



west virginia department of environmental protection

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**ENGINEERING EVALUATION / FACT SHEET**

**BACKGROUND INFORMATION**

Application No.: R13-2087E  
Plant ID No.: 039-00049  
Applicant: Columbia Gas Transmission, LLC (Columbia Gas)  
Facility Name: Coco Compressor Station  
Location: Elkview, Kanawha County, WV  
NAICS Code: 486210 - Pipeline Transfer of Natural Gas  
Application Type: Modification  
Received Date: February 6, 2015  
Engineer Assigned: John Legg  
Fee Amount: \$2,000.00 (\$1,000.00 for Rule 13 and \$1,000.00 for 40CFR60, Subpart JJJJ)  
Date Received: February 9, 2015  
Complete Date: March 2, 2015 (original legal advertisement affidavit received)  
Due Date: June 2, 2015  
Applicant Ad Date: February 16, 2015  
Newspaper: *The Charleston Gazette*  
UTM's: Easting: 463.5 km      Northing: 4,250.5 km      Zone: 17  
Latitude/Longitude: 38.401773 degrees N; -81,417764 E degrees  
Description: Install one (1) 1,175Hp natural gas-fueled emergency generator/engine set. Retired two (2) existing reciprocating engines/generators (275 hp and 306 hp). Note that the retired generators/engines were grandfathered/not covered under R13-2087D.

On February 6, 2015, Columbia Gas submitted permit modification R13-2087E. On February 9, 2014, the \$2,000.00 application fee (\$1,000.00 Rule 13 modification fee and \$1,000.00 fee for 40CFR60, Subpart JJJJ) was paid and the writer was assigned as the reviewing engineer. On February 16, 2014, the company ran their legal ad in *The Charleston Gazette*. On March 02, 2015, the DAQ received the original affidavit of publication for the legal ad and the application was deemed complete.

R13-2087E retires/removes two existing natural gas-fueled reciprocating engines/generators (G1 at 275 hp and G2 at 306 hp) and installs one new natural gas-fueled reciprocation engine/generator (G3 at 1,175 hp)

<b>Table 1: Net Change in Coco Compressor Station's Potential To Emit Resulting from Permit Modification R13-2087E.</b>								
<b>Source</b>		<b>NOx</b>	<b>CO</b>	<b>VOC</b>	<b>SO2</b>	<b>PM10/ PM2.5</b>	<b>CH2O</b>	<b>Total HAP</b>
Changes in PTE	lb/hr	-9.80	-21.83	-0.10	+0.14	-0.04	+0.35	0.44
	ton/yr	-2.11	-4.89	-0.02	+0.001	-0.01	+0.09	+0.11

## PROCESS DESCRIPTION

Columbia's Coco Station is located in Kanawha County, West Virginia, near the town of Elkview. The station receives natural gas via pipeline from an upstream compressor station, compresses it using reciprocating internal combustion engines (RICE), and transmits it via pipeline to a downstream station. The station is covered by SIC code 4922, operates under permits R13-2087D and Title V Permit No. R13-03900049-2012, and has the potential to operate 7 days per week, 24 hours per day. The station currently consists of:

- Seven (7) natural gas-fueled RICE engines:
  - five (5) 890-hp
  - one (1) 1,100-hp
  - one (1) 4,000-hp
- Two (2) emergency natural gas-fueled generators:
  - one (1) 275-hp
  - one (1) 306-hp
- One (1) 4.2 MM Btu/hr natural gas-fueled boiler,
- Two (2) natural gas-fueled heaters (9.38 MM Btu/hr and 0.09 MM Btu/hr), and
- Numerous insignificant storage tanks of various sizes.

<b>Table 2: Existing Station Potential Annual Emissions (TPY).</b>							
<b>Source</b>	<b>NOx</b>	<b>CO</b>	<b>VOC</b>	<b>SO2</b>	<b>PM10/ PM2.5</b>	<b>*CH2O</b>	<b>Total HAP</b>
Facility-Wide	927.5	75.9	44.1	0.29	17.2	19.2	27.7
* CH2O is the chemical formula for formaldehyde.							

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PROPOSED MODIFICATION

This modification proposes to retire the 275-hp and 306-hp Ingersoll-Rand PVG-6 emergency generators currently located at the facility and replace them with one 1,175-hp Waukesha VGF-P48GL emergency generator. The emissions from the new unit are based on vendor specifications and AP-42 emission factors. Emission estimates are presented in Attachment N to the application and below in this evaluation.

No other changes in station equipment are currently being proposed. The date for starting construction and initial commercial operation is June 2015 (mistakenly and consistently listed as June 2016 in the permit application).

**Table 3: R13-2087E Emission Units Table**  
**(Changes High-lighted in Red)**

Permitted Under & Comments	Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device
R13-2087B	HTR2	H2	Heatec HCI-6010-40-G Regeneration Gas Heater	2005	9.38 MMBtu/hr	N/A
R13-2087D (Omitted in Application R13-2087E)	HTR4	H4	Heat Recovery Corporation Model 4384-22 Natural gas-fueled, direct-fired line heater	2008	38.0 MM Btu/hr	N/A
Not Permitted under Rule 13 <b>To Be Retired</b>	<del>008G1</del>	<del>G1</del>	<del>Reciprocating Engine/Generator; Ingersoll-Rand PVG-6; 4-cycle, rich burn; emergency</del>	<del>1951</del>	<del>275 hp</del>	<del>N/A</del>
Not Permitted under Rule 13 <b>To Be Retired</b>	<del>008G2</del>	<del>G2</del>	<del>Reciprocating Engine/Generator; Ingersoll-Rand PVG-6; 4-cycle, rich burn; emergency</del>	<del>1951</del>	<del>306 hp</del>	<del>N/A</del>
<b>New R13-2087E</b>	<b>008G3</b>	<b>G3</b>	<b>Waukesha VGF-P48GL Emergency Generator #3</b>	<b>2015</b>	<b>1,175 HP</b>	<b>None</b>

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**Table 4: Information on New, Natural Gas-fueled Emergency Generator Engine (008G3).**

