
TRS	Total Reduced Sulfur
TSP	Total Suspended Particulate
USEPA	United States Environmental Protection Agency
UTM	Universal Transverse Mercator
VEE	Visual Emissions Evaluation
VOC	Volatile Organic Compounds

2.3. Permit Expiration and Renewal

2.3.1. Permit duration. This permit is issued for a fixed term of five (5) years and shall expire on the date specified on the cover of this permit, except as provided in 45CSR§30-6.3.b. and 45CSR§30-6.3.c.
[45CSR§30-5.1.b.]

2.3.2. A permit renewal application is timely if it is submitted at least six (6) months prior to the date of permit expiration.
[45CSR§30-4.1.a.3.]

2.3.3. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with 45CSR§30-6.2. and 45CSR§30-4.1.a.3.
[45CSR§30-6.3.b.]

2.3.4. If the Secretary fails to take final action to deny or approve a timely and complete permit application before the end of the term of the previous permit, the permit shall not expire until the renewal permit has been issued or denied, and any permit shield granted for the permit shall continue in effect during that time.
[45CSR§30-6.3.c.]

2.4. Permit Actions

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

2.5. Reopening for Cause

2.5.1. This permit shall be reopened and revised under any of the following circumstances:

a. Additional applicable requirements under the Clean Air Act or the Secretary's legislative rules become applicable to a major source with a remaining permit term of three (3) or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 45CSR§§30-6.6.a.1.A. or B.

b. Additional requirements (including excess emissions requirements) become applicable to an affected source under Title IV of the Clean Air Act (Acid Deposition Control) or other legislative rules of the Secretary. Upon approval by U.S. EPA, excess emissions offset plans shall be incorporated into the permit.

c. The Secretary or U.S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

d. The Secretary or U.S. EPA determines that the permit must be revised or revoked and reissued to assure compliance with the applicable requirements.

[45CSR§30-6.6.a.]

2.6. Administrative Permit Amendments

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

2.7. Minor Permit Modifications

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

2.8. Significant Permit Modification

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

2.9. Emissions Trading

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

2.10. Off-Permit Changes

2.10.1. Except as provided below, a facility may make any change in its operations or emissions that is not addressed nor prohibited in its permit and which is not considered to be construction nor modification under any rule promulgated by the Secretary without obtaining an amendment or modification of its permit. Such changes shall be subject to the following requirements and restrictions:

a. The change must meet all applicable requirements and may not violate any existing permit term or condition.

b. The permittee must provide a written notice of the change to the Secretary and to U.S. EPA within two (2) business days following the date of the change. Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change.

c. The change shall not qualify for the permit shield.

d. The permittee shall keep records describing all changes made at the source that result in emissions of regulated air pollutants, but not otherwise regulated under the permit, and the emissions resulting from those changes.

e. No permittee may make any change subject to any requirement under Title IV of the Clean Air Act (Acid Deposition Control) pursuant to the provisions of 45CSR§30-5.9.

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

2.11. Operational Flexibility

2.11.1. The permittee may make changes within the facility as provided by § 502(b)(10) of the Clean Air Act. Such operational flexibility shall be provided in the permit in conformance with the permit application and applicable requirements. No such changes shall be a modification under any rule or any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) promulgated by the Secretary in accordance with Title I of the Clean Air Act and the change shall not result in a level of emissions exceeding the emissions allowable under the permit.
[45CSR§30-5.8]

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

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

a. If subsequent changes cause the facility's operations and emissions to revert to those authorized in the permit and the permittee resumes compliance with the terms and conditions of the permit, or

b. If the permittee obtains final approval of a significant modification to the permit to incorporate the change in the permit.

[45CSR§30-5.8.c.]

2.11.4. "Section 502(b)(10) changes" are changes that contravene an express permit term. Such changes do not include changes that would violate applicable requirements or contravene enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
[45CSR§30-2.39]

2.12. Reasonably Anticipated Operating Scenarios

2.12.1. The following are terms and conditions for reasonably anticipated operating scenarios identified in this permit.

a. Contemporaneously with making a change from one operating scenario to another, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating and to document the change in reports submitted pursuant to the terms of this permit and 45CSR30.

b. The permit shield shall extend to all terms and conditions under each such operating scenario; and

c. The terms and conditions of each such alternative scenario shall meet all applicable requirements and the requirements of 45CSR30.

[45CSR§30-5.1.i.]

2.13. Duty to Comply

2.13.1. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.
[45CSR§30-5.1.f.1.]

2.14. Inspection and Entry

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

a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;

d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

[45CSR§30-5.3.b.]

2.15. Schedule of Compliance

2.15.1. For sources subject to a compliance schedule, certified progress reports shall be submitted consistent with the applicable schedule of compliance set forth in this permit and 45CSR§30-4.3.h., but at least every six (6) months, and no greater than once a month, and shall include the following:

a. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when such activities, milestones or compliance were achieved; and

b. An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measure adopted.

[45CSR§30-5.3.d.]

2.16. Need to Halt or Reduce Activity not a Defense

2.16.1. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.
[45CSR§30-5.1.f.2.]

2.17. Emergency

2.17.1. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.
[45CSR§30-5.7.a.]

2.17.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of 45CSR§30-5.7.c. are met.
[45CSR§30-5.7.b.]

2.17.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;

b. The permitted facility was at the time being properly operated;

c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and

d. Subject to the requirements of 45CSR§30-5.1.c.3.C.1, the permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice, report, and variance request fulfills the requirement of 45CSR§30-5.1.c.3.B. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

[45CSR§30-5.7.c.]

2.17.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.
[45CSR§30-5.7.d.]

2.17.5. This provision is in addition to any emergency or upset provision contained in any applicable requirement.
[45CSR§30-5.7.e.]

2.18. Federally-Enforceable Requirements

2.18.1. All terms and conditions in this permit, including any provisions designed to limit a source's potential to emit and excepting those provisions that are specifically designated in the permit as "State-enforceable only", are enforceable by the Secretary, USEPA, and citizens under the Clean Air Act.
[45CSR§30-5.2.a.]

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

2.19. Duty to Provide Information

2.19.1. The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records required to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.
[45CSR§30-5.1.f.5.]

2.20. Duty to Supplement and Correct Information

2.20.1. Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.
[45CSR§30-4.2.]

2.21. Permit Shield

2.21.1. Compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance provided that such applicable requirements are included and are specifically identified in this permit or the Secretary has determined that other requirements specifically identified are not applicable to the source and this permit includes such a determination or a concise summary thereof.
[45CSR§30-5.6.a.]

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

a. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance; or

b. The applicable requirements of the Code of West Virginia and Title IV of the Clean Air Act (Acid Deposition Control), consistent with § 408 (a) of the Clean Air Act.

c. The authority of the Administrator of U.S. EPA to require information under § 114 of the Clean Air Act or to issue emergency orders under § 303 of the Clean Air Act.

[45CSR§30-5.6.c.]

2.22. Credible Evidence

2.22.1. Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee including but not limited to any challenge to the credible evidence rule in the context of any future proceeding.
[45CSR§30-5.3.e.3.B. and 45CSR38]

2.23. Severability

2.23.1. The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid by a court of competent jurisdiction, the remaining permit terms and conditions or their application to other circumstances shall remain in full force and effect.
[45CSR§30-5.1.e.]

2.24. Property Rights

2.24.1. This permit does not convey any property rights of any sort or any exclusive privilege.
[45CSR§30-5.1.f.4]

2.25. Acid Deposition Control

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

a. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid deposition control program, provided that such increases do not require a permit revision under any other applicable requirement.

b. No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement.

c. Any such allowance shall be accounted for according to the procedures established in rules promulgated under Title IV of the Clean Air Act.

[45CSR§30-5.1.d.]

2.25.2. Where applicable requirements of the Clean Air Act are more stringent than any applicable requirement of regulations promulgated under Title IV of the Clean Air Act (Acid Deposition Control), both provisions shall be incorporated into the permit and shall be enforceable by the Secretary and U. S. EPA.
[45CSR§30-5.1.a.2.]

3.0 Facility-Wide Requirements

3.1. Limitations and Standards

3.1.1. **Open burning.** The open burning of refuse by any person is prohibited except as noted in 45CSR§6-3.1. **[45CSR§6-3.1.]**

3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause or allow any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.
[45CSR§6-3.2.]

3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them.
[40 C.F.R. §61.145(b) and 45CSR34]

3.1.4. **Odor.**

3.1.4.1. 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.]

3.1.4.2. Accidental and other infrequent discharges 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 Director in the manner to be prescribed by the Director.
[45CSR§4-4.1 State-Enforceable only.]

3.1.4.3. When a process or operation results in the discharge of an air pollutant or pollutants which causes or contributes to an objectionable odor, an acceptable control program shall be developed and offered to the Director by the person responsible for the discharge of such air pollutant or pollutants. This control program shall be submitted in the manner prescribed by the Director and within such time as shall be fixed by the Director. If such a control program has been approved by the Director by the issuance of a variance, the person responsible for said discharge shall not be considered to be in violation of this rule in connection with said discharge so long as the program is observed.
[45CSR§4-6.1 State-Enforceable only.]

3.1.4.4. The Director may permit, under emergency circumstances, the discharge of air pollutants which causes or contributes to an objectionable odor under specific conditions for specific time periods. Any person who desires such a variance shall make application to the Director in the manner prescribed by the Director.
[45CSR§4-6.2 State-Enforceable only.]

3.1.5. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11.
[45CSR§11-5.2]

3.1.6. **Emission inventory.** The permittee is responsible for submitting, on an annual basis, an emission inventory in accordance with the submittal requirements of the Division of Air Quality.
[W.Va. Code § 22-5-4(a)(14)]

3.1.7. **Ozone-depleting substances.** For those facilities performing maintenance, service, repair or disposal of appliances, the permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 C.F.R. Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:

a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the prohibitions and required practices pursuant to 40 C.F.R. §§ 82.154 and 82.156.

b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 C.F.R. § 82.158.

