



west virginia department of environmental protection

Division of Air Quality
601 57th Street, SE
Charleston, WV 25304-2345
Phone: 304 926 0475 • Fax: 304 926 0479

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

ENGINEERING EVALUATION/FACT SHEET

B ACKGROUND INFORMATION

Application No.:	R13-2394A
Plant ID No.:	097-00009
Applicant:	Columbia Gas Transmission LLC
Facility Name:	Cleveland Station
Location:	Kanawha Head
NAICS Code:	486210
Application Type:	Modification
Received Date:	October 20, 2014
Engineer Assigned:	Edward S. Andrews, P.E.
Fee Amount:	\$4,500.00
Fee Deposit Date:	October 22, 2014
Complete Date:	November 14, 2014
Due Date:	January , 2015
Applicant Ad Date:	October 24, 2014
Newspaper:	<i>The Record Delta</i>
UTM's:	Easting: 555.4 km Northing: 4,289.1 km Zone: 17
Description:	The application is for the installation of two new combustion turbines, two process heaters, and replacement of the emergency generator.

Process Description

Columbia's Cleveland Station is located in Upshur County, West Virginia, between the towns of Cleveland and Kanawha Head. The Cleveland Station is a transmission compressor station that services a natural gas pipeline system. The station receives natural gas via pipeline from an upstream compressor station, compresses it using reciprocating internal combustion engines and a natural gas-fired turbine, and then transmits it via pipeline to a downstream station. Currently the station operates ten (10) reciprocating internal combustion engines (RICE) and one combustion turbine (CT), including:

- Six (6) 1,100-hp (nominal) natural gas-fired, Cooper-Bessemer two-cycle, lean-burn RICE with installation dates in 1953 (1 unit) and 1954 (5 units).
- Four (4) 2,000-hp (nominal) natural gas-fired, Cooper-Bessemer two-cycle, lean-burn RICE with installation dates in 1955, 1957, and 1969 (units); and
- One (1) 3,165-hp (nominal) natural gas-fired, Allison turbine that was installed in 1970.

Auxiliary equipment at the station consists of a 500 bhp natural gas-fired emergency power generator (installed in 2000), and various storage tanks for low pressure liquids. For comfort heating purposes the station operates two (2) small space heaters.

To increase the overall reliability of the station, Columbia has proposed to:

- Add two (2) new Solar Taurus 70 combustion turbines;
- Add one new 880-hp Waukesha emergency generator;
- Add two (2) new 0.65 MMBtu/hr ETI indirect-fired heaters;
- Add up to 46 new catalytic space heaters (0.073 MMBtu/hr each);
- Add various small insignificant storage tanks (condensate, waste liquid, lube oil);
- Retire six (6) 1,100-hp Cooper-Bessemer GMVA-8 RICE units;
- Retire one (1) 3,165-hp Allison 501-K13 turbine;
- Retire one (1) 500-hp Waukesha emergency generator; and
- Move four (4) 2,000-hp Cooper-Bessemer GMWA-8 RICE units to standby status.

The two (2) Solar Taurus 70 combustion turbines each have a nominal output of 10,915 hp. During normal operation, these turbines will replace the 6 retired RICE units, the existing turbine, and the 4 RICE units that will be placed on standby status. These proposed turbines are designated as Emission Points E12 and E13. The new turbines will be equipped with advanced dry low NO_x combustion controls, known by the manufacturer as SoLoNO_x. These controls reduce NO_x and peak combustion temperatures through the use of a lean, premixed air/fuel mixture and advance combustion controls.

Other emissions sources include replacing the existing emergency generator set with a larger unit that is rated at 778 kilo watts (kW) of electricity. The replacement set is equipped with a Waukesha VGF-H24GL engine, which is a 880 bhp, natural gas fueled, 4 stroke lean burn, spark-ignition engine. The applicant notes up to 46 catalytic (natural gas-fired) heaters used for indoor air conditioning during the heating season may be installed at the facility.