Item		Response	Comments	
Emission Unit ID		008G3	G3 - Emission Point ID	
Manufacturer		Waukesha		
Model		VGF-PVG-6		
EPA Emission Regulation	Certified	No	Initial and subsequent performance tests are planned per 40 CFR 60, Subpart JJJJ.	
	Engine Family	Not Applicable	Not Certified	
	Certification Number	Not Applicable	Not Certified	
	Emission Standards (40 CFR 60, Subpart JJJJ)	2.0 (NOx) (g/HP-hr)		160 (NOx) (ppmvd at 15% O <sub>2</sub> )
		4.0 (CO) (g/HP-hr)		540 (CO) (ppmvd at 15% O <sub>2</sub> )
1.0 (VOC) (g/HP-hr) (formaldehyde not included)			86 (VOC) (ppmvd at 15% O <sub>2</sub> ) (formaldehyde not included)	
Item of Interest/Variable		Value	Comments	
Type		Four (4) Stroke/Cycle; Lean Burn		
Engine Speed (rpm)		1,800		
Displacement (cu. in)		2,924		
Compression Ratio		11:1		
Combustion		Lean Burn, Open Chamber		
Air/Fuel Ratio Setting		7.8% O <sub>2</sub>		
Frequency (Hz)		60		
Voltage		480		
Fuel		Natural Gas		
Design Class		4S-LB	4 stroke lean burn	
Power Rating	Output kWe	831	@ Maximum Speed of 1,800 rpm	
	bhp	1,175		
	kVA	1039		
H2S (gr/100 scf)		< 1		

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**Table 4: Information on New, Natural Gas-fueled Emergency Generator Engine (008G3).**

Fuel Use (LHV) (Btu/bhp-hr) (HHV) (Btu/bhp-hr)	6,991 7733	
Fuel Use (scfm)	148.5	8,908 (scfh)
Annual Fuel Use (mmscf/yr)	4.454 (@ 500 hr/yr)	
Maximum Design Heat Input (mm Btu/hr)	9.09	Based on burning natural gas having heat content of 1,020 Btu/scf.
Fuel Heating Value (Btu/scf)	1,020	
Manufacture Date	2015	4/1/15 email from Jim Alexander to writer.
Date Installed	Estimated - Late Summer 2015	
Operating Hours	500	
Emissions Control Device	None	

SITE INSPECTION

The writer did not visit the Coco Station for this modification application (R13-2087E). However, the facility is routinely inspected by DAQ Enforcement. On February 20, 2014, the most recent inspection, DAQ Enforcement Inspector Mike Kolb inspected the facility, found no violations, and gave the facility the inspection code of 30 for incompliance.

Directions (per application, entry 12A, page 2 of 4):

- Located near Elkview, Kanawha County, WV. Traveling from the intersection of State Route 114 and secondary Route 49, proceed 3.4 miles and bear right on Route 49. Go 3.6 miles from the intersection of Routes 47 and 49 and turn left onto secondary County Route 7/1 (Coco Road). Travel approximately 1.5 miles. The station is located on the right side of the road.

UTM coordinates (per application, page 2 of 4, entry 12.E, F, and G):

Northing	4,250.5	KM
Easting	463.5	KM
Zone	17	

Per Columbia Gas's legal advertisement in Attachment P to the application, the latitude and longitude coordinates are:

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38.401773 degrees North (latitude)  
 -81.417764 degrees East (longitude)

**ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER**

Summarized below are the hourly and annual estimated emissions resulting from the installation of the new 1,175 Hp, natural gas-fueled emergency generator engine proposed under Permit Update R13-2087E for Columbia Gas's Coco Compressor Station, Elkview, Kanawha County, WV. The writer reviewed Columbia Gas's emissions calculations found in Attachment N to the permit application and found the calculations to be logical and correct.

<b>Table 5: Hourly and Annual Emissions Resulting from New 1,175 Hp Emergency Generator/Engine.</b>				
Pollutant	Emission Factors	Emissions		Comments
		(lb/hr)	*(TPY)	
NOx (NO + NO2)	2.0 (g/bhp-hr)	5.18	1.30	Generator/Engine Vendor Data
CO	1.3 (g/bhp-hr)	3.37	0.84	Generator/Engine Vendor Data
CO2	433 (g/bhp-hr)	1,121.64	280.41	Generator/Engine Vendor Data
CO2e	117.1 (lb/MM Btu)	1,064	266	40 CFR 98 Subpart C
	463 (g/bhp-hr)	1,199.35	299.84	Generator/Engine Vendor Data
PM <sub>10</sub>	0.010 (lb/MM Btu)	0.09	0.02	AP-42 Table 3.2-2 (7/00) - 4SLB
PM <sub>2.5</sub>	0.010 (lb/MM Btu)	0.09	0.02	AP-42 Table 3.2-2 (7/00) - 4SLB
SO2 (Max. Hourly)	0.0571 (lb/MM Btu)	0.52	-----	20 grains S/ 100 scf
SO2 (Average Annual)	0.000714 (lb/MM Btu)	-----	0.00162	0.25 grains S / 100 scf
VOC	0.04 (g/bhp-hr)	0.10	0.03	Generator/Engine Vendor Data
THC	1.6 (g/bhp-hr)	4.14	1.04	Generator/Engine Vendor Data
NMHC	0.24 (g/bhp-hr)	0.62	0.16	Generator/Engine Vendor Data
NM, NEHC	0.04 (g/bhp-hr)	0.10	0.03	Generator/Engine Vendor Data
CH4	1.36 (g/bhp-hr)	3.52	0.88	Generator/Engine Vendor Data
Formaldehyde	0.05280 (lb/MM Btu)	0.48	0.12	AP-42 Table 3.2-2 (7/00) - 4SLB

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<b>Table 5: Hourly and Annual Emissions Resulting from New 1,175 Hp Emergency Generator/Engine.</b>				
Pollutant	Emission Factors	Emissions		Comments
		(lb/hr)	*(TPY)	
	0.19 (g/bhp-hr)	0.49	0.12	Generator/Engine Vendor Data
Total HAPs	0.07220 (lb/MM Btu)	0.66	0.16	AP-42 Table 3.2-2 (7/00) - 4SLB

\* Based on operating the generator a maximum of 500 hours per year.

<b>Table 6: Station Potential Annual Emission (TPY) After R13-2087E.</b>								
Source	NOx	CO	CO <sub>2</sub> E	VOC	SO <sub>2</sub>	PM <sub>10</sub> / PM <sub>2.5</sub>	CH <sub>2</sub> O	Total HAP
Facility-Wide (R13-2087D)	927.5	75.9	47,794	44.1	0.29	17.2	19.2	27.7
Retire G1	-1.61	-2.71	-85.34	-0.02	-0.001	-0.03	-0.03	-0.05
Retire G2	-1.79	-3.02	-94.96	-0.02	-0.001	-0.02	-0.02	-0.03
Add G3	+1.30	+0.84	+266	+0.03	+0.002	+0.02	+0.12	+0.16
Changes in PTE	-2.11	-4.89	+86	-0.02	+0.000	-0.01	+0.09	+0.11
Facility-Wide (R13-2087E)	925.37	71.02	47,880	44.13	0.29	17.22	19.26	27.85