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

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

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

3.1.9. Facilities using Mercaptan Tanks shall use proper odor control methods to comply with 45CSR4. **[45CSR§30-12.7 State-Enforceable only.]**

3.1.10. Emergency Operating Condition/Unit Replacement:

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

a. The replacement engine(s) is only allowed to operate until repair of the failed engine(s) is complete, but under no circumstance may the replacement engine(s) operate in excess of sixty (60) days;

b. Both the replacement engine(s) and the repaired failed engine(s) shall not operate at the same time with the exception of any necessary testing of the repaired engine(s) and this testing may not exceed five (5) hours;

c. Potential hourly emissions from the replacement engine(s) are less than or equal to the potential hourly emissions from the engine(s) being replaced;

d. Credible performance emission test data verifying the emission rates associated with the operation of the substitute engine shall be submitted to the Director within five (5) business days;

e. The permittee must provide written notification to the Director within five (5) business days of the replacement. This notification must contain:

i. Information to support the claim of life threatening circumstances to justify applicability of this emergency provision;

ii. Identification of the engine(s) being temporarily replaced;

iii. The design parameters of the replacement engine(s) including, but not limited to, the design horsepower and emission factors;

iv. Projected duration of the replacement engine(s); and

v. The appropriate certification by a responsible official.

[45CSR§30-12.7]

3.2. Monitoring Requirements

3.2.1. None.

3.3. Testing Requirements

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

a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63, if applicable, in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable.

b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit.

c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.

d. The permittee shall submit a report of the results of the stack test within 60 days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:

1. The permit or rule evaluated, with the citation number and language.

2. The result of the test for each permit or rule condition.

3. A statement of compliance or non-compliance with each permit or rule condition.

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

3.4. Recordkeeping Requirements

3.4.1. **Monitoring information.** The permittee shall keep records of monitoring information that include the following:

a. The date, place as defined in this permit and time of sampling or measurements;

b. The date(s) analyses were performed;

c. The company or entity that performed the analyses;

d. The analytical techniques or methods used;

e. The results of the analyses; and

f. The operating conditions existing at the time of sampling or measurement.

[45CSR§30-5.1.c.2.A.]

3.4.2. **Retention of records.** The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of monitoring sample, measurement, report, application, or record creation date. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Where appropriate, records may be maintained in computerized form in lieu of the above records.
[45CSR§30-5.1.c.2.B.]

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

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

b. When a person is found in violation of this rule, the Director may require the person to utilize a system to minimize fugitive particulate matter. This system to minimize fugitive particulate matter may include, but is not limited to, the following:

i. Use, where practicable, of water or chemicals for control of particulate matter in demolition of existing buildings or structures, construction operations, grading of roads or the clearing of land;

ii. Application of asphalt, water or suitable chemicals on unpaved roads, material stockpiles and other surfaces which can create airborne particulate matter;

iii. Covering of material transport vehicles, or treatment of cargo, to prevent contents from dripping, sifting, leaking or otherwise escaping and becoming airborne, and prompt removal of tracked material from roads or streets; or

iv. Installation and use of hoods, fans and fabric filters to enclose and vent the handling of materials, including adequate containment methods during sandblasting, abrasive cleaning or other similar operations.

[45CSR§17-3. State-Enforceable only.]

3.5. Reporting Requirements

3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.
[45CSR§§30-4.4. *and* 5.1.c.3.D.]

3.5.2. A permittee may request confidential treatment for the submission of reporting required under 45CSR§30-5.1.c.3. pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.
[45CSR§30-5.1.c.3.E.]

3.5.3. Except for the electronic submittal of the annual certification to the USEPA as required in 3.5.5 below, all notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, mailed first class or by private carrier with postage prepaid to the address(es) set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

If to the DAQ:

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

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

If to the US EPA:

Associate Director
Office of Air Enforcement and Compliance Assistance (3AP20)
U. S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

3.5.4. **Certified emissions statement.** The permittee shall submit a certified emissions statement and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality. **[45CSR§30-8.]**

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

3.5.6. **Semi-annual monitoring reports.** The permittee shall submit reports of any required monitoring on or before September 15 for the reporting period January 1 to June 30 and on or before March 15 for the reporting period July 1 to December 31. All instances of deviation from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with 45CSR§30-4.4. **[45CSR§30-5.1.c.3.A.]**

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

3.5.8. **Deviations.**

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

1. Any deviation resulting from an emergency or upset condition, as defined in 45CSR§30-5.7., shall be reported by telephone or telefax within one (1) working day of the date on which the permittee becomes aware of the deviation, if the permittee desires to assert the affirmative defense in accordance with 45CSR§30-5.7. A written report of such deviation, which shall include the probable cause of such deviations, and any corrective actions or preventative measures taken, shall be submitted and certified by a responsible official within ten (10) days of the deviation.

2. Any deviation that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to the Secretary immediately by telephone or telefax. A written report of such deviation, which shall include the probable cause of such deviation, and any corrective actions or preventative measures taken, shall be submitted by the responsible official within ten (10) days of the deviation.

3. Deviations for which more frequent reporting is required under this permit shall be reported on the more frequent basis.

4. All reports of deviations shall identify the probable cause of the deviation and any corrective actions or preventative measures taken.

[45CSR§30-5.1.c.3.C.]

b. The permittee shall, in the reporting of deviations from permit requirements, including those attributable to upset conditions as defined in this permit, report the probable cause of such deviations and any corrective actions or preventive measures taken in accordance with any rules of the Secretary.
[45CSR§30-5.1.c.3.B.]

3.5.9. **New applicable requirements.** If any applicable requirement is promulgated during the term of this permit, the permittee will meet such requirements on a timely basis, or in accordance with a more detailed schedule if required by the applicable requirement.
[45CSR§30-4.3.h.1.B.]

3.5.10. During compliance certification, the facility shall certify that the facility burns natural gas in all stationary equipment regulated under this permit except, when applicable, for emergency equipment (i.e. diesel generators).
[45CSR§30-5.1.c.3.C.]

4.0 Miscellaneous Indirect Heat Exchangers including Reboilers, Natural Gas Heaters and Regeneration Gas Heaters less than 10 MMBtu/hr

4.1. Limitations and Standards

4.1.1. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six minute block average. **[45CSR§2-3.1.]**

4.1.2. Compliance with the visible emission requirements of 45CSR§2-3.1 (Section 4.1.1 of this permit) shall be determined in accordance with 40 C.F.R. Part 60, Appendix A, Method 9 or by using measurements from continuous opacity monitoring systems approved by the Director. The Director may require the installation, calibration, maintenance and operation of continuous opacity monitoring systems and may establish policies for the evaluation of continuous opacity monitoring results and the determination of compliance with the visible emission requirements of 45CSR§2-3.1 (Section 4.1.1 of this permit). Continuous opacity monitors shall not be required on fuel burning units which employ wet scrubbing systems for emission control. **[45CSR§2-3.2.]**

4.2. Monitoring Requirements

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

4.3. Testing Requirements

4.3.1. N/A

4.4. Recordkeeping Requirements

4.4.1. N/A

4.5. Reporting Requirements

4.5.1. N/A

5.0 Miscellaneous Indirect Heat Exchangers including Reboilers (with Natural Gas Heaters) and Regeneration Gas Heaters greater than or equal to 10 MMBtu/hr and less than 100 MMBtu/hr

5.1. Limitations and Standards

5.1.1. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six minute block average.
[45CSR§2-3.1.]

5.1.2. Compliance with the visible emission requirements of 45CSR§2-3.1 (Section 5.1.1 of this permit) shall be determined in accordance with 40 C.F.R. Part 60, Appendix A, Method 9 or by using measurements from continuous opacity monitoring systems approved by the Director. The Director may require the installation, calibration, maintenance and operation of continuous opacity monitoring systems and may establish policies for the evaluation of continuous opacity monitoring results and the determination of compliance with the visible emission requirements of 45CSR§2-3.1 (Section 5.1.1 of this permit). Continuous opacity monitors shall not be required on fuel burning units which employ wet scrubbing systems for emission control.
[45CSR§2-3.2, 45CSR§2A-6]

5.1.3. No person shall cause, suffer, allow or permit the discharge of particulate matter into the open air from all fuel burning units located at one plant, measured in terms of pounds per hour in excess of the amount determined as follows:
For Gas-fired fuel burning units, the product of 0.09 and the total design heat inputs for such units in million B.T.U.'s per hour, provided however that no more than six hundred (600) pounds per hour of particulate matter shall be discharged into the open air from all such units;
[45CSR§2-4.1.b.]

5.1.4. Subject to the provisions of 45CSR2, allowable emission rates for individual stacks shall be determined by the owner and/or operator and registered with the Director at the request of, and on forms provided by, the Director. Such rates shall be subject to review and approval by the Director. The approved set of individual stack allowable emission rates shall become an official part of the compliance schedule and/or any permits concerning such source(s), and shall not be changed without the prior written approval of the Director
[45CSR§2-4.2]

5.1.5. If the number of similar fuel burning units located at one plant, each of which is meeting the requirements of this rule, is expanded by the addition of a new unit(s), the total allowable emission rate for the new unit(s) shall be determined according to 45CSR§2-4.3.
[45CSR§2-4.3]

5.1.6. The addition of sulfur oxides to a combustion unit exit gas stream for the purpose of improving emissions control equipment efficiency shall be reviewed by the Director. No person shall cause, suffer, allow or permit the addition of sulfur oxides as described above unless written approval for such addition is provided by the Director.
[45CSR§2-4.4.]

5.1.7. The provisions of section 5.1.6 shall not apply to combustion units in operation on or before September 1, 1974.
[45CSR§2-4.5.]

5.1.8. The visible emission standards set forth in 45CSR§2-3.1 (Section 5.1.1 of this permit) shall apply at all times except in periods of start-ups, shutdowns and malfunctions. Where the Director believes that start-ups and shutdowns are excessive in duration and/or frequency, the Director may require an owner or operator to provide a written report demonstrating that such frequent start-ups and shutdowns are necessary.
[45CSR§2-9.1.]