SITE INSPECTION

A full on-site inspection was last performed by the WVDAQ on March 19, 2014. On that date Mike Kolb found the facility to be “in compliance.” with all applicable rules and regulations, which includes the facility Title V Operating Permit. This action only proposes the installation of new equipment that is scheduled for 2015. Thus, no site inspection for the proposed action is required.

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ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Solar Combustion Turbines

The applicant classified the operation of the turbine into five operating modes, which are normal operation, startup/shutdown, low-load, below zero, and extreme below zero. The emissions from the proposed turbine and the existing one can vary significantly between these different operating modes. Solar refers to these modes as non-SoLoNO_x modes except for normal operation, which is referred to as SoLoNO_x Mode.

Normal Operation: At loads above 50% with ambient temperatures above zero degrees Fahrenheit. The Solar's SoLoNO_x, which is Solar's gas turbine dry low NO_x emission combustion system, combustion system works very well to minimize emissions generated from the combustion turbine. Typically, the system can maintain NO_x emissions at 15 ppm with the oxygen corrected to 15% in this mode. Carbon Dioxide (CO) and unburnt hydrocarbons (UHC) are maintained at 25 ppm with the oxygen level corrected to 15%.

Startup/Shut Down: Startup and Shutdown events should take approximately 10 minutes per event (10 min. startup & 10 min. shutdown) or 20 minutes for a complete startup/shut down cycle. Solar has published Product Information Letter (PIL) 170 Revision 5 for customers to estimate emissions during startup/shut down events of their turbines. To determine the annual potential emissions, Columbia used 100 complete events per year to determine the annual potential to emit for the turbine. CO emissions are 166.5 pounds per complete cycle with NO_x being only 1.9 pounds per cycle.

Low-Load Operations: Low-load operation would be considered to be non-startup/shutdown modes with the turbine operating below 50% load (as determined by ambient temperatures). Solar provided an estimate of NO_x, CO, and UHC emissions in PIL 167 Revision 4. For annual estimation purposes, Columbia did not anticipate operating the combustion turbines during this condition.

Below Zero Operations: Cold weather operations would be considered to be when the turbine is operating at loads above 50% when ambient conditions are below zero degrees Fahrenheit. Solar provided an estimate of NO_x CO and UHC emissions in PIL 167 Revision 4 for customers to estimate emissions during non-SoLoNO_x modes, which includes conditions below zero. For annual estimation purposes, Columbia used 20 hours per year. CO emissions are 19.55 pounds per hour with NO_x emissions being 13.49 pounds per hour for operating the turbines during these conditions.

Extreme Below Zero Operations: In addition to regular below zero operations, although very limited, there are times when the ambient temperatures fall below negative twenty degrees

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Fahrenheit. In PIL 167 Revision 4, Solar has additional guidelines for determining emissions of NO_x, CO, and UHC at these extreme conditions. For annual estimation purposes, Columbia did not anticipate operating these combustion turbines during this condition.

Compressor Venting

Columbia used a conservative assumption that one blowdown occurs per shutdown. It is not expected that a blowdown will occur after each shutdown. The Solar Taurus 70 has 15 pneumatic actuator vents with a vent rate of 3 standard cubic feet per hour per actuator. The proposed compressor will be equipped with 2 dry seals with an estimated leakage rate of 0.5 scf per minute per seal. Using the specific features of the compressor, Columbia estimated the blowdown emissions would be 151 pounds of VOCs per event (startup & shutdown), which includes losses from the pneumatic starter and blowdown. Carbon dioxide equivalent was predicated to be 949.5 pounds per startup & shutdown cycle.

The pneumatic actuators and seals are contributing to fugitive leaks during continuous operations. The dry seals are losing 60 scf per hour and the actuators are losing 45 scf per hour. For annual estimates, it was assumed continuous operation. VOCs emissions were estimated to be 0.30 tpy from the actuators and 0.40 tpy from the seals.