<b>Table 7: Station Potential Hourly Emission (lb/hr) After R13-2087E.</b>								
Source	NOx	CO	CO <sub>2</sub> E	VOC	SO <sub>2</sub>	PM <sub>10</sub> / PM <sub>2.5</sub>	CH <sub>2</sub> O	Total HAP
Facility-Wide (R13-2087D)	249.03	43.65	8820	6.85	4.31	2.88	3.17	4.37
Retire G1	-7.09	-11.93	-375	-0.09	-0.18	-0.06	-0.07	-0.10
Retire G2	-7.89	-13.27	-418	-0.11	-0.20	-0.07	-0.07	-0.12
Add G3	+5.18	+3.37	+1,064	+0.10	+0.52	+0.09	+0.49	+0.66
Changes in PTE	-9.80	-21.83	+271	-0.10	+0.14	-0.04	+0.35	0.44

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<b>Table 7: Station Potential Hourly Emission (lb/hr) After R13-2087E.</b>								
<b>Source</b>	<b>NOx</b>	<b>CO</b>	<b>CO<sub>2</sub>E</b>	<b>VOC</b>	<b>SO<sub>2</sub></b>	<b>PM<sub>10</sub>/ PM<sub>2.5</sub></b>	<b>CH<sub>2</sub>O</b>	<b>Total HAP</b>
Facility-Wide (R13-2087E)	239.23	21.82	9,091	6.75	4.45	2.84	3.52	4.81

## REGULATORY APPLICABILITY

Columbia Gas's Coco Compressor Station is a major source for NOx estimated at 927.5 TPY and Hazardous Air Pollutants (HAPs): greater than 10 TPY for an individual HAP (formaldehyde estimated at 19. TPY ) and greater than 25 TPY of aggregated HAPs (estimated at 27.9 TPY) under Title V and Prevention of Significant Deterioration (PSD) rules.

The new 1,175 hp natural gas-fueled reciprocating compressor engine/generator (GN-4) was added to permit R13-2087E in sections 5.0, 6.0 (40CFR60 Subpart JJJJ) and 7.0 (40CFR63 Subpart ZZZZ).

Only the rules related to the changes made under this modification are discussed below. Please see the previous engineering evaluations for further discussion of the rules applicable to this facility.

**45 CSR 13 "Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, Permission to Commence Construction, and Procedures for Evaluation"**

Columbia's Coco Compressor Station is a stationary source under Rule 13, Section 2.24.a. Before this modification, the facility operated under construction permit R13-2087D.

Because the potential increase in emissions from the proposed modification do not exceed PSD significance levels, the modification is classified as a minor modification with respect to PSD and is subject to the permitting requirements of 45 CSR 13.

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Potential Emissions from Proposed New Equipment (tpy).									
Source	Operating Mode	Hr/Yr	NOx	CO	CO2e	PM10	PM2.5	VOC	SO2
G3 - Emerg. Gen.	Normal	500	1.30	0.84	266	0.02	0.02	0.03	0.002
	PSD Significance Level		40	100		15	10	40	40

Columbia Gas submitted a complete application, published a Class I legal advertisement to notify the public, and paid the appropriate permitting fees: \$1,000.00 for Rule 13 review and \$1,000.00 for 40 CFR 60, Subpart JJJJ review.

**45CSR16 “Standards of Performance for New Stationary Sources”**

This rule establishes and adopts standards of performance for new stationary sources promulgated by the United States Environmental Protection Agency pursuant to section 111(b) of the federal Clean Air Act, as amended. This rule codifies general procedures and criteria to implement the standards of performance for new stationary sources set forth in 40 CFR Part 60. The Secretary hereby adopts these standards by reference. The Secretary also adopts associated reference methods, performance specifications and other test methods which are appended to these standards.

NSPS apply to new, modified or reconstructed stationary sources meeting the criteria established in 40 CFR Part 60.

**40CFR60,  
Subpart JJJJ**

**“Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (SI ICE)”**

NSPS Subpart JJJJ applies to stationary spark ignition engine manufactures and owners/operators. For natural gas-fired emergency engines manufactured after January 1, 2009, the applicable emission limits for engines greater than 130 hp rated capacity are:

- For NOx, the limit is 2.0 grams per horsepower-hour (g/hp-hr) or 160 ppmvd at 15 percent O<sub>2</sub>;
- For CO, the limit is 4.0 g/hp-hr or 540 ppmvd at 15 percent O<sub>2</sub>; and

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- For VOC, the limit is 1.0 g/hp-hr or 86 ppmvd at 15 percent O<sub>2</sub>.

Because the new generator engine will not be a certified engine, performance testing per 40 CFR 60.4244 will be conducted initially and every 8,760 hours of operation or 3 years, whichever comes first.

The proposed emergency engine will be subject to Subpart JJJJ limits for engines greater than 130 hp. Based on manufacturer's data supplied by Columbia in Appendix N of the application, the engine will comply with these emission limits.

45CSR30

**"Requirements for Operating Permits"**

The facility is a Title V source, operating under Title V Permit No. R30-03900049-2012. Columbia's application package contained Attachment S, "Title V Permit Revision Information" which will enable the DAQ to modify the station's Title V permit to reflect the changes proposed in R13-2087E.

45 CSR 34

**"Emission Standards for Hazardous Air Pollutants for Source Categories Pursuant to 40 CFR, Part 63"**

This rule establishes and adopts a program of national emission standards for hazardous air pollutants (NESHAPS) and other regulatory requirements promulgated by the United States Environmental Protection Agency pursuant to 40 CFR Parts 61, 63 and section 112 of the federal Clean Air Act, as amended (CAA). This rule codifies general procedures and criteria to implement emission standards for stationary sources that emit (or have the potential to emit) one or more of the eight substances listed as hazardous air pollutants in 40 CFR §61.01(a), or one or more of the substances listed as hazardous air pollutants in section 112(b) of the CAA. The Secretary hereby adopts these standards by reference. The Secretary also adopts associated reference methods, performance specifications and other test methods which are appended to these standards.

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40CFR63,  
Subpart ZZZZ

“National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combust Engines”

Subpart ZZZZ establishes national emission limitations and operating limitations for HAPs emitted from stationary RICE located at major and area sources of HAP emissions. The subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

Columbia’s Coco Station is classified as a major source of HAP emissions (individual HAP with potential emissions greater than 10 ton/yr; aggregated HAP with potential emissions greater than 25 ton/yr) and will remain so after this modification.

The proposed emergency generator is subject to the NESHAP for stationary RICE. The proposed engine is a 1,175-hp emergency generator which will not, and is not contractually obligated to be available for more than 15 hours per calendar year for emergency demand response programs and voltage deviation as described in 40 CFR 63.6640 (f) (2) (ii) and (iii). As a new emergency stationary RICE with a site rating greater than 500 brake horsepower at a major source of HAPs which does not operate for these purposes, the proposed engine does not have to meet the requirements of Subpart ZZZZ and Subpart A except for the initial notification requirements in 40 CFR 63.6645(f).