5.1.9. At all times, including periods of start-ups, shutdowns and malfunctions, owners and operators shall, to the extent practicable, maintain and operate any fuel burning unit(s) including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, visible emission observations, review of operating and maintenance procedures and inspection of the source.
[45CSR§2-9.2.]

5.1.10. Total Allowable Emission Rates for Similar Units in Priority I and Priority II Regions -- No person shall cause, suffer, allow or permit the discharge of sulfur dioxide into the open air from all stacks located at one plant, measured in terms of pounds per hour, in excess of the amount determined as follows: the product of 3.1 and the total design heat inputs for such units discharging through those stacks in million BTU's per hour.
[45CSR§10-3.1.e]

5.1.11. Maximum Allowable Emission Rates for Similar Units in Region IV (Kanawha Valley Air Quality Control Region: Kanawha County, Putnam County, and Falls and Kanawha Magisterial Districts of Fayette County)-- No person shall cause, suffer, allow or permit the discharge of sulfur dioxide into the open air from all stacks located at one plant, measured in terms of pounds per hour, in excess of the amount determined as follows: the product of 1.6 and the total design heat inputs for such units discharging through those stacks in million BTU's per hour, provided however, that no more than 5,500 pounds per hour of sulfur dioxide shall be discharged into the open air from all such stacks.
[45CSR§10-3.2.c]

5.1.12. Maximum Allowable Emission Rates for Similar Units in All Priority III Regions Except Region IV. No person shall cause, suffer, allow or permit the discharge of sulfur dioxide into the open air from all stacks located at one plant, measured in terms of pounds per hour, in excess of the amount determined as follows: the product of 3.2 and the total design heat inputs for such units discharging through those stacks in million BTU's per hour.
[45CSR§10-3.3.f.]

5.2. Monitoring Requirements

5.2.1. If periodic testing or instrumental or noninstrumental monitoring (which may consist of recordkeeping designed to serve as monitoring), is not already required by a state rule, federal regulation, 45CSR13 or 45CSR14 permit, or consent order, then compliance with emission limits for NO_x, CO, VOC, SO_2, PM, PM_{10}, and/or applicable HAP's shall be determined based on the fuel usage and one of the following methods:

a. Stack Test Data;
b. AP-42 factors; or
c. Manufacturer's guaranteed emission factors;
d. Other method/data approved by DAQ.
e. GRI Gly-Calc version 3.0 or higher; or
f. GRI HAP-Calc.

If a monitoring timeframe is not already established and there are hourly emission limits, monthly records indicating hourly average emissions shall be available for a period of no less than five (5) years. If a monitoring timeframe is not already established and there are yearly emission limits, monthly records indicating the twelve month rolling total emissions shall be available for a period of no less than five (5) years.
[45CSR§30-5.1.c.]

5.2.2. At such reasonable times as the Secretary may designate, the permittee shall conduct visible emissions observations using Method 22 For the purpose of demonstrating compliance with Section 5.1.1. If visible emissions are observed, the permittee shall conduct a Method 9 reading unless the cause for visible emissions is corrected within 24 hours. Records of observation will be kept for at least 5 years from the date of observation.
[45CSR§30-5.1.c.]

5.3. Testing Requirements

5.3.1. At such reasonable times as the Secretary may designate, the permittee may be required to conduct or have conducted tests to determine compliance with any applicable emission limitations. Tests shall be conducted in accordance with the methods set forth below unless the method is already specified in a state rule, federal regulation, 45CSR13 or 45CSR14 permit, or consent order. The permittee may request an alternative test procedure with a written submittal to the Director.

a. Tests to determine compliance with NO_x emission limits shall be conducted in accordance with Method 7E or 20 as set forth in 40 C.F.R.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 C.F.R.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 C.F.R.60, Appendix A.
d. Tests to determine compliance with SO_2 emission limits shall be conducted in accordance with Method 20 as set forth in 40 C.F.R. 60 Subpart GG or 40 C.F.R. 60 Appendix A, Method 6 or 15.
e. Tests to determine compliance with PM_{10} and PM emission limits shall be conducted in accordance with Method 5 as set forth in 40 C.F.R. 60, Appendix A or Appendix A of 45CSR2.
f. Tests to determine compliance with Benzene emission limits shall be conducted in accordance with Method 18 as set forth in 40 C.F.R. 60, Appendix A. Testing for formaldehyde shall be conducted using EPA Methods 320 or 323.

[45CSR§30-5.1.c; 45CSR§§2-8.1.b and 8.1.c]

5.4. Recordkeeping Requirements

5.4.1. The owner or operator of a fuel burning unit(s) shall maintain records of the operating schedule, and the quality and quantity of fuel burned in each fuel burning unit as the following:

For fuel burning unit(s) which burn only pipeline quality natural gas, such records shall include, but not be limited to, the date and time of start-up and shutdown, and the quantity of fuel consumed on a monthly basis. Such records are to be maintained and made available to the Director or his duly authorized representative upon request.
[45CSR§2-8.3.c, 45CSR§2A-7.1.]

5.5. Reporting Requirements

5.5.1. The owner or operator of a fuel burning unit(s) subject to 45CSR2 shall report to the Director any malfunction of such unit or its air pollution control equipment which results in any excess particulate matter emission rate or excess opacity [i.e., emissions exceeding the standards in sections 3 and 4 of 45CSR2 (Section 5.1.1 & 5.1.3 of this permit)] as provided in one of the following subdivisions:

5.5.1.1. Excess opacity periods meeting the following conditions may be reported on a quarterly basis unless otherwise required by the Director:

The excess opacity period does not exceed thirty (30) minutes within any 24-hour period; and Excess opacity does not exceed 40%.

5.5.1.2. The owner or operator shall report to the Director any malfunction resulting in excess particulate matter or excess opacity, not meeting the criteria set forth in 45CSR§2-9.3a (Section 5.5.1.1 of this permit), by telephone, telefax, or e-mail by the end of the next business day after becoming aware of such condition. The owner or operator shall file a certified written report concerning the malfunction with the Director within thirty (30) days providing the following information:

A detailed explanation of the factors involved or causes of the malfunction;

The date and time of duration (with starting and ending times) of the period of excess emissions;

An estimate of the mass of excess emissions discharged during the malfunction period;

The maximum opacity measured or observed during the malfunction;

Immediate remedial actions taken at the time of the malfunction to correct or mitigate the effects of the malfunction; and

A detailed explanation of the corrective measures or program that will be implemented to prevent a recurrence of the malfunction and a schedule for such implementation.
[45CSR§2-9.3.]

6.0 Reciprocating Internal Combustion Engines, Emergency Generators and Combustion Turbines

6.1. Limitations and Standards

6.1.1. N/A

6.2. Monitoring Requirements

6.2.1. If periodic testing or instrumental or noninstrumental monitoring (which may consist of recordkeeping designed to serve as monitoring), is not already required by a state rule, federal regulation, 45CSR13 or 45CSR14 permit, or consent order, continued compliance with the emission limits for NO_x, CO, VOC, SO_2, PM, PM_{10} and/or applicable HAPs shall be determined based on compliance with the fuel usage and/or brake hp and one of the following methods:

a. Stack Test Data;
b. AP-42 factors;
c. Manufacturer's guaranteed emission factors;
d. Other method/data approved by DAQ; or
e. GRI HAP-Calc.

If a monitoring timeframe is not already established and there are hourly emission limits, monthly records indicating hourly average emissions shall be available for a period of no less than five (5) years. If a monitoring timeframe is not already established and there are yearly emission limits, monthly records indicating the twelve month rolling total emissions shall be available for a period of no less than five (5) years.

[45CSR§30-5.1.c.]

6.3. Testing Requirements

6.3.1. At such reasonable times as the Secretary may designate, the permittee may be required to conduct or have conducted tests to determine compliance with any applicable emission limitations. Tests shall be conducted in accordance with the methods set forth below unless the method is already specified in a state rule, federal regulation, 45CSR13 or 45CSR14 permit, or consent order. The permittee may request an alternative test procedure with a written submittal to the Director.

a. Tests to determine compliance with NO_x emission limits shall be conducted in accordance with Method 7E or 20 as set forth in 40 C.F.R.60, Appendix A.

c. Tests to determine compliance with CO emission limits shall be conducted in accordance with Method 10,10A, or 10B as set forth in 40 C.F.R.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 C.F.R.60, Appendix A.

d. Tests to determine compliance with SO_2 emission limits shall be conducted in accordance with Method 20 as set forth in 40 C.F.R. 60, Subpart GG or 40 C.F.R. 60 Appendix A, Method 6 or 15.

e. Tests to determine compliance with PM and PM_{10} emission limits shall be conducted in accordance with Method 5 as set forth in 40 C.F.R. 60, Appendix A.

f. Tests to determine compliance with Benzene emission limits shall be conducted in accordance with Method 18 as set forth in 40 C.F.R. 60, Appendix A. Testing for formaldehyde shall be conducted using EPA Methods 320 or 323.

[45CSR§30-5.1.c.]

6.4. Recordkeeping Requirements

6.4.1. If recordkeeping is not already required by a state rule, federal regulation, 45CSR13 or 45CSR14 permit, or consent order to demonstrate compliance with the emission limits for NO_x, CO, VOC, SO_2, PM, PM_{10} and/or applicable HAPs, the permittee shall maintain a record of equipment fuel consumption and/or bhp-hrs developed and hours of operation for all the Reciprocating Internal Combustion Engines, Emergency Generators & Combustion Turbines. If a monitoring timeframe is not already established, a twelve month rolling total shall be maintained to verify compliance with the long term emission limitations. Each calendar month a new twelve month total shall be calculated using the previous twelve months data. If a monitoring timeframe is not already established and there are hourly emission limits, monthly records indicating the hourly average emissions shall be available for a period of no less than five (5) years. If a monitoring timeframe is not already established and there are yearly emission limits, records indicating the twelve month rolling total emissions shall be available for a period of no less than five (5) years. Upon request by the Secretary the records will be certified by the responsible official.
[45CSR§30-5.1.c.]