Fuel Gas Heaters

Heaters H3 and H4 are two 0.65 MMBtu/hr natural gas fired heaters. Columbia used emission factors from Tables 1.4.1-1 and 1.4.1-3 of AP-42 and Subpart C of Part 98 to estimate emissions from these heaters. Presented in the following table is the estimate of emissions from the heaters.

Table #1 – Emissions from Fuel Heaters				
Pollutant	Emission Factor	Hourly Rate per Heater(lb/hr)	Annual Rate (TPY)	Annual Rate for Both Heaters (tpy)
PM/PM ₁₀ /PM _{2.5} Filterable	1.9 lb/MMcf	0.001	0.004	0.01
PM Condensable Fraction	5.7 lb/MMcf	0.004	0.018	0.04
Total PM	7.6 lb/MMcf	0.005	0.02	0.04
Sulfur Dioxide (SO ₂)	20 grain/100 scf	0.04	0.018	0.04
Oxides of Nitrogen (NO _x)	100 lb/MMcf	0.06	0.26	0.52
Carbon Monoxide (CO)	84 lb/MMcf	0.05	0.22	0.44
Volatile Organic Compounds (VOCs)	5.5 lb/MMcf	0.004	0.02	0.04
Total Hazardous Air Pollutants (HAPs)	1.89 lb	0.03	0.13	0.04
Carbon Dioxide Equivalent (CO _{2e})	116.98 lb/MMBtu	76.04	333.06	666.12

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Equipment Leaks

Columbia has measured leaks throughout their pipeline systems and developed emission factors based on component leaks per compressor by type of component. The VOC emissions were estimated as a total for both compressors to be 0.40 tpy. These fugitive leaks have the potential to release greenhouse gases, which are methane and carbon dioxide. The potential CO₂e from these leaks were estimated to be 258.29 tpy.

Emergency Generator

The applicant used several sources of data, which included manufacturer's data (engine and catalytic converter), to estimate emissions from the proposed engine. Presented in the following table is the estimate of emissions from the emergency generator.

	Waukesha Engine	
Engine Maximum Power Output (bhp)	880	
	Emissions	
Pollutant	(lb/hr)	(TPY)
Oxides of Nitrogen (NO _x)	3.88	0.97
Carbon Monoxide (CO)	3.1	0.78
Volatile Organic Compounds (VOCs)	0.12	0.03
Formaldehyde (HCOH)	0.48	0.12
Carbon Dioxide Equivalent (CO ₂ e)	1,038.94	259.74

Emissions from the proposed new sources are indicated in the following table.

Table #3 – Potential Emissions from the Proposed New Emissions Units										
Source	Operating Mode	Cycle s	Hr/Yr	NO _x (tpy)	CO (tpy)	PM ₁₀ (tpy)	PM _{2.5} (tpy)	VOC (tpy)	SO ₂ (tpy)	CO _{2e} (tpy)
E12 Solar Taurus CT	Normal Load @ 32 ^o F		8,707	19.68	19.98	2.40	2.40	2.29	0.26	42,653
	Low Temperature (< 0 ^o F)		20	0.13	0.20	0.01	0.01	0.01	0.001	98
	Very Low Temperature (< 20 ^o F)		0	0	0	0	0	0	0	0
	Low Load (< 50%)		0	0	0	0	0	0	0	0
	Startup/Shutdown	100	33	0.10	8.33	0.01	0.01	0.10	0.001	163
	Total			8,760	19.91	28.51	2.42	2.42	2.4	0.262
E13 Solar Taurus CT	Normal Load @ 32 ^o F		8,707	19.68	19.98	2.40	2.40	2.29	0.26	42,653
	Low Temperature (< 0 ^o F)		20	0.13	0.20	0.01	0.01	0.01	0.001	98
	Very Low Temperature (< 20 ^o F)		0	0	0	0	0	0	0	0
	Low Load (< 50%)		0	0	0	0	0	0	0	0
	Startup/Shutdown	100	33	0.10	8.33	0.01	0.01	0.10	0.001	163
	Total			8,760	19.91	28.51	2.42	2.42	2.4	0.262
Venting	Normal							16.59		10,743
Equipment Leaks	Fugitive								0.40	258
G5 – Em. Gen.	Normal		500	0.97	0.63	0.02	0.02	0.02	0.001	200
H3 –Line Heater	Normal		8,760	0.28	0.23	0.02	0.02	0.02	0.002	333
H4 –Line Heater	Normal		8,760	0.28	0.23	0.02	0.02	0.02	0.002	333
SH1 – Catalytic Heaters	Normal		8,760	1.42	1.19	0.11	0.11	0.08	0.01	1,699
Total				42.77	59.3	5.01	5.01	21.53	1.465	99,394
PSD Significance Threshold Values (45CSR14-2.74a.				40	100	15	10	40	40	
Does the Project trigger the significance under PSD?				Yes	No	No	No	No	No	