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

Various non-criteria regulated pollutants are emitted from the combustion of natural gas. Columbia Gas’s Coco Compressor station is an existing major source of HAPs. The increases in HAP emissions proposed under this modification, however, are estimated to be extremely small: +0.09 TPY formaldehyde; and +0.11 TPY aggregated HAPs.

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## AIR QUALITY IMPACT ANALYSIS

Emissions resulting from this modification are estimated to decrease or increase only slightly. For that reason no air modeling study was conducted for the source.

Source	Annual Emissions Changes (TPY)							
	NO <sub>x</sub>	CO	CO <sub>2</sub> E	VOC	SO <sub>2</sub>	PM <sub>10</sub> /PM <sub>2.5</sub>	CH <sub>2</sub> O	Total HAP
Annual Emissions Changes Resulting from Implementing Permit Modification R13-2087E	-2.11	-4.89	+86	-0.02	+0.000	-0.01	+0.09	+0.11

## MONITORING OF OPERATIONS

The new emergency generator will be operated in such a manner as to be considered an emergency stationary engine under 40 CFR 60, Subpart JJJJ.

To demonstrate compliance, Columbia will record monthly operating hours. This monthly record will be used to track 12-month rolling operating hours. The 12-month rolling operating hours will be reported to the state as part of the Station's semi-annual monitoring report.

Records for the emergency generator will include the hours and reason for operation, a maintenance plan and records of maintenance, and records of performance testing to demonstrate compliance with 40 CFR 60 Subpart JJJJ. The engine will be maintained and operated in a manner consistent with good air pollution control practices for minimizing emissions.

Because the new generator engine will not be a certified engine, performance testing per 40 CFR 60.4244 will be conducted initially and every 8,760 hours of operation or 3 years, whichever comes first.

Columbia will submit an initial notification and performance test results as required by 40 CFR 60.4245.

The new generator engine will be subject to limited requirements under 40 CFR 63, Subpart ZZZZ. Columbia will comply with this subpart by submitting the initial notification per 40 CFR Part 63.6645(f).

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CHANGES TO PERMIT

The changes made to permit R13-2087D to arrive at permit R13-2087E are detailed in **RED** in the compare file which can be found in Attachment A to this evaluation.

RECOMMENDATION TO DIRECTOR

Columbia Gas's request for a modification permit to add one (1) 1,175 Hp, natural gas-fueled emergency generator and to retire two (2) other 275 Hp and 306 Hp natural gas-fueled emergency generators at their Coco Compressor Station located near Elkview, Kanawha County, WV meets the requirements of all applicable rules and therefore should be granted said modification permit (R13-2087E).

  
John Legg, Permit Writer

  
May 6, 2015

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# ATTACHMENT A

## WordPerfect Document Compare Summary

Original document: Q:\AIR\_QUALITY\LEGG\Columbia Gas Transmission Corporation\2087E\039-00049\_PERM\_13-2087D.wpd

Revised document: @PFDesktop\MyComputer\Q:\AIR\_QUALITY\LEGG\Columbia Gas Transmission Corporation\2087E\039-00049\_PERM\_13-2087E.wpd

Deletions are shown with the following attributes and color:

~~Strikeout~~, **Blue** RGB(0,0,255).

Deleted text is shown as full text.

Insertions are shown with the following attributes and color:

Double Underline, **Redline**, **Red** RGB(255,0,0).

The document was marked with 69 Deletions, 74 Insertions, 0 Moves.

Compare R13-2087E to R13-2087D

*West Virginia Department of Environmental Protection*

*Joe Manchin, III  
Governor*

*Division of Air Quality*

*Randy C. Huffman  
Cabinet Secretary*

# Permit to ~~Administratively~~ Update Modify



**R13-2087**~~DE~~E

*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 facility listed below 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  
Coco Compressor  
039-00049**

---

*John A*William F. Benedict*Durham*  
Director

*Issued: June 5, 2008* DRAFT • *Effective: June 5, 2008* DRAFT

This permit will supersede and replace Permit ~~R13-2087E~~ R13-2087D approved on June 5, 2008.

Facility Location: Elkview, Kanawha County, West Virginia

Mailing Address: 7 Coco Road, Elkview, WV 25071

Facility Description: Natural gas compressor station.

SIC Codes: 4922

NAICS Code: 486210

UTM Coordinates: 463.605 km Easting • 4250.605 km Northing • Zone 17

Lat/Long Coordinates:

Latitude: 38.401773; Longitude: - 81.417764

Permit Type: ~~Class II Administrative Update~~ Modification

Description of Change:

~~Installation a new natural gas-fueled, direct-fired line heater. The new line heater (HFR4) will fire 37,255 ft<sup>3</sup>/hr of natural gas (38.0 MM Btu/hr) and will be used to raise the gas temperature above the gas condensation temperature (dew point) before sending the gas to downstream equipment. Installation of the heater will create new emission point H4. of one emergency generator, retiring of two emergency generators.~~

*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.*

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

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**1.0 Emission Units**

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
HTR2	H2	Heatec HCI-6010-40-G <u>Regenerative Regeneration Gas Heater</u>	2005	9.38 MMBtu/hr	N/A
<del>HTR4H4He</del> at Recovery Corporation Model 4384-22 Natural gas-fueled, direct-fired line heater <del>008G</del> <del>3</del>	<u>G3</u>	<u>Waukesha VGF-P48GL</u> <u>Emergency Generator #3</u>	2008 <u>15</u>	<del>38.0 MM</del> Btu/hr <u>1,175 HP</u>	<del>N/A</del> <u>None</u>