6.5. Reporting Requirements

6.5.1. N/A

7.0 Turbines subject to 40 C.F.R. 60 Subpart GG

7.0.1. The provisions of 40 C.F.R. 60 Subpart GG applicable to the emission unit are specified in the Emission Units Table in Section 1.0.

8.0 Turbines subject to 40 C.F.R. 60 Subpart KKKK

8.0.1. The provisions of 40 C.F.R. 60 Subpart KKKK applicable to the emission unit are specified in the Emission Units Table in Section 1.0.

9.0 Turbines subject to 40 C.F.R. 63 Subpart YYYY

9.0.1. The provisions of 40 C.F.R. 63 Subpart YYYY applicable to the emission unit are specified in the Emission Units Table in Section 1.0.

10.0 Stationary Reciprocating Internal Combustion Engines (RICE) subject to 40 C.F.R. 63 Subpart ZZZZ

10.0.1. The provisions of 40 C.F.R. Part 63 Subpart ZZZZ applicable to the emission unit are specified in the Emission Units Table in Section 1.0.

11.0 Stationary Spark Ignition Internal Combustion Engines subject to 40 C.F.R 60 Subpart JJJJ

11.0.1. The provisions of 40 C.F.R. Part 60 Subpart JJJJ applicable to the emission unit are specified in the Emission Units Table in Section 1.0.

12.0 Stationary Compression Ignition Internal Combustion Engines subject to 40 C.F.R. 60 Subpart IIII

12.0.1. The provisions of 40 C.F.R. Part 60 Subpart IIII applicable to the emission unit are specified in the Emission Units Table in Section 1.0.

13.0 Storage Vessels subject to 40 C.F.R. 60 Subpart Kb

13.0.1. The provisions of 40 C.F.R. Part 60 Subpart Kb applicable to the emission unit are specified in the Emission Units Table in Section 1.0.

14.0 Natural Gas Dehydration Units

14.1. Limitations and Standards

14.1.1. (a) Potential HAP emissions from the entire facility shall be less than 10 TPY of any single HAP or 25 TPY of any combination of HAPs. For purposes of determining potential HAP emissions at transmission and storage facilities, the methods specified in 40 CFR 63, Subpart HHH shall be used unless HAPs are specifically limited by a federally enforceable permit condition. For purposes of determining potential HAP emissions at production-related facilities, the methods specified in 40 CFR 63, Subpart HH shall be used unless HAPs are specifically limited by a federally enforceable permit condition.

And / Or,

(b) Actual average emissions shall be less than 1.0 tons/yr (or 0.9 Mg/yr) of Benzene per dehydration unit either thru 45CSR13 limit or by this condition. For purposes of determining actual average benzene emissions at transmission and storage facilities, the methods specified in 40 CFR 63, Subpart HHH shall be used unless Benzene emissions are specifically limited by a federally enforceable permit condition. For purposes of determining actual average Benzene emissions at production-related facilities, the methods specified in 40 CFR 63, Subpart HH shall be used unless Benzene emissions are specifically limited by a federally enforceable permit condition.

[45CSR§30-12.7]

The following requirements for flares make the flare federally and practically enforceable. *If a flare is being used to provide the natural gas source with synthetic minor status or reduce the potential HAPs to below major source levels, the one ton of benzene exemption for MACT, or even if the source is minor without the flare, but would like to reduce their PTE by the use of a flare, the following control device requirements shall be used.*

14.1.2. Flare, subject to this section shall be designed and operated in accordance with the following:

14.1.2.a. Flares shall be steam-assisted, air-assisted, or non-assisted.

14.1.2.b. Flares shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. This streamlined limit of no visible emissions will ensure compliance with 45CSR§6-4.3. During the exception period when visible emissions are allowed, the visible emissions shall not exceed 20% opacity except for periods of start-up as outlined in 45CSR§6-4.4. (i.e., less than forty (40%) percent opacity, for a period or periods aggregating no more than eight (8) minutes per start-up).

14.1.2.c. Flares shall be operated and with a flame present at all times when emissions may be vented to them, except during SSM (Startup, Shutdown, Malfunctions) events.

14.1.2.d. Flares shall be used only with the net heating value of the gas being combusted at 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted at 7.45 MJ/scm (200 Btu/scf) or greater if the flares is non-assisted. The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K\sum_{i=1}^{n} C_i H_i$$

Where:

H_T=Net heating value of the sample, MJ/scm; where the net enthalpy per mole of off gas is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C.

K=Constant=

$$1.740\times10^{-7}\left(\frac{1}{ppmv}\right)\left(\frac{\text{g-mole}}{\text{scm}}\right)\left(\frac{\text{MJ}}{\text{kcal}}\right)$$

where the standard temperature for (g-mole/scm) is 20 °C.

C_i=Concentration of sample component i in ppmv on a wet basis, which may be measured for organics by Test Method 18, but is not required to be measured using Method 18 (unless designated by the Director).

H_i=Net heat of combustion of sample component i, kcal/g-mole at 25 °C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382–76 or 88 or D4809–95 if published values are not available or cannot be calculated.

n=Number of sample components.

14.1.2.e. Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity less than 18.3 m/sec (60 ft/sec), except as provided by 14.1.2.f and 14.1.2.g of this section. The actual exit velocity of a flare shall be determined by dividing by the volumetric flow rate of gas being combusted (in units of emission standard temperature and pressure), by the unobstructed (free) cross-sectional area of the flare tip, which may be determined by Test Method 2, 2A, 2C, or 2D in appendix A to 40 CFR part 60, as appropriate, but is not required to be determined using these Methods (unless designated by the Director).

14.1.2.f. Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the method specified in 14.1.2.e. of this section, equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec), are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).

14.1.2.g. Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the method specified in 14.1.2.e. of this section, less than the velocity V_{max}, as determined by the method specified in this paragraph, but less than 122 m/sec (400 ft/sec) are allowed. The maximum permitted velocity, V_{max}, for flares complying with this paragraph shall be determined by the following equation:

$$\text{Log}_{10}(V_{max})=(H_T+28.8)/31.7$$

Where:

V_{max}=Maximum permitted velocity, m/sec.
28.8=Constant.
31.7=Constant.
H_T=The net heating value as determined in 14.1.2.d of this section

14.1.2.h. Air-assisted flares shall be designed and operated with an exit velocity less than the velocity V_{max}. The maximum permitted velocity, V_{max}, for air-assisted flares shall be determined by the following equation:

$$V_{max}=8.71 + 0.708(H_T)$$

Where:

V_{max}=Maximum permitted velocity, m/sec.
8.71=Constant.
0.708=Constant.
H_T=The net heating value as determined in 14.1.2.d of this section.

[45CSR§30-12.7; 45CSR§§6-4.3 and 4.4]

14.1.3. Flares are not required to conduct a flare compliance assessment for concentration of sample (i.e. Method 18) and tip velocity (i.e. Method 2), until such time as the Director requests a flare compliance assessment to be conducted in accordance with section 14.3.3, but the permittee is required to conduct a flare design evaluation in accordance with section 14.3.2.
[45CSR§30-5.1.c.]

14.1.4. No person shall cause or allow particulate matter to be discharged from any incinerator into the open air in excess of the quantity determined by use of the following formula:
Emissions (lb/hr) = F x Incinerator Capacity (tons/hr)
Where, the factor, F, is as indicated in Table I below:

Table I: Factor, F, for Determining Maximum Allowable Particulate Emissions.

	Incinerator Capacity	Factor F
A.	Less than 15,000 lbs/hr	5.43
B.	15,000 lbs/hr or greater	2.72

[45CSR§6-4.1]

14.1.5. No person shall cause, suffer, allow or permit the emission of particles of unburned or partially burned refuse or ash from any incinerator which are large enough to be individually distinguished in the open air.
[45CSR§6-4.5]

14.1.6. Incinerators, including all associated equipment and grounds, shall be designed, operated and maintained so as to prevent the emission of objectionable odors.
[45CSR§6-4.6]

14.1.7. No person shall cause, suffer, allow or permit the emission into the open air from any source operation an in-stack sulfur dioxide concentration exceeding 2,000 parts per million by volume from existing source operations, except as provided in 45CSR§10-4.1.a through 45CSR§10-4.1.e.
[45CSR§10-4.1]

14.1.8. No person shall cause, suffer, allow or permit the combustion of any refinery process gas stream or any other process gas stream that contains hydrogen sulfide in a concentration greater than 50 grains per 100 cubic feet of gas except in the case of a person operating in compliance with an emission control and mitigation plan approved by the Director and U. S. EPA. In certain cases very small units may be considered exempt from this requirement if, in the opinion of the Director, compliance would be economically unreasonable and if the contribution of the unit to the surrounding air quality could be considered negligible.
[45CSR§10-5.1]

14.2. Monitoring Requirements

14.2.1. In order to demonstrate compliance with the requirements of 14.1.2.c, the permittee shall monitor the presence or absence of a flare pilot flame using a thermocouple or any other equivalent device, except during SSM events.
[45CSR§30-5.1.c.]

14.2.2. Compliance with emission limits for NO_x, CO, VOC, SO_2, PM, PM_{10}, and/or applicable HAPs shall be determined based on compliance with either the underlying 45CSR13 or 45CSR14 permit(s) authorizing construction of the source or the gas and/or liquid throughput & gas usage. If a monitoring timeframe is not already established and there are hourly emission limits, records indicating the hourly average emissions shall be available for a period of no less than five (5) years. If a monitoring timeframe is not already established and there are yearly emission limits, monthly records indicating the twelve month rolling total emissions shall be available for a period of no less than five (5) years.
[45CSR§30-5.1.c.]

14.2.3. Compliance with the emission limits for CO and NO_x from the flare shall be determined by using the emission factors listed in 13.5 for Industrial Flares of the 5th edition of USEPA's AP-42 (or more recent version).
[45CSR§30-5.1.c.]