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The following table illustrates the facility's total potential to emit (PTE) changes before and after this modification:

Table #4 – Cleveland's PTE Changes								
	Annual Emissions (tpy)							
	NO _x	CO	PM ₁₀ / PM _{2.5}	VOC	SO ₂	CH ₂ O	Total HAP	CO _{2e}
Current PTE	1,114.12	79.72	26.84	64.75	0.48	29.80	42.93	78,614
New Sources PTE	42.76	59.30	5.01	21.51	0.54	0.61	0.91	99,137
Retiring Units PTE	-227.60	-40.47	-12.62	-29.43	-0.27	-13.55	-19.52	-44,135
Change in PTE	- 184.84	18.83	-7.61	-7.92	0.27	-12.94	-18.61	55,002.00
New PTE	929.28	98.55	19.23	56.83	0.75	16.86	24.32	133,616.00

REGULATORY APPLICABILITY

The Cleveland Station as configured at the time of submittal of this application is classified as a Major Source under Prevention of Significant Deterioration (PSD), which is State Rule 45 CSR 14, and a Major Source for Hazardous Air Pollutants. The applicant must demonstrate that this project either does not trigger other permitting requirements or satisfies them within the application.

PSD

Prevention of Significant Deterioration requirements (PSD) applies to projects that have the potential to increase annual emissions beyond defined significance levels. This potential is evaluated as a two-step process. First any emission increase associated with the project itself is evaluated. If the project will result in a significant emission increase (45 CSR §§14-2.74 & 2.75), then the net emission increase must be determined, including all contemporaneous equipment changes.

Going back up to Table #3, the proposed new emission units represent a significant increase of NO_x emissions. Thus, Columbia has elected to retire six of the existing compressor

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engines (E01 through E06) and the combustion turbine (E11). Columbia selected the 24-month conservative period of June 2010 to May 2012 as the baseline emission period for the NO_x.

Table #3 Baseline Emissions from the Existing Engines to be Retired		
Source	Total NO _x Emission During Baseline Period (tpy)	Yearly Average NO _x Occurred During Baseline Period
Cooper-Bessemer GMVA-8 (E01)	25.1509	12.58
Cooper-Bessemer GMVA-8 (E02)	21.49	10.75
Cooper-Bessemer GMVA-8 (E03)	27.97	13.99
Cooper-Bessemer GMVA-8 (E04)	25.07	12.54
Cooper-Bessemer GMVA-8 (E05)	30.06	15.03
Cooper-Bessemer GMVA-8 (E06)	20.75	10.38
Allison 511-K13 (E11)	11.04	5.52
Baseline NO _x Total	161.53	80.77

The NO_x emissions for the baseline are 80.77 tpy. Because, these baseline emission units will be shut down as part of this project, these emissions are subtracted from the net increase from the new emissions units being added as part of the project. Thus, this results in a net decrease of 38 tpy of NO_x. There were no other changes that occurred during the contemporaneous period. Since the net result of this project is a decrease of NO_x, this project does not represent a significant net increase in emissions and does not require a major modification permit under PSD.

NSPS

New Source Performance Standards (NSPS) apply to certain new, modified, or reconstructed sources meeting criteria established in 40 CFR 60.