**2.0. General Conditions**

**2.1. Definitions**

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

**2.2. Acronyms**

<b>CAAA</b>	Clean Air Act Amendments	<b>PM<sub>2.5</sub></b>	Particulate Matter less than 2.5µm in diameter
<b>CBI</b>	Confidential Business Information	<b>PM<sub>10</sub></b>	Particulate Matter less than 10µm in diameter
<b>CEM</b>	Continuous Emission Monitor	<b>Ppb</b>	Pounds per Batch
<b>CES</b>	Certified Emission Statement	<b>pph</b>	Pounds per Hour
<b>C.F.R. or CFR</b>	Code of Federal Regulations	<b>ppm</b>	Parts per Million
<b>CO</b>	Carbon Monoxide	<b>Ppmv or ppmv</b>	Parts per million by volume
<b>C.S.R. or CSR</b>	Codes of State Rules	<b>PSD</b>	Prevention of Significant Deterioration
<b>DAQ</b>	Division of Air Quality	<b>psi</b>	Pounds per Square Inch
<b>DEP</b>	Department of Environmental Protection	<b>SIC</b>	Standard Industrial Classification
<b>dscm</b>	Dry Standard Cubic Meter	<b>SIP</b>	State Implementation Plan
<b>FOIA</b>	Freedom of Information Act	<b>SO<sub>2</sub></b>	Sulfur Dioxide
<b>HAP</b>	Hazardous Air Pollutant	<b>TAP</b>	Toxic Air Pollutant
<b>HON</b>	Hazardous Organic NESHAP	<b>TPY</b>	Tons per Year
<b>HP</b>	Horsepower	<b>TRS</b>	Total Reduced Sulfur
<b>lbs/hr</b>	Pounds per Hour	<b>TSP</b>	Total Suspended Particulate
<b>LDAR</b>	Leak Detection and Repair	<b>USEPA</b>	United States Environmental Protection Agency
<b>M</b>	Thousand	<b>UTM</b>	Universal Transverse Mercator
<b>MACT</b>	Maximum Achievable Control Technology	<b>VEE</b>	Visual Emissions Evaluation
<b>MDHI</b>	Maximum Design Heat Input	<b>VOC</b>	Volatile Organic Compounds
<b>MM</b>	Million	<b>VOL</b>	Volatile Organic Liquids
<b>MMBtu/hr or mmbtu/hr</b>	Million British Thermal Units per Hour		
<b>MMCF/hr or mmcf/hr</b>	Million Cubic Feet per Hour		
<b>NA</b>	Not Applicable		
<b>NAAQS</b>	National Ambient Air Quality Standards		
<b>NESHAPS</b>	National Emissions Standards for Hazardous Air Pollutants		
<b>NO<sub>x</sub></b>	Nitrogen Oxides		
<b>NSPS</b>	New Source Performance Standards		
<b>PM</b>	Particulate Matter		

### 2.3. Authority

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

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

### 2.4. Term and Renewal

- 2.4.1. This permit supercedes and replaces previously issued Permit ~~R13-2087, R13-2087A, R13-2087B, and R13-2087C~~ R13-2087D. This permit shall remain valid, continuous and in effect unless it is revised, suspended, revoked or otherwise changed under an applicable provision of 45CSR13 or any applicable legislative rule.

### 2.5. Duty to Comply

- 2.5.1. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Application R13-2087, R13-2087A, R13-2087B, R13-2087C, R13-2087D, R13-2087E and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to;  
[45CSR§§13-5.11 and 13-10.3]
- 2.5.2. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA;
- 2.5.3. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7;
- 2.5.4. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses and/or approvals from other agencies; i.e., local, state and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

### 2.6. Duty to Provide Information

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

**2.7. Duty to Supplement and Correct Information**

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

**2.8. Administrative Update**

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

**2.9. Permit Modification**

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

**2.10. Major Permit Modification**

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

**2.11. Inspection and Entry**

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

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

**2.12. Emergency**

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

**2.13. Need to Halt or Reduce Activity Not a Defense**

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

**2.14. Suspension of Activities**

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

**2.15. Property Rights**

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

**2.16. Severability**

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

**2.17. Transferability**

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

**2.18. Notification Requirements**

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

**2.19. Credible Evidence**

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

### 3.0. Facility-Wide Requirements

#### 3.1. Limitations and Standards

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

#### 3.2. Monitoring Requirements

[Reserved]

#### 3.3. Testing Requirements

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

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

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

[WV Code § 22-5-4(a)(15)]

### 3.4. Recordkeeping Requirements

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

floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.

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

[45CSR§4. *State-Enforceable only.*]

### 3.5. Reporting Requirements

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

**If to the DAQ:**

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

**If to the USEPA:**

Associate Director  
Office of Air Enforcement and Permits Review Compliance Assistance (3AP123AP20)  
U. S. Environmental Protection Agency  
Region III  
1650 Arch Street  
Philadelphia, PA 19103-2029

3.5.4. **Operating Fee.**

- 3.5.4.1. In accordance with 45CSR30 – Operating Permit Program, the permittee shall submit a Certified Emissions Statement (CES) and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality. A receipt for the appropriate fee shall be maintained on the premises for which the receipt has been issued, and shall be made immediately available for inspection by the Secretary or his/her duly authorized representative.

- 3.5.5. **Emission inventory.** At such time(s) as the Secretary may designate, the permittee herein shall prepare and submit an emission inventory for the previous year, addressing the emissions from the facility and/or process(es) authorized herein, in accordance with the emission inventory submittal requirements of the Division of Air Quality. After the initial submittal, the Secretary may, based upon the type and quantity of the pollutants emitted, establish a frequency other than on an annual

basis.

**4.0. Source-Specific Requirements (Regeneration Gas & Line Heaters: HTR2 and HTR4)**

**4.1. Limitations and Standards**

4.1.1. Maximum air pollutant emission rates from the listed emission point I.D.'s shall not exceed the following limits:

Emission Point ID	Equipment Description	Pollutant	Emission Rates	
			(lb/hr)	(tons/yr) <sup>(1)</sup>
H2	9.38 MMBtu/hr Regeneration Gas Heater (HTR2)	NO <sub>x</sub>	1.13	4.95
		CO	0.35	1.53
		VOC	0.05	0.22
		SO <sub>x</sub>	0.53	0.03
		PM <sub>10</sub>	0.02	0.09

~~H4~~

~~38.0 MM Btu/hr~~

~~Natural Gas-fueled, Direct-fired Line Heater (HTR4) NO<sub>x</sub> 2.78.3 CO 3.16.7 VOC 0.20.9 SO<sub>x</sub> 2.170.1 PM<sub>10</sub> 0.10.3~~

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

4.1.2. The 9.38 MM Btu/hr regeneration gas heater (HTR2) shall consume no more than 9,196 scf of natural gas per hour or 8.06 x 10<sup>7</sup> scf of natural gas per year.

~~4.1.3. The natural gas-fueled, direct-fired line heater (HTR4) shall be operated in accordance to the following limits and requirements:~~

~~a. The heater shall be limited to a maximum designed heat input rate of 38.0 x 10<sup>6</sup> Btu/hr.~~

~~b. Fuel consumption shall be limited to natural gas at a maximum rate of 37,255 ft<sup>3</sup>/hr and 326.4 x 10<sup>6</sup> ft<sup>3</sup>/yr.~~

~~4.1.4. Carbon Monoxide (CO) emissions from the natural gas-fueled, direct-fired line heater (HTR4) shall be limited to no more than 400 ppm by volume on a dry basis corrected to 3 percent oxygen based on an average calculated from three (3) separated test runs.~~

~~4.1.5. At all times, including periods of startup, shutdown, and malfunction, the permittee must operate and maintain any affected source (HTR4), including any air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emission. During a period of startup, shutdown, or malfunction, this general duty to minimize emissions requires that the permittee reduce emissions from the affected source (HTR4) to the greatest extent which is consistent with safety and good air pollution control practices. The~~

~~general duty to minimize emissions during a period of startup, shutdown, or malfunction does not require the owner or operator to achieve emission levels that would be required by the applicable standard at other times if this is not consistent with safety and good air pollution control practices, nor does it require the owner or operator to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved.~~

~~4.1.6. The permittee shall develop a site-specific testing plan according to the requirements in 40 C.F.R. §63.7(c). [Reserved]~~

4.1.4. [Reserved]

4.1.5. [Reserved]

4.1.6. [Reserved]

4.1.7. The pertinent sections of 45CSR2 applicable to this facility include, but are not limited to, the following:

§45-2-3.1.