14.2.4. Compliance with the emission limits for PM-10 from the flare shall be determined by using the emission factors listed in Section 1.4-2 for Natural Gas Combustion of the 5th edition of USEPA's AP-42 (or more recent version) and the design heat input of the flare.
[45CSR§30-5.1.c.]

14.2.5. To show compliance with Section 14.1.7 and 14.1.8, the owner or operator may elect not to monitor the total sulfur content of the fuel combusted, if the gaseous fuel is demonstrated to meet the definition of natural gas in 40 C.F.R. § 60.331(u). The owner or operator shall use one of the following sources of information to make the required demonstration:

The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less; or

Representative fuel sampling data which show that the sulfur content of the gaseous fuel does not exceed 20 grains/100 scf. At a minimum, representative fuel data specified in either section 2.3.1.4 or 2.3.2.4 of appendix D to 40 C.F.R.75 is required. **[45CSR§30-5.1.c.]**

14.3. Testing Requirements

14.3.1. In order to demonstrate compliance with the flare opacity requirements of 14.1.2.b the permittee shall conduct a Method 22 opacity test for at least two hours. This test shall demonstrate no visible emissions are observed for more than a total of 5 minutes during any 2 consecutive hour period using 40CFR60 Appendix A Method 22.

The permittee shall conduct this test within one (1) year of permit issuance or initial startup whichever is later and a second opacity test within one (1) year from the time the permit expires. The visible emission checks shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40 CFR part 60, appendix A, Method 22 or from the lecture portion of 40 CFR part 60, appendix A, Method 9 certification course.
[45CSR§30-5.1.c.]

14.3.2. In order to demonstrate compliance with the flare design criteria requirements of section 14.1.2, the permittee shall conduct a flare design evaluation demonstrating compliance with the criteria set forth by section 14.1.2. The flare design evaluation shall include, but not limited to, net heat value calculations, exit (tip) velocity calculations, and all supporting concentration calculations. The permittee may elect to demonstrate compliance with the flare design criteria requirements of section 14.1.2 by complying with the compliance assessment testing requirements of section 14.3.3.
[45CSR§30-5.1.c.]

14.3.3. The Director may require the permittee to conduct a flare compliance assessment to demonstrate compliance with the flare requirements of section 14.1.2 and the flare design evaluation. This compliance assessment testing shall be conducted in accordance with Test Method 18 for organics and Test Method 2, 2A, 2C, or 2D in appendix A to 40 CFR part 60, as appropriate, or other equivalent testing approved in writing by the Director. Also, Test Method 18 may require the permittee to conduct Test Method 4 in conjunction with Test Method 18.
[45CSR§30-5.1.c.]

14.4. Recordkeeping Requirements

14.4.1. For the purpose of demonstrating compliance with section 14.1.2.c and 14.2.1, the permittee shall maintain records of the times and duration of all periods which the pilot flame was absent. Said records shall be maintained on-site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review.
[45CSR§30-5.1.c.]

14.4.2 For the purpose of demonstrating compliance with section 14.1.2 and 14.3.2, the permittee shall maintain a record of the flare design evaluation. The flare design evaluation shall include, net heat value calculations, exit (tip) velocity calculations, and all supporting concentration calculations and other related information requested. Said records shall be maintained on-site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review.
[45CSR§30-5.1.c.]

14.4.3 For the purpose of demonstrating compliance with the requirements set forth in sections 14.1.2 and 14.3.3., the permittee shall maintain records of testing conducted in accordance with 14.3.3. Said records shall be maintained on-site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review.
[45CSR§30-5.1.c.]

14.4.4. The permittee shall document and maintain the corresponding records specified by the on-going monitoring requirements of 14.2 and testing requirements of 14.3. Said records shall be maintained on-site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review.
[45CSR§30-5.1.c.]

14.4.5. For the purpose of demonstrating compliance with section 14.1.2.b, the permittee shall maintain records of the visible emission opacity tests conducted per Section 14.3.1. Said records shall be maintained on-site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review.
[45CSR§30-5.1.c.]

14.4.6. For the purpose of demonstrating compliance with section 14.1.1.a, the permittee shall maintain a record of all potential to emit (PTE) HAP calculations for the entire facility. These records shall include the natural gas compressor engines and ancillary equipment. Said records shall be maintained on-site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review.
[45CSR§30-5.1.c.]

14.4.7. The permittee shall maintain a record of the wet natural gas throughput through the dehydration system. Said records shall be maintained on-site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review.
[45CSR§30-5.1.c.]

14.4.8. The permittee shall maintain records of monthly hours of operation for the Glycol Dehydration Unit. Said records shall be maintained on-site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review.
[45CSR§30-5.1.c.]

14.4.9. For the purpose of demonstrating compliance with section 14.1.1.b, the permittee shall maintain a record of actual average Benzene emissions calculations for the entire facility. These records shall include the natural gas compressor engines and ancillary equipment. Said records shall be maintained on-site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review.
[45CSR§30-5.1.c.]

14.5. Reporting Requirements

14.5.1. If permittee is required by the Director or chooses to demonstrate compliance with section 14.3.3, then the permittee shall submit a testing protocol thirty (30) days prior to testing and shall submit a notification of the testing date fifteen (15) days prior to testing. Also, the permittee shall submit the testing results within sixty (60) days of testing and provide all supporting calculations and testing data.
[45CSR§30-5.1.c.]

14.5.2. Any deviation(s) of the allowable visible emission requirement for any emission source discovered during observations using 40CFR Part 60, Appendix A, Method 9 or 22 shall be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days of the occurrence and shall

include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned. **[45CSR§30-5.1.c.]**

14.5.3. Any deviation(s) of the flare design and operation criteria in Section 14.1.2 shall be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days of discovery of such deviation.
[45CSR§30-5.1.c.]

15.0 Natural Gas Transmission and Storage Facilities which are major sources of HAPs subject to 40 C.F.R. 63 Subpart HHH

15.0.1. The provisions of 40 C.F.R. Part 63 Subpart HHH applicable to the emission unit are specified in the Emission Units Table in Section 1.0.

16.0 Natural Gas Production Facilities subject to 40 C.F.R.63 Subpart HH

16.0.1. The provisions of 40 C.F.R. Part 63 Subpart HH applicable to the emission unit are specified in the Emission Units Table in Section 1.0.

17.0 Boilers and Process Heaters subject to 40 C.F.R.63 Subpart DDDDD

17.0.1. The boiler or process heater shall comply with all applicable requirements for existing affected sources, pursuant to 40 C.F.R. 63, Subpart DDDDD, "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" no later than the existing source compliance date of March 21, 2014, or as amended by US EPA.

If required to submit a Notification of Compliance Status (NOCS) pursuant to 40 C.F.R. 63, Subpart DDDDD, the permittee shall also submit a complete application for significant modification to the Title V permit to incorporate the specific requirements of the rule no later than the maximum time allowed for the NOCS submittal in 40 C.F.R. §63.7545(e).

If requested, this Title V permitting deadline may be changed upon written approval by the Director. The permittee shall request the change in writing at least 30 days prior to the application due date.

[40 C.F.R. 63, Subpart DDDDD, 45CSR§30-6.5.b.]

18.0 Small Industrial-Commercial-Institutional Steam Generating Units subject to 40 C.F.R.60 Subpart Dc

18.0.1. The provisions of 40 C.F.R. Part 60 Subpart Dc applicable to the emission unit are specified in the Emission Units Table in Section 1.0.

19.0 Boiler subject to 40 C.F.R. 63 Subpart JJJJJJ

19.0.1. The provisions of 40 C.F.R. Part 63 Subpart JJJJJJ applicable to the emission unit are specified in the Emission Units Table in Section 1.0.

20.0 45CSR40 requirements applicable to Stationary Internal Combustion Engines

20.0.1. The provisions of 45CSR40 applicable to Stationary Internal Combustion Engines are specified in the Emission Units Table in Section 1.0.

21.0 45CSR13, 45CSR14, and Consent Order Requirements

Permit R14-0013 ~~D~~E (see Appendix A)

Consent Order CO-R1-C-2007-4A (2005) (see Appendix B)

22.0 Other Specific Requirements

22.1. Limitations and Standards

22.1.1. None

22.2. Monitoring Requirements

22.2.1. The permittee shall employ automatic control systems on the compressor engine No. 10 (Emission Unit ID 002-10) that will continuously monitor and control key engine operating parameters. These parameters include engine horsepower, speed, air manifold temperature, and fuel flow. These values are then used to determine the air manifold pressure that is required to achieve the specified air/fuel ratio and emission rate. As engine operating conditions change, the control system adjusts air manifold pressure to continuously maintain the required emission levels.
[45CSR§30-5.1.c]

22.3. Testing Requirements

22.3.1. Compliance with the NO_X and CO emission limits set forth in R14-0013 ~~D~~E, condition 4.1.~~5~~3, shall be determined by conducting an emissions stack test of the Clark TLAD-10 engine identified as Source E-10, at least once during the Title V permit term, but, at least 180 days prior to the Title V permit expiration.
[45CSR§30-5.1.c]

22.4. Recordkeeping Requirements

22.4.1. None.

22.5. Reporting Requirements

22.5.1. None.

23.0 Permit Shield

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

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

a. 45CSR4 shall not apply to the following sources of objectionable odor until such time as feasible control methods are developed: Internal combustion engines. **[45CSR§4-7.1 State-Enforceable only]**

24.0 Compliance Plan

None.

APPENDIX A

West Virginia Department of Environmental Protection

Earl Ray Tomblin
Governor

Division of Air Quality

Randy C. Huffman
Cabinet Secretary

Permit to Modify

R14-0013E

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§22-5-1 et seq.) and 45 C.S.R. 13 – Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation. The permittee identified at the above-referenced facility is authorized to construct the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Issued to:
Columbia Gas Transmission LLC
Lost River Compressor Station
031-00002

William F. Durham
Director

Issued: May 11, 2016

This permit will supercede and replace Permit R14-0013D issued on May 31, 2013.