The fuel pre heater is rated for 1.09 MMBtu/hr. The definition of affected source in Subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units) is units between 10 MMBtu/hr and up to 100 MMBtu/hr. Thus, the proposed fuel preheater is not an affected source and is not subject to the standards under Subpart Dc.

Turbines are driving compressors at a transmission station for a natural gas pipeline system. Subpart OOOO (Standards of Performance for Crude Oil and Natural Gas Production) establishes standards for certain process equipment at oil and natural gas production sites. This regulation defines sites from the wellhead and the point of custody transfer to the natural gas transmission and storage segment. The Cleveland Compressor is downstream of the custody

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transfer point of Columbia's transmission system. Therefore, the proposed compressors are not affected sources and not subject to the performance standards of Subpart OOOO.

Subpart KKKK

U.S. EPA has promulgated NSPS for stationary combustion turbines constructed, modified, or reconstructed after February 18, 2005, in Subpart KKKK. Subpart KKKK applies to combustion turbines with a peak heat input of 10 MMBtu/hr and greater. The proposed Solar Taurus turbines are rated at 71.3 MMBtu/hr (at 0⁰ F). Therefore, the proposed turbines are affected sources under this subpart.

Sources subject to Subpart KKKK are exempt from the requirements of Subpart GG (NSPS for combustion turbines constructed/modified/reconstructed after October 3, 1977).

This subpart establishes emissions standards for NO_x and SO₂. These turbines would be limited to 0.060lb of SO₂ per MMBtu/hr of heat input. These turbines will be burning pipeline quality natural gas with a maximum sulfur content of 20 grains per 100 standard cubic feet of gas. Under 40 CFR §60.4365, a source is exempt from monitoring fuel sulfur content if the source burns natural gas that is covered by an transportation agreement (Federal Energy Regulatory Commission tariff limit) with a maximum of 20 grains of sulfur per 100 standard cubic feet of gas (40 CFR §60.4365(a)).

40 CFR §60.4325 establishes NO_x standards for affected units as specified in Table 1 of Subpart KKKK. The proposed units are new turbines firing natural gas with a heat input of greater than 50 MMBtu/hr and less than 850 MMBtu/hr. In this subcategory, these turbines are limited to a NO_x standard of 25 ppm at 15 percent oxygen (O₂) content or 150 nana gram /Joule of useful output. The selected turbines are equipped with a dry low NO_x emission combustion system, known as SoLoNO_x[™], which has been developed to provide the lowest emissions possible during normal operating conditions. Solar Taurus (manufacturer) predicts that the NO_x emissions with the SoLoNO_x[™] combustion controls from the turbine to be 15 ppm when the ambient temperatures are at or above 0⁰ F.

There are alternative standards for units operating at less than 75 percent of peak load or when operating temperatures are less than 0⁰ F. The alternative limit is 150 ppm at 15% O₂ is listed in Table 1 to Subpart KKKK. The manufacturer predicts that the NO_x rate for the proposed turbines would increase up to 120 ppm for subzero operations. For low load operations, the manufacturer predicts the NO_x concentrations to increase slightly to 70 ppm for loads at or less than 50% of peak output and 50 ppm at idle conditions. The proposed turbines are capable of meeting the NO_x limitations under this subpart at normal and other than normal conditions.

This subpart requires sources to use one of two options in monitoring compliance with the standard, which are testing or a continuous emission monitoring system. Sources can conduct testing every year and reduce the subsequent testing to every two years if the NO_x results are at or less than 75% of the standard, which equates to 15 ppm for these two turbines.

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The applicant has elected to use the testing option at this time. The permit will be structured on the 15 ppm as the short term limit, which is 75% of the applicable limit, for the short term limit with initial testing and subsequent testing every two years. Under the subpart, sources electing to conduct testing are only required to submit test reports of the results in lieu of submitting excess emissions and monitor downtime in accordance with 40 CFR §60.7(c).