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 (10) percent opacity based on a six minute block average.

§45-2-7.1.

No person shall construct, modify or relocate any fuel burning unit without first obtain a permit in accordance with the provisions of W.Va. Code §22-5-1 et seq., and Series 13, 14, 19 and 30 of Title 45.

4.1.8. The pertinent sections of 45CSR13 applicable to this facility include, but are not limited to, the following:

§45-13-6.1

At the time a stationary source is alleged to be in compliance with an applicable emission standard and at reasonable times to be determined by the Secretary thereafter, appropriate tests consisting of visual determinations or conventional in-stack measurements or such other tests the Secretary may specify shall be conducted to determine compliance.

§45-13-10.2

The Secretary may suspend or revoke a permit if, after six (6) months from the date of issuance, the holder of the permit cannot provide the Secretary, at the Secretary's request, with written proof of a good faith effort that construction, modification, or relocation, if applicable, has commenced. Such proof shall be provided not later than thirty (30) days after the Secretary's request. If construction or modification of a stationary source is discontinued for a period of eighteen (18) months or longer, the Secretary may suspend or revoke the permit.

§45-13-10.3

The Secretary may suspend or revoke a permit or general permit registration if the plans and

specifications upon which the approval was based or the conditions established in the permit are not adhered to. Upon notice of the Secretary's intent to suspend, modify or revoke a permit, the permit holder may request a conference with the Secretary in accordance with the provisions of W.Va Code § 22-5-5 to show cause why the permit or general permit should not be suspended, modified or revoked.

#### 4.2. Testing Requirements

4.2.1. Upon request, tests to determine compliance with the emission limitations set forth in this permit shall be conducted in accordance with the methods as set forth below. The Secretary may require a different test method or approve an alternative method in light of any technology advancements that may occur. Compliance testing shall be conducted at, or near, 100% of the peak load. The permittee may request an alternative test procedure with a written submittal (protocol) to the Secretary.

- a. Tests to determine compliance with PM emission limits shall be conducted in accordance with Method 5, 5A, 5B, 5C, 5D, 5E, 5F, 5G, or 5H as set forth in 40 CFR 60, Appendix A.
- b. Tests to determine compliance with SO<sub>2</sub> emission limits shall be conducted in accordance with Method 6, 6A, 6B, or 6C as set forth in 40 CFR 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 CFR 60, Appendix A.
- d. Tests to determine compliance with NO<sub>x</sub> emission limits shall be conducted in accordance with Method 7, 7A, 7B, 7C, 7D, or 7E as set forth in 40 CFR 60, Appendix A.
- e. Tests to determine compliance with VOC emission limits shall be conducted in accordance with Method 25, or 25A as set forth in 40 CFR 60, Appendix A.
- f. Tests to determine compliance with Opacity of emissions shall be conducted in accordance with Method 9 as set forth in 40 CFR 60, Appendix A.

4.2.2. With regard to the emissions testing required by the WV Division of Environmental Protection, Division of Air Quality (DAQ), the permittee shall submit to the Secretary of the DAQ a test protocol detailing the proposed test methods, date, and time testing is to take place, testing locations, and any other relevant information. The test protocol must be received by the Secretary no less than thirty (30) days prior to the date the testing is to take place. The Secretary shall be notified at least fifteen (15) days in advance of the actual dates and times during which the tests will be conducted. The results of emissions testing shall be submitted to the DAQ within thirty (30) days of completion of testing.

~~4.2.3. An initial performance test shall be conducted to determine if CO emissions from the natural gas-fueled, direct-fired line heater (HFR4) do not exceed the limitation specified in 4.1.4. The performance test for CO shall be conducted according to test requirements specified in Table 4.2.3:~~

~~Reference to be Followed a. Select the sampling ports location and the number of traverse points. Carbon Monoxide Method 1 in appendix A of 40 C. F. R. 60. b. Determine oxygen and carbon dioxide concentrations of the~~

~~stack gas. Method 3A or 3B in appendix A to 40 CFR 60, or ASTM D6522-00 (IBR, see 40 C. F. R. §63.14(B)), or ASME PTC 19, Part 10 (1981) (IBR, see 40 C.F. R. §63.14(i)).~~c. Measure the moisture content of the stack gas (in conjunction with ~~Method 10 & 10B.~~) Method 4 in appendix A to 40 C. F. R. 60.

~~d. Measure the carbon monoxide emission concentration. Method 10, 10A, or 10B in appendix A to 40 C.F. R. 60 or ASTM D6522-00 (Ibr, see 40 C. F. R. §63.14(b)) when the fuel is natural gas.~~

~~4.2.4. Following the initial performance test, periodic performance tests shall be conducted to demonstrate that CO emissions from the natural gas-fueled, direct-fired line heater (HTR4) do not exceed the limitation specified in 4.1.4. The periodic performance test for CO shall be conducted annually, unless results from the previous test were  $\leq 50\%$  of the emission limit ( $\leq 200$  ppm CO). If results from the previous test were  $\leq 50\%$  of the emission limit ( $\leq 200$  ppm CO), then the subsequent performance test shall be required every five years. If results of any subsequent test ever exceed  $50\%$  of the emission limit ( $> 200$  ppm CO), then the performance test schedule shall revert back to an annual schedule. All periodic tests shall be conducted according to the testing methods specified in Table 4.2.3.~~

~~4.2.5. The permittee shall conduct performance tests for CO according to 40 C. F. R. §63.7 (c), (d), (f), and (h).~~

### 4.3. Recordkeeping Requirements

4.3.1. **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.

4.3.2. For the purposes of determining compliance with the maximum fuel usage limit set forth in Source Specific Requirements 4.1.2. and 4.1.3., the permittee shall maintain accurate records of the hours of operation and the amount of natural gas consumed by the 9.38 MM Btu/hr regeneration gas heater (HTR2) and the 38 MMBtu/hr direct-fired line heater (HTR4). Said records shall be maintained on site for a period of five (5) years. Said records shall be made available to the Secretary of the Division of Air Quality or his/her duly authorized representative upon request and shall be certified by a responsible official upon the submittal. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but

must remain accessible within a reasonable time. When appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.