Facility Location:	Mathias, Hardy County, West Virginia
Mailing Address:	1700 MacCorkle Avenue, SE, Charleston, WV 25314
Facility Description:	Transmission Station for a natural gas pipeline system
NAICS Codes:	486210
UTM Coordinates:	685.5 km Easting • 4,305.1 km Northing • Zone 17
Permit Type:	Modification
Description of Change:	Addition of two (2) new Solar Mars 100 turbines, one (1) process heater, 26 catalytic heaters and the removal of one (1) existing Clark HRA-8T Compressor engine. Additionally, the synthetic minor limit on the two (2) existing Solar 70 turbines for GHG will be removed.

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. Changes authorized by this permit must also be incorporated into the facility's Title V operating permit. Commencement of the operations authorized by this permit shall be determined by the appropriate timing limitations associated with Title V permit revisions per 45CSR30.

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1.0. Emission Units

Source ID	Emission Point ID	Description	Make/Model	Design Capacity	Installed (year)
002-01(1)	E01	Compressor Engine No. 1	Clark HRA-8T	1,320 hp	1953
002-07	E07	Compressor Engine No. 7	Clark TLA-8	2,700 hp	1969
002-08	E08	Compressor Engine No. 8	Clark TLA-8	2,700 hp	1969
002-09	E09	Compressor Engine No. 9	Clark TLA-8	2,700 hp	1970
002-10	E10	Compressor Engine No. 10	Clark TLAD-10	4,640 hp	1991
002-12	G3	Emergency Generator #2	Waukesha VGF48GL	1,063 hp	2009
002-13	E11	Compressor Engine No. 11	Caterpillar G3616	4,735 hp	2009
003-01	T01	Turbine #1	Solar Taurus 70	9,236 hp @ 59°F 11,557 hp @ 0°F	2013
003-02	T02	Turbine #2	Solar Taurus 70	9,236 hp @ 59°F 11,557 hp @ 0°F	2013
001-04	HTR2	Fuel Heater #2	n/a	0.75 MMBtu/hr	2013
001-05	HTR3	Fuel Heater #3	n/a	0.25 MMBtu/hr	2013
001-06	SH1	40 Catalytic Heaters	n/a	2.88 MMBtu/hr(2)	2013
003-03	T03	Turbine #3	Solar Mars 100	15,067 hp @ 32°F	2017
003-04	T04	Turbine #4	Solar Mars 100	15,067 hp @ 32°F	2017
001-07	HTR4	Fuel Gas Heater	n/a	0.50 MMBTU/hr	2017
001-08	SH2	26 Catalytic Heaters	n/a	1.34 MMBtu/hr(2)	2017
001-09	SH3	22 Catalytic Heaters	n/a	0.66 MMBtu/hr(2)	2013

(1) Engine shall be removed from service
(2) Listed design capacity is aggregate for all heaters.

2.0. General Conditions

2.1. Definitions

2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.

2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.

2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.12.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.

2.2. Acronyms

CAAA	Clean Air Act Amendments
CBI	Confidential Business Information
CEM	Continuous Emission Monitor
CES	Certified Emission Statement
C.F.R. *or* CFR	Code of Federal Regulations
CO	Carbon Monoxide
C.S.R. *or* CSR	Codes of State Rules
DAQ	Division of Air Quality
DEP	Department of Environmental Protection
$dscm$	Dry Standard Cubic Meter
FOIA	Freedom of Information Act
HAP	Hazardous Air Pollutant
HON	Hazardous Organic NESHAP
HP	Horsepower
lbs/hr	Pounds per Hour
LDAR	Leak Detection and Repair
M	Thousand
MACT	Maximum Achievable Control Technology
MDHI	Maximum Design Heat Input
MM	Million
MMBtu/hr *or* mmbtu/hr	Million British Thermal Units per Hour
MMCF/hr *or* mmcf/hr	Million Cubic Feet per Hour
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAPS	National Emissions Standards for Hazardous Air Pollutants
NO_X	Nitrogen Oxides
NSPS	New Source Performance Standards
PM	Particulate Matter
$PM_{2.5}$	Particulate Matter less than 2.5 µm in diameter
PM_{10}	Particulate Matter less than 10µm in diameter
Ppb	Pounds per Batch
Pph	Pounds per Hour
Ppm	Parts per Million
Ppmv or ppmv	Parts per Million by Volume
PSD	Prevention of Significant Deterioration
Psi	Pounds per Square Inch
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
TAP	Toxic Air Pollutant
TPY	Tons per Year
TRS	Total Reduced Sulfur
TSP	Total Suspended Particulate
USEPA	United States Environmental Protection Agency
UTM	Universal Transverse Mercator
VEE	Visual Emissions Evaluation
VOC	Volatile Organic Compounds
VOL	Volatile Organic Liquids

2.3. Authority

This permit is issued in accordance with West Virginia Air Pollution Control Act 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;*

2.3.2. 45CSR14 – *Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration;*

2.4. Term and Renewal

2.4.1. This permit supersedes and replaces previously issued Permit R14-0013D. 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 other 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 Applications R14-0013 through R14-0013E, 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 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 as defined in and according to the procedures specified in 45CSR14 or 45CSR19, as appropriate.
[45CSR§13-5.1]

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; and

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 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 emissions, 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§34]

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 45CSR11.
[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.

d. The permittee shall submit a report of the results of the stack test within sixty (60) days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1.; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:

1. The permit or rule evaluated, with the citation number and language;
2. The result of the test for each permit or rule condition; and,
3. A statement of compliance or noncompliance with each permit or rule condition.

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

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:	**If to the US EPA:**
Director	Associate Director
WVDEP	Office of Air Enforcement and Compliance Assistance (3AP20)
Division of Air Quality	U.S. Environmental Protection Agency
601 57th Street	Region III
Charleston, WV 25304-2345	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 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. Only those emission units as identified in Table 1.0 are authorized by this permit. In accordance with the information filed in Permit Applications R14-0013E, the emission units identified under Table 1.0 of this permit shall be installed, maintained, and operated so as to minimize any fugitive escape of pollutants and shall not exceed the listed design capacities.

4.1.2. The facility shall employ three (3) Clark TLA-8 natural-gas fired compressor engines. The operation of these engines shall not exceed the following maximum combined operating and emission limitations:

a. The engines shall be limited to the maximum operating capacities as shown in Table 4.1.2(a).

Table 4.1.2(a)

Engine No. - Source ID -	Maximum Engine Rating[1] (hp)	Total Combined Annual Operating Limit (bhp-hr/yr)
No. 7 - 002-07 -	2,700	70,956,000
No. 8 - 002-08 -	2,700	
No.9 - 002-09 -	2,700	

(1) Maximum rating based on standard operating conditions. Under ambient operating conditions (less than 40°F), the maximum peak rating of each engine is 3,015 horsepower.

b. Emissions released from the engines shall not exceed the maximum individual hourly and total combined annual emission limits set forth in Table 4.1.2(b).

Table 4.1.2(b)

Emission Point ID	Pollutant	Emission Limits	
		Individual Hourly (g/hp-hr)	Total Combined Annual (tons/yr)
E07, E08, E09	NO_X	9.5	562.5
	CO	3.1	203.4

4.1.3. The facility shall employ one (1) Clark TLAD-10 natural-gas fired compressor engine. The operation of this engine shall not exceed the following maximum operating and emission limitations:

a. The engines shall be limited to the maximum operating capacities as shown in Table 4.1.3(a).

Table 4.1.3(a)

Engine No. - Source ID -	Maximum Engine Rating (hp)
No. 10 - 002-10 -	4,640

b. Emissions released from the engine shall not exceed the maximum hourly and annual emission limits set forth in Table 4.1.3(b).

Table 4.1.3(b)

Emission Point ID	Pollutant	Emission Factor (g/hp-hr)	Maximum Emission Rates	
			Hourly (lb/hr)	Annual (ton/yr)
E10	NO_X	2.0	20.5	89.6
	CO	2.1	22.5	98.5
	VOC	0.7	8.2	35.8
	SO_2	0.003	0.1	0.2
	PM(1)	0.19	1.9	8.3

(1) All particulate matter emissions assumed to be less than PM2.5. Includes condensables.

4.1.4. The facility shall employ one (1) Caterpillar G3616 natural-gas fired compressor engine. The operation of this engine shall not exceed the following maximum operating and emission limitations:

a. The engine shall be limited to the maximum operating capacities as shown in Table 4.1.4(a).

Table 4.1.4(a)

Engine No. - Source ID -	Maximum Engine Rating (hp)
No. 11 - 002-13 -	4,735

b. Emissions released from the engine shall not exceed the maximum hourly and annual emission limits set forth in Table 4.1.4(b).

Table 4.1.4(b)

Emission Point ID	Pollutant	Emission Factor (g/hp-hr)	Maximum Emission Rates Hourly (lb/hr)	Maximum Emission Rates Annual (ton/yr)
E11	NO_X	0.70	7.30	32.00
	CO	0.63	6.52	28.60
	VOC	0.16	1.70	7.42
	SO_2	0.0024	0.02	0.11
	PM(1)	0.034	0.40	1.60
	Formaldehyde	0.114	1.19	5.22

(1) All particulate matter emissions assumed to be less than $PM_{2.5}$. Includes condensables.

c. The permittee shall install, maintain and operate an oxidation catalyst on engine E11 to reduce CO, VOC, and formaldehyde emissions. The oxidation catalyst shall be utilized at all times the engine is operating.

d. Pursuant to 40 CFR 63, Subpart ZZZZ, the permittee shall:

(1) Reduce uncontrolled CO emissions by 93 percent or more; or

(2) Limit concentration of formaldehyde in the exhaust to 14 ppmvd or less at 15 percent O_2.
[40 CFR §63.6600 - Table 2a]

e. Pursuant to 40 CFR 63, Subpart ZZZZ, the permittee shall, with respect to the oxidation catalyst:

(1) Maintain the catalyst so that the pressure drop across the catalyst does not change by more than two inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and

(2) Maintain the temperature of the exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.
[40 CFR §63.6600 - Table 2b]

f. The permittee shall regularly inspect, maintain, and repair engine E11 and its oxidation catalyst to assure proper operation. The engine and the oxidation catalyst shall be operated, maintained and serviced per manufacturer recommendations. Based on manufacturer recommendations, the permittee must either maintain on-site spare parts for use in immediate repair or participate in a quick turn-around catalyst element cleaning/loaner program with a catalyst supplier.

g. The permittee shall comply with all applicable requirements of NSPS for Stationary Compression Ignition Internal Combustion Engines specified in 40 CFR Part 60, Subpart JJJJ.