Subpart JJJJ

Subpart JJJJ (Standard of Performance for Stationary Spark Ignition Internal Combustion Engines) applies to stationary spark ignition engines manufactured after July 1, 2007. The replacement generator set will be equipped with a spark ignition engine manufactured after July 1, 2007. Thus, the engine would be subject the standards of this subpart and subject to the emission limitations of Table 1 to Subpart JJJJ of Part 60, which includes the following requirements for emergency engines greater than 130 bhp.

- For NO_x, the limit is 2.0 grams per horsepower-hour (g/hp-hr) or 160 ppmvd at 15 % O₂.
- For CO, the limit is 4.0 g/hp-hr or 500 ppmvd at 15 % O₂.
- For VOC, the limit is 1.0 g/hp-hr or 86 ppmvd at 15 % O₂.

The proposed engine for the generator set is manufactured by Waukesha. The manufacturer claims that the NO_x rate is predicted at 2 g/hp-hr; CO is 1.30 g/hp-hr; and VOC (Non-Methane Hydrocarbon) is 0.26 g/hp-hr. According to the manufacturer's data, this engine should be capable of meeting the emission standards of this subpart. However, the manufacturer did not certify the engine as specified under 40 CFR Part 90, 40 CFR Part 1048 or 40 CFR Part 1054. Therefore, the permit will require the applicant to conduct an initial performance test and either conduct subsequent performance testing every 8,760 hours of operation or once every 3 years, whichever is sooner.

Subpart OOOO

Turbines are driving compressors at a transmission station for a natural gas pipeline system. Subpart OOOO (Standards of Performance for Crude Oil and Natural Gas Production) establishes standards for certain process equipment at oil and natural gas production sites. This regulation defines sites from the wellhead and the point of custody transfer to the natural gas transmission and storage segment. The Cleveland Compressor is downstream of the custody transfer point of Columbia's transmission system. Therefore, the proposed compressors are not affected sources and not subject to the performance standards of Subpart OOOO.

However, this subpart does include storage tanks that have a VOC potential of 6 tpy or greater that are located at natural gas transmission segments. 40 CFR §60.5365(e) is clear that the potential must be calculated using a generally accepted model or calculation methodology, based on the maximum average daily throughput determined for a 30-day period of production prior to the applicable emission determination deadline. For the replacement of the station

condensate storage tank, this time period would be the first 30 days the vessel was placed into service. Thus, the draft permit will require the applicant to record the daily production of pipeline fluids from the station being stored in the new vessel for the first 30 days of being in service and determine if the potential VOC emissions from the vessel, which includes the flash, working, and breathing loses, are at or greater than 6 tpy. If the VOC emissions is at or greater than 6 tpy, the vessel is an affected Group 2 source under the Subpart OOOO, which requires these emissions to be controlled.

NESHAP

The station is classified as a major source of HAPs. Formaldehyde is the HAP that makes the facility a major source of HAPs, which is generated from the existing compressor engines. After making the proposed changes, the Cleveland Station will still have the potential to emit over 16 tpy of formaldehyde, which is over the major source threshold for HAPs. All of the proposed sources are a listed affected source under 40 CFR Part 63. The following will discuss the key applicable parts of each affected source with its corresponding subpart.

Subpart YYYY

The proposed turbines are classified as affected sources under the NESHAP for stationary combustion turbines promulgated under Subpart YYYY of 40 CFR Part 63. These proposed turbines are classified as new lean premix gas-fired turbines. Per 40 CFR §63.6095(d), U.S. EPA stayed the standards for new or reconstructed stationary turbines that are either a lean premix gas-fired or diffusion flame gas-fired stationary combustion turbine. The only requirement that the applicant must comply with under this subpart is the Initial Notification requirements until U.S. EPA takes final action to require compliance with the standards under the subpart. The application has satisfied the Initial Notification requirements through this permit application (See 40 CFR §63.5(d)(1)).