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**5.0. Source-Specific Requirements (Emergency Generator Engine: 008G3)**

**5.1. Limitations and Standards**

5.1.1. The two (2) emergency generators/reciprocating engines listed below are to be disconnected and retired from service before the new emergency generator/engine: Waukesha VGF-P48GL (G3) can be put into service.

<u>Emission Unit ID</u>	<u>Emission Point ID</u>	<u>Emission Unit Description</u>	<u>Year Installed</u>	<u>Design Capacity</u>	<u>Control Device</u>
<u>008G1</u>	<u>G1</u>	<u>Reciprocating Engine/Generator; Ingersoll-Rand PVG-6; 4-cycle, rich burn; emergency</u>	<u>1951</u>	<u>275 hp</u>	<u>None</u>
<u>008G2</u>	<u>G2</u>	<u>Reciprocating Engine/Generator; Ingersoll-Rand PVG-6; 4-cycle, rich burn; emergency</u>	<u>1951</u>	<u>306 hp</u>	<u>None</u>

5.1.2. The quantity of natural gas that shall be consumed by the new emergency generator/engine: Waukesha VGF-P48GL (G3) shall not exceed 8,908 scf/hr or 4.46 x 10<sup>6</sup> scf/yr (based on a heat content for natural gas of 1,020 Btu/scf and based on operating the generator/engine a maximum of 500 hr/yr).

5.1.3. Maximum emissions from the new emergency generator/engine: Waukesha VGF-P48GL (G3) shall not exceed the following limits:

**Table 5.1.3: Emission Limits for Emergency Generator Engine (G3).**

<u>Pollutant</u>	<u>Maximum Hourly Emissions (lb/hr)</u>	<u><sup>(1)</sup>Maximum Annual Emissions (ton/year)</u>
<u>Nitrogen Oxides (NOx)</u>	<u>5.18</u>	<u>1.30</u>
<u>Carbon Monoxide (CO)</u>	<u>3.37</u>	<u>0.84</u>
<u>Non-Volatile Organic Compounds (VOC)</u>	<u>0.10</u>	<u>0.03</u>
<u>(1) Based on a maximum of 500 hr/yr of operation.</u>		

**5.2. Monitoring Requirements**

5.2.1. The permittee shall monitor the amount of natural gas consumed by the new emergency generator/engine (G3) on a monthly and yearly basis.

**5.3. Testing Requirements**

**5.3.1. See Facility-Wide Testing Requirements, Section 3.3.**

**5.4. Recordkeeping Requirements**

**5.2.1. To demonstrate compliance with Section 5.1, the permittee shall maintain records of the amount of natural gas consumed, the hours of operation, and the maintenance work performed on the new emergency generator/ engine (G3).**

**5.3. Reporting Requirements**

**5.3.1. See Facility-Wide Reporting Requirements, Section 3.5.**

**6.0. Source-Specific Requirements (40CFR60 Subpart JJJJ, Emergency Generator Engine: 008G3)**

**6.1. Limitations and Standards**

6.1.1. The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (6) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

a. Owners and operators of stationary SI ICE that commenced construction after June 12, 2006, where the stationary SI ICE are manufactured:

2. On or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP: [40CFR§60.4230(a)(4)(ii)]

6.1.2. Owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards in Table 1 to this subpart for their stationary SI ICE.

Table 6.1.2: Emission Standards for Emergency Generator Engine 008G3.

<u>Equipment ID No.</u>	<u>Engine type and fuel</u>	<u>Maximum engine power</u>	<u>Manufacture date</u>	<u>Emission standards<sup>a</sup></u>					
				<u>g/HP-hr</u>			<u>ppmvd at 15% O<sub>2</sub></u>		
				<u>NO<sub>x</sub></u>	<u>CO</u>	<u>VOC<sup>d</sup></u>	<u>NO<sub>x</sub></u>	<u>CO</u>	<u>VOC</u>
<u>008G3</u>	<u>Emergency</u>	<u>HP&gt;130</u>		<u>2.0</u>	<u>4.0</u>	<u>1.0</u>	<u>160</u>	<u>540</u>	<u>86</u>
<u>a. Owners and operators of stationary non-certified SI engines may choose to comply with the emission standards in units of either g/HP-hr or ppmvd at 15 percent O<sub>2</sub>.</u>									
<u>d. For purposes of this subpart, when calculating emissions of volatile organic compounds, emission of formaldehyde should not be included.</u>									

[40CFR§60.4233(e)]

6.1.3. Owners and operators of stationary SI ICE must operate and maintain stationary SI ICE that achieve the emission standards as required in §60.4233 over the entire life of the engine. [40CFR§60.4234]

**6.2. Monitoring Requirements**

6.2.1. Starting on July 1, 2010, if the emergency stationary SI internal combustion engine that is greater than or equal to 500 HP that was built on or after July 1, 2010, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter. [40CFR§60.4237(a)]

**6.3. Other Requirements**

6.3.1. After July 1, 2009, owners and operators may not install stationary SI ICE with a maximum engine power of greater than or equal to 500 HP that do not meet the applicable requirements in §60.4233, except that lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP that do not meet the applicable requirements in §60.4233 may not be installed after January 1, 2010. [40CFR§60.4236(b)]

6.3.2. For emergency stationary SI ICE with a maximum engine power of greater than 19 KW (25 HP), owners and operators may not install engines that do not meet the applicable requirements in §60.4233 after January 1, 2011. [40CFR§60.4236(c)]

#### 6.4. Compliance Requirements

6.4.1. If you are an owner or operator of a stationary SI internal combustion engine and must comply with the emission standards specified in §60.4233(d) or (e), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) and (2) of this section.

(b) Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in §60.4233(d) or (e) and according to the requirements specified in §60.4244, as applicable, and according to paragraphs (b)(2)(i) and (ii) of this section.

2. (ii) If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

#### [40CFR§60.4243(b)(2) (ii)]

6.4.2. Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time lime on the use of emergency stationary ICE in emergency situations. The owner or operator may petition the Administrator for approval of additional hours to be use for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. Emergency stationary ICE may operate up to 50 hours per year in non-emergency situations, but those 50 hours are counted toward the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. For owner and operators of emergency engines, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in this section, is prohibited. [40CFR§60.4243(d)]

6.4.3. Owners and operators of stationary SI natural gas fired engines may operate their engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but must keep records of such use. If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, the owners and operators are required to conduct a performance test to demonstrate compliance with the emission standards of §60.4233. [40CFR§60.4243(e)]

## 6.5. Testing Requirements

6.5.1. Owners and operators of stationary SIICE who conduct performance tests must follow the procedures in paragraphs (a) through (f) of this section.