4.1.5. The facility shall employ two (2) Solar Taurus 70 and two (2) Solar Mars 100 natural-gas fired turbines. The operation of these turbines shall not exceed the following maximum operating and emission limitations:

a. The turbines shall be limited to the maximum operating capacities as shown in Table 4.1.5(a).

Table 4.1.5(a)

Turbine No. - Source ID -	Maximum Turbine Rating (hp)
No. 1 - 003-01 -	9,236 hp @ 59°F 11,557 hp @ 0°F
No. 2 - 003-02 -	9,236 hp @ 59°F 11,557 hp @ 0°F
No. 3 - 003-03 -	15,067 hp @ 32°F
No. 4 - 003-04 -	15,067 hp @ 32°F

b. Emissions released from the turbines shall not exceed the maximum individual hourly (per operation mode) and total combined annual emission limits set forth in Table 4.1.5(b) and (c).

Table 4.1.5(b)

Emission Point ID	Pollutant	Maximum Emission Rates					
		Individual Hourly (lb/hr)(1)					Combined Annual (ton/yr)
		Normal Load	Low Temp	Very Low Temp	Low-Load	Startup/ Shutdown (1)	
T01, T02	NO_X	5.04	15.00	42.84	24.56	2.40	47.57
	CO	5.12	21.73	32.60	1,708.23	214.60	103.01
	VOC	0.73	1.55	1.55	24.40	3.05	7.36
	SO_2	4.70	4.70	4.70	4.70	4.70	0.52
	PM(2)	0.61	0.61	0.61	0.61	0.61	5.38
	CO_2e	10,904	10,904	10,904	10,904	10,904	95,518
	Formaldehyde	0.06	0.06	0.06	0.06	0.06	0.52

(1) Operating modes are defined under 4.2.3(a). Startup/shutdown emissions are per cycle and not lb/hr.
(2) All particulate matter emissions assumed to be less than $PM_{2.5}$. Includes condensables.

Table 4.1.5(c)

Emission Point ID	Pollutant	Maximum Emission Rates				
		Individual Hourly (lb/hr)(1)				Combined Annual (ton/yr)
		Normal Load	Low Temp	Low-Load	Startup/ Shutdown (1)	
T03, T04	NO_X	6.96	21.16	16.10	3.10	64.52
	CO	7.07	30.67	653.41	272.70	96.29
	VOC	0.81	1.75	7.47	3.12	7.62
	SO_2	7.36	7.36	7.36	7.36	0.81
	PM(2)	0.85	0.85	0.85	0.85	7.45
	CO_2e	15,087	15,087	15,087	15,087	132,159
	Formaldehyde	0.09	0.09	0.09	0.09	0.80

(1) Operating modes are defined under 4.2.4(a). Startup/shutdown emissions are per cycle and not lb/hr.
(2) All particulate matter emissions assumed to be less than $PM_{2.5}$. Includes condensables.

c. Each Turbine shall be equipped with $SoLoNO_x$™ lean-premixed combustion technology to ensure uniform air/fuel mixture and to prevent formation of NO_x.

d. Pursuant to 40 CFR 60, Subpart KKKK, the permittee meet the following requirements:

(1) You must meet the emission limits for NO_X specified in Table 1 to this subpart.
[40 CFR § 60.4320]

(2) If your turbine is located in a continental area, you must comply with either paragraph (a)(1), (a)(2), or (a)(3) of this section.

(i) You must not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain SO_2 in excess of 110 nanograms per Joule (ng/J) (0.90 pounds per megawatt-hour (lb/MWh)) gross output;

(ii) You must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO_2 /J (0.060 lb SO_2 /MMBtu) heat input. If your turbine simultaneously fires multiple fuels, each fuel must meet this requirement.
[40 CFR § 60.4330]

4.1.6. The Fuel Heaters (001–04, 001-05, 001-07) and the Catalytic Heaters (001-06, 001-08, 001-09) shall operate according to the following requirements:

a. The maximum emissions from Fuel Heater 001-04 shall not exceed the limits given in the following table;

Table 4.1.6(a): Fuel Heater 001-04 Emission Limits

Pollutant	Hourly (lb/hr)	Annual (ton/yr)
CO	0.06	0.27
NO_x	0.07	0.32

b. The maximum emissions from Fuel Heater 001-05 shall not exceed the limits given in the following table;

Table 4.1.6(b): Fuel Heater 001-05 Emission Limits

Pollutant	Hourly (lb/hr)	Annual (ton/yr)
CO	0.02	0.09
NO_x	0.02	0.11

c. The maximum emissions from Fuel Heater 001-07 shall not exceed the limits given in the following table;

Table 4.1.6(c): Fuel Heater 001-07 Emission Limits

Pollutant	Hourly (lb/hr)	Annual (ton/yr)
CO	0.04	0.18
NO_x	0.05	0.21

d. The maximum emissions from the Catalytic Heaters (001-06) shall not exceed the limits given in the following table;

Table 4.1.6(d): Catalytic Heaters (001-06) Emission Limits(1)

Pollutant	Hourly (lb/hr)	Annual (ton/yr)
CO	0.24	1.04
NO_x	0.28	1.24

(1) Both hourly and annual limits are aggregate limits for all 40 Catalytic Heaters.

e. The maximum emissions from the Catalytic Heaters (001-08) shall not exceed the limits given in the following table;

Table 4.1.6(e): Catalytic Heaters (001-08) Emission Limits(1)

Pollutant	Hourly (lb/hr)	Annual (ton/yr)
CO	0.11	0.48
NO_x	0.13	0.57

(1) Both hourly and annual limits are aggregate limits for all 26 Catalytic Heaters.

f. The maximum emissions from the Catalytic Heaters (001-09) shall not exceed the limits given in the following table;

Table 4.1.6(f): Catalytic Heaters (001-09) Emission Limits(1)

Pollutant	Hourly (lb/hr)	Annual (ton/yr)
CO	0.05	0.24
NO_x	0.06	0.28

(1) Both hourly and annual limits are aggregate limits for all 22 Catalytic Heaters.

g. As the annual emission limits given in Table 4.1.6(a-f) are based on operating 8,760 hours/year, there is no limit on the annual hours of operation or fuel usage of the Fuel Heaters or the Catalytic Heaters.

h. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six minute block average.
[45CSR§2-3.1.]

4.1.7. The Waukesha VGF48GL Emergency Generator (002-12) shall operate according to the following requirements:

a. The maximum emissions from 002-12 shall not exceed the limits given in the following table;

Table 4.1.7(a): Emergency Generator 002-12 Emission Limits

Pollutant	Hourly (lb/hr)	Annual (ton/yr)
CO	3.04	0.76
NO_x	4.68	1.17
VOC	0.61	0.15

b. The Emergency Generator shall not operate in excess of 500 hours per year. Compliance with the Maximum Yearly Operation Limitation shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the hours of operation at any given time during the previous twelve consecutive calendar months. **[45CSR§13-5.11.]**

c. The permittee shall maintain on-site verification that the Emergency Generator was manufactured prior to January 1, 2009.

4.1.8. The following conditions and requirements are specific to Heaters (HTR2, HTR3, HTR4):

a. Heaters (HTR2, HTR3, HTR4) shall be designed and constructed with a maximum design heat input of 0.75 MMBtu/hr, 0.25 MMBTU/hr and 0.50 MMBTU/hr respectively. The condition satisfies compliance with the limitation of 45 CSR §2-3.1.
[45 CSR 2A-3.1.a.]

b. For the purpose of complying with Subpart DDDDD of Part 63 as Gas 1 units, the permittee shall perform a tune-up on each heater in accordance with 40 CFR §63.7540(a)(12). The first tune-up shall be completed no later than 61 months after initial start-up of the heater, and thereafter once every 61 months. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup. Such tune-ups shall consist of the following:

i. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (permittee may delay the burner inspection until the next scheduled unit shutdown, but inspected at least once every 72 months). At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment;

ii. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

iii. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (permittee may delay the inspection until the next scheduled unit shutdown);

iv. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NOx requirement to which the unit is subject; and

v. Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer;
[40 CFR §§63.7540(a)(10), (12), and (13)]

4.1.9. **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, Compliance Demonstration, Source-Specific Recording and Reporting Requirements

4.2.1. For the purpose of determining compliance with the operating limits set forth in Section 4.1.2. of this permit, the permittee shall monitor and record the actual brake horsepower-hours generated by each of the permitted engines. The records shall be maintained in a format that demonstrates compliance with the total maximum brake-horsepower hour limits established in Section 4.1.2. of this permit.

4.2.2. For the purpose of demonstrating compliance with the annual emission limits set forth in Section 4.1 of this permit, the permittee shall maintain records of the actual emissions calculated using the actual brake-horsepower hour records of Section 4.2.1 of this permit and the engine specific hourly emission factors. The hourly emission factors used to show compliance for engines E07 - E09 shall be 7.2 g-NOx/bhp-hr and 2.6 g-CO/bhp-hr.