Subpart ZZZZ

The internal combustion engine for the emergency generator set is classified as an affected source under the NESHAP for Stationary Reciprocating Internal Combustion Engines (Subpart ZZZZ). The proposed engine will have a power output rating of 880 bhp and be operated as an emergency use engine. Columbia intend to not operate the generator for more than 15 hours per calendar year for emergency demand response as defined in 40 CFR §§63.6640(f)(2)(ii) and (iii). An emergency demand response is determined and declared by the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3 or other authorized entity as determined by the Reliability Coordinator. According to 40 CFR §§63.6590(b) and (b)(1), the proposed engine is not required to meet the requirements of Subpart ZZZZ and the general requirements of Part 63 except for the initial notification requirements under §63.6645(f).

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40 CFR 63.9(b)(1)(iii) allows permit authorities with approved programs to accept construction or reconstruction applications to fulfill the initial notification requirements of Part 63. It is view that the criteria outline in 63.6590(b)(1)(i) and (ii) has been satisfied in the application and the require information as noted in 63.9(b)(2)(i) though (v) was provided in the application. Therefore, the initial notification pursuant to 40 CFR §63.6645(f) was satisfied for the proposed emergency generator.

Subpart DDDDD

The proposed heaters are classified as a process heater under the NESHAP for Industrial, Commercial, and Institutional Boiler and Process Heaters (Subpart DDDDD) and therefore is an affected source under the subpart. Each heater is designed to burn natural gas (Gas I Unit) and will have a heat input rating of 0.65 MMBtu/hr. These key features (natural gas and less than 5 MMBtu/hr heat input) makes these heaters only subject to the work practice requirements of this subpart. The applicant will be required to conduct tune-ups to the heater once every five years and keep monthly fuel use records. These requirements and the corresponding reporting will be incorporated into the permit.

The station is a major source of air pollution and therefore subject to 40 CSR 30. This proposed permitting action does not affect the facility's status or requirements to obtain a valid and current Title V Operating Permit. Since the proposed modification involves new emission units, Columbia has 12 months after initial startup to update the facility operating permit. As part of this submission, Columbia included a Significant Modification Application with this permit application.

This action requires the decommissioning of several existing emission units to net out of PSD (45 CSR 14). Thus, Public Notice Level C must be executed under 45 CSR §13-8.5. This section requires the applicant to post a sign and publish a commercial ad in conjunction with the agency "notice intent to approve" legal ad. The writer will contact the applicant to coordinate the publication of both ads in accordance with timing of 45 CSR §13-8.5.

Other than the requirement of Notice Level C, Columbia has satisfied the application filling requirement of 45 CSR 13, which include submitting a complete application, publishing a legal ad, and paying correct fees in accordance with 45 CSR 22.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

The new emission units will not emit any pollutants that are not already being emitted by another emission source at the facility. Therefore, no information about the toxicity of the hazardous air pollutants (HAPs) is presented in this evaluation.

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AIR QUALITY IMPACT ANALYSIS

Based on the netting analysis, the proposed modification is not classified as a major modification of a major source as defined by 45CSR14, so air quality modeling was not required.

MONITORING OF OPERATIONS

Columbia proposed to monitor the different operating modes (i.e. normal, low load, low temperature, etc.) in terms of hours per month. This monitoring will be used to determine actual emissions to show compliance with the annual limits. The applicable rules and regulations require tracking hours of operation for the generator set through the hour-meter, fuel used by the heater, testing, and maintenance records. These sources are required to conduct compliance testing.

CHANGES TO PERMIT R13-2394

Permit R13-2394 covers the engine for the emergency generator identified as G4. This generator set will be replaced by the proposed generator set identified as G5. The emissions limits and fuel limit conditions will be carried over to the proposed draft and remain in the permit until the generator set is removed for the station.

RECOMMENDATION TO DIRECTOR

The information provided in the permit application indicates that the Cleveland Station should meet all applicable requirements of state rules and federal regulations. It is recommended that Columbia Gas Transmission, LLC be granted a 45CSR13 modification permit for the proposed modification to Cleveland Compressor Station.



Edward S. Andrews, P.E.
Engineer

March 10, 2015
Revised Date

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