- (a) Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in §60.8 and under the specific conditions that are specified by Table 2 to this subpart.
- (b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c). If your stationary SI internal combustion engine is non-operational, you do not need to startup the engine solely to conduct a performance test; however, you must conduct the performance test immediately upon startup of the engine.
- (c) You must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.
- (d) To determine compliance with the NOX mass per unit output emission limitation, convert the concentration of NOX in the engine exhaust using Equation 1 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 1})$$

Where:

ER = Emission rate of NOX in g/HP-hr.

Cd = Measured NOX concentration in parts per million by volume (ppmv).

1.912×10<sup>-3</sup> = Conversion constant for ppm NOX to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, horsepower-hour (HP-hr).

- (e) To determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using Equation 2 of this section:

$$ER = \frac{C_d \times 1.164 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 2})$$

Where:

ER = Emission rate of CO in g/HP-hr.

Cd = Measured CO concentration in ppmv.

1.164×10<sup>-3</sup> = Conversion constant for ppm CO to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

- (f) For purposes of this subpart, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of this section:

$$ER = \frac{C_d \times 1.833 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 3})$$

Where:

ER = Emission rate of VOC in g/HP-hr.

C<sub>d</sub> = VOC concentration measured as propane in ppmv.

1.833×10<sup>-3</sup> = Conversion constant for ppm VOC measured as propane, to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

- (g) If the owner/operator chooses to measure VOC emissions using either Method 18 of 40 CFR part 60, appendix A, or Method 320 of 40 CFR part 63, appendix A, then it has the option of correcting the measured VOC emissions to account for the potential differences in measured values between these methods and Method 25A. The results from Method 18 and Method 320 can be corrected for response factor differences using Equations 4 and 5 of this section. The corrected VOC concentration can then be placed on a propane basis using Equation 6 of this section.

$$RF_i = \frac{C_{mi}}{C_{Ai}} \quad (\text{Eq. 4})$$

Where:

RF<sub>i</sub> = Response factor of compound i when measured with EPA Method 25A.

CM<sub>i</sub> = Measured concentration of compound i in ppmv as carbon.

CA<sub>i</sub> = True concentration of compound i in ppmv as carbon.

$$C_{icorr} = RF_i \times C_{imeas} \quad (\text{Eq. 5})$$

Where:

C<sub>icorr</sub> = Concentration of compound i corrected to the value that would have been measured by EPA Method 25A, ppmv as carbon.

C<sub>imeas</sub> = Concentration of compound i measured by EPA Method 320, ppmv as carbon.

$$C_{DSCM} = 0.6098 \times C_{icorr} \quad (\text{Eq. 6})$$

Where:

C<sub>DSCM</sub> = Concentration of compound i in mg of propane equivalent per DSCM.

#### [40CFR§60.4244]

### 6.6. Notification, Reports, and Records

- 6.6.1. Owners and operators of all stationary SI ICE must keep records of the information in paragraphs (a)(1) through (4) of this section.

- (1) All notifications submitted to comply with this subpart and all documentation supporting any notification.
- (2) Maintenance conducted on the engine.
- (3) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable.
- (4) If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to §60.4243(a)(2), documentation that the engine meets the emission standards.

**[40CFR§60.4245(a)]**

6.6.2. For all stationary SI emergency ICE greater than or equal to 500 HP manufactured on or after July 1, 2010, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than or equal to 130 HP and less than 500 HP manufactured on or after July 1, 2011 that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation.  
**[40CFR§60.4245(b)]**

6.6.2. Engine Not Certified. Owners and operators of stationary SI ICE greater than or equal to 500 HP that have not been certified by an engine manufacturer to meet the emission standards in §60.4231 must submit an initial notification as required in §60.7(a)(1). The notification must include the information in paragraphs (c)(1) through (5) of this section.

- (1) Name and address of the owner or operator;
- (2) The address of the affected source;
- (3) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;
- (4) Emission control equipment; and
- (5) Fuel used.

**[40CFR§60.4245(c)]**

6.6.3. Owners and operators of stationary SI ICE that are subject to performance testing must submit a copy of each performance test as conducted in §60.4244 within 60 days after the test has been completed.  
**[40CFR§60.4245(d)]**

**6.7. General Provisions (40 CFR part 60)**

6.7.1. Table 3 of 40CFR60, Subpart JJJJ shows which parts of the General Provisions in §60.1 through §60.19 apply to the permittee. [40CFR§60.4246]

**7.0. Source-Specific Requirements (40CFR63, Subpart ZZZZ, Emergency Generator Engine: 008G3)**

**7.1. Limitations and Standards: No requirements.**

**7.2. Other Requirements: No requirements.**

**7.3. Continuous Compliance Requirements**

**7.3.1. Requirements for emergency stationary RICE.**

**(1) If you own or operate a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that was installed on or after June 12, 2006, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1)(i) through (iii) of this section. Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (iii) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f) (1) (i) through (iii) of this section, the engine will not be considered an emergency engine under this subpart and will need to meet all requirements for non-emergency engines.**

**(i) There is no time limit on the use of emergency stationary RICE in emergency situations.**

**(ii) You may operate your emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year.**

**(iii) You may operate your emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted toward the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity; except that owners and operators may operate the emergency engine for a maximum of 15 hours per year as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there are emergency conditions that could lead to a potential electrical blackout, such as unusually low frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage level. The engine may not be operated for more than 30 minutes prior to the time when the emergency condition is expected to occur, and the engine operation must be terminated immediately after the facility is notified that the emergency condition is no longer imminent. The 15 hours per year of demand response operation are counted as part of the 50 hours of operation per year provided for non-emergency situations. The supply of emergency power to another entity or entities**

pursuant to financial arrangement is not limited by this paragraph (f) (1) (iii), as long as the power provided by the financial arrangement is limited to emergency power.

[40CFR§63.6645(f)]

**7.4. Testing Requirements: No requirements.**

**7.5. Notifications, Reporsts, and Records**

7.5.1. If you are required to submit an Initial Notification but are otherwise not affected by the requirements of this subpart, in accordance with §63.6590(b), your notification should include the information in §63.9(b)(2)(i) through (v), and a statement that your stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).

[40CFR§63.6645(f)]

**7.6. General Provisions (40 CFR part 63)**

7.6.1. No general provisions apply, except as specified in 63.6645(f) (see Notification Requirements above).

### 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<sup>1</sup>

(please use blue ink)

\_\_\_\_\_  
Responsible Official or Authorized Representative

\_\_\_\_\_  
Date

Name and Title

(please print or type)

\_\_\_\_\_  
Name

\_\_\_\_\_  
Title

Telephone No. \_\_\_\_\_

Fax No. \_\_\_\_\_

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<sup>1</sup> 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 Secretary;
- b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;

- c. For a municipality, State, Federal, or other public entity: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of USEPA); or
  
- d. The designated representative delegated with such authority and approved in advance by the Secretary.