4.2.3. The permittee shall calculate and record, on a monthly and rolling twelve month basis, the emissions of each pollutant limited under Table 4.1.5(b) generated by turbines 003-01 and 003-02. The calculation shall be based on the emission factors used in permit application R14-0013E and the following information:

a. The permittee shall monitor and record the number of hours that the turbines 003-01 and 003-02 operate in the following operational modes:

(1) Normal: ≥50% Load and ≥ 10°F;
(2) Low Temp: < 10°F ≥ -20°F;
(3) Very Low Temp: < -20°F; and
(4) Low-Load: < 50% Load.

b. The permittee shall monitor and record the number of startup/shutdowns of each turbine;

4.2.4. The permittee shall calculate and record, on a monthly and rolling twelve month basis, the emissions of each pollutant limited under Table 4.1.5(c) generated by turbines 003-03 and 003-04. The calculation shall be based on the emission factors used in permit application R14-0013E and the following information:

a. The permittee shall monitor and record the number of hours that the turbines 003-03 and 003-04 operate in the following operational modes:

(1) Normal: > 50% Load and ≥ 0°F;
(2) Low Temp: < 0°F; and
(3) Low-Load: < 50% Load.

b. The permittee shall monitor and record the number of startup/shutdowns of each turbine;

4.2.5. For the purposes of demonstrating compliance with the maximum usage limits set forth in 4.1.7(b), the permittee shall monitor and record the monthly and rolling twelve month hours of operation of the emergency generator.

4.2.6. The permittee shall meet all applicable Monitoring, Compliance Demonstration, Source-Specific Recording and Reporting Requirements as given under 40 CFR 60 Subpart JJJJ, 40 CFR 60, Subpart KKKK and 40 CFR 63, Subpart ZZZZ.

a. 40 C.F.R. 63 Subpart ZZZZ, specifically 40 C.F.R. §§ 63.6595(a)(3), 63.6605, 63.6640. **[G3]**

b. 40 C.F.R. 63 Subpart ZZZZ, specifically 40 C.F.R. §§ 63.6595(a)(3), 63.6600(b) (emission limits in Table 2a, item 2, and the operating limitations in Table 2b, item 1), 63.6605, 63.6635, 63.6640 (Table 6). **[E11]**

c. 40 C.F.R. 60 Subpart JJJJ, specifically 40 C.F.R. § 60.4233(e) & emission limits on Line 5 of Table 1 of 40 C.F.R. 60 Subpart JJJJ, 40 C.F.R. §§ 60.4234, 60.4243(b)(2)(ii), 60.4246. **[E11]**

d. 40 C.F.R. 60 Subpart KKKK, specifically 40 C.F.R. §§60.4300; 60.4305; 60.4320 (NO_x - Table 1, 3rd line: "New turbine firing natural gas"); 60.4330(a)(2)(SO_2); 60.4333(a); 60.4340(a)(NOx annual tests); 60.4360 (sulfur content monitoring); 60.4365(a); 60.4370(b). **[T01-T04]**

4.3. Testing Requirements

4.3.1. For the purpose of demonstrating compliance with the hourly emission limits set forth in Section 4.1.2. of this permit, the permittee shall conduct annual emissions testing for NO_X and CO emissions released from engines No.7 through No. 9 (emission points E07 through E09) using portable emissions analyzers.

Upon utilization of the air-to-fuel ratio monitoring established in Section 4.2.2. of permit R14-0013E, periodic emissions testing shall be performed once every five (5) years. This periodic testing may be performed using portable emissions analyzers.

4.3.2. In addition to the NO_x performance testing as required under 40 CFR 60, Subpart KKKK, within 60 days after achieving full load, but not later than 180 days after initial startup, and at such times thereafter as may be required by the Director, the permittee shall conduct, or have conducted, a performance test on each turbine to determine compliance with the "normal load" CO emission limit specified under Table 4.1.5(b) and (c) and in accordance with 3.3.1. The permittee shall use an appropriate EPA-approved test method as given under 40 CFR 60, Appendix A and approved in writing by the Director in a protocol submitted pursuant to 3.3.1(c). The testing shall take place while the engines are operating at "normal load" as defined under 4.2.3(a) and 4.2.4(a).

4.3.3. In addition to the NO_x performance testing as required under 40 CFR 60, Subpart KKKK, within 60 days after achieving full load, but not later than 180 days after initial startup, and at such times thereafter as may be required by the Director, the permittee shall conduct, or have conducted, a performance test on one (1) of the Solar Mars turbines (T03, T04) to determine compliance with the particulate matter emission limit (including condensables) specified under Table 4.1.5(c) and in accordance with 3.3.1. The permittee shall use an appropriate EPA-approved test method for particulate matter including condensables. The permittee shall submit a testing protocol pursuant to 3.3.1(c). The testing shall take place while the engines are operating at "normal load" as defined under 4.2.3(a) and 4.2.4(a).

4.3.4. The permittee shall meet all applicable testing requirements as given under 40 CFR 60 Subpart JJJJ, 40 CFR 60, Subpart KKKK and 40 CFR 63, Subpart ZZZZ.

a. 40 C.F.R. 63 Subpart ZZZZ, specifically 63.6610 (a) (Table 4), 63.6615 (Table 3, items 1 and 3), 63.6620, 63.6625 ((a), (b) and (h)), 63.6630 (Table 5). **[E11]**

b. 40 C.F.R. 60 Subpart JJJJ, specifically 40 C.F.R. § 60.4244. **[E11]**

c. 40 C.F.R. 60 Subpart KKKK, specifically 40 C.F.R. § 60.4400. **[T01-T04]**

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:

a. The equipment involved.

b. Steps taken to minimize emissions during the event.

c. The duration of the event.

d. The estimated increase in emissions during the event.

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

e. The cause of the malfunction.

f. Steps taken to correct the malfunction.

g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

4.4.4. The permittee shall meet all applicable record-keeping requirements as given under 40 CFR 60 Subpart JJJJ, 40 CFR 60, Subpart KKKK and 40 CFR 63, Subpart ZZZZ.

4.4.5. The permittee shall keep the following records in accordance with 40CFR§63.7555. This includes but is not limited to the following information during the tune up as required in Condition 4.1.8.b. and 40 CFR §63.7540:

a. The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater.

b. A description of any corrective actions taken as a part of the tune-up.
[40 CFR §§63.7540(a)(10)(vi) and 63.7555]

4.5. Reporting Requirements

4.5.1. The permittee shall meet all applicable reporting requirements as given under 40 CFR 60 Subpart JJJJ, 40 CFR 60, Subpart KKKK and 40 CFR 63, Subpart ZZZZ.

a. 40 C.F.R. 63 Subpart ZZZZ, specifically 40 C.F.R. 63 Subpart ZZZZ, specifically 40 C.F.R. § 63.6645(f). **[G3]**

b. 40 C.F.R. 63 Subpart ZZZZ, specifically 63.6645, 63.6655 (except (c), (e),(f)), 63.6650 (except (g)). **[E11]**

c. 40 C.F.R. 60 Subpart JJJJ, specifically 40 C.F.R. § 60.4245. **[E11]**

d. 40 C.F.R. 60 Subpart KKKK, specifically 40 C.F.R. § 60.4375; 60.4395. **[T01-T04]**

4.5.2. The permittee shall submit "5-year Compliance Reports" for Heaters (HTR2, HTR3, HTR4) electronically using CEDRI that is accessed through the EPA's Center Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form for this report is not available in CEDRI at the time the report is due, the permittee shall submit the report to the Administrator and Director using the addresses listed in Condition 3.5.3. The first compliance report shall be submitted no later than five years after the initial start-up of the unit and the first date ending on January 31. Subsequent reports shall be submitted once every five years afterwards. Such reports shall contain the information specified in 40 CFR §§63.7550(c)(5) (i)through (iv) and (xiv) which are:

a. Permittee and facility name, and address;

b. Process unit information emission limitations, and operating limitations;

c. Date of report and beginning and ending dates of the reporting period;

d. Include the date of the most recent tune-up for each boiler; and

e. Include the date of the most recent burner inspection if it was not done on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown.

The permittee shall maintain records of such reports in accordance with Condition 3.4.1.
[40CFR §§63.7550(b), (b)(1), (c)(1), & (c)(5)(i) though (iii) and (xiv), and (h)(3)]

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.

Signature[1] (please use blue ink) _____ Responsible Official or Authorized Representative _____ Date

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

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 U.S. EPA); or

d. The designated representative delegated with such authority and approved in advance by the Director.

APPENDIX B

west virginia department of environmental protection

Division of Air Quality
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Phone 304/926-0475 • FAX: 304/926-0479

Joe Manchin III, Governor
Stephanie R. Timmermeyer, Cabinet Secretary
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COMPLIANCE ORDER
ISSUED UNDER THE
AIR POLLUTION CONTROL ACT
WEST VIRGINIA CODE, CHAPTER 22, ARTICLE 5, SECTION 4

TO: Mr. Victor M. Gaglio
Senior Vice President of Operations
Columbia Gas Transmission Corporation
1700 MacCorkle Avenue, SE
Charleston, WV 25314

DATE: March 1, 2007

ORDER NO.: # CO-R1-C-2007-4A (2005)

AFFECTED FACILITIES:
Flat Top Compressor Station - WV ID# 089-00004
Clendenin Compressor Station - WV ID# 039-00048
Hubball Compressor Station - WV ID# 043-00002
Lost River Compressor Station - WV ID# 031-00002
Smithfield Compressor Station - WV ID# 103-00010

INTRODUCTION

This Order is issued to Columbia Gas Transmission pursuant to the authority vested in the Director of the Division of Air Quality (Director) under Chapter 22, Article 5, Section 1 et seq. of the West Virginia Code. Through this Compliance Order, the Director approves an amended NO_X Compliance Plan submitted to the Division of Air Quality by Columbia Gas Transmission. The NO_X Compliance Plan, in conjunction with the provisions of this Order, provide certain methodologies by which Columbia Gas Transmission will achieve and demonstrate required reductions of nitrogen oxides (NO_X) emissions each ozone season beginning in 2007 pursuant to 45CSR§1-90 and Phase II of the NO_X SIP Call, *Interstate Ozone Transport: Response to Court Decisions on the NO_X SIP Call, NO_X SIP Call Technical Amendments, and Section 126 Rules: Final Rule* (21 APR 2004, 69 FR 77). This Compliance Order supersedes Compliance Order No. CO-R1-C-2005-29, issued December 15, 2005.

FINDINGS OF FACT

In support of this Order, the Director hereby finds the following:

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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.

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.

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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