



west virginia department of environmental protection

Division of Air Quality
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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.: G60-C060A
Plant ID No.: 007-00006
Applicant: Equitrans Limited Partnership
Facility Name: Burnsville #71
Location: Burnsville, Braxton County
SIC Code: 4922
NAICS Code: 48621
Application Type: Modification
Received Date: June 2, 2015
Engineer Assigned: David Keatley
Fee Amount: \$1,500
Date Received: June 6, 2015
Complete Date: August 12, 2015
Due Date: September 26, 2015
Applicant Ad Date: June 30, 2015
Newspaper: *Braxton Citizens' News*
UTM's: Easting: 529.40 km Northing: 4,301.40 km Zone: 17
GPS Coordinates: Latitude: 38.86363 Longitude: -80.65857
Description: Installation and operation of a 302 bhp emergency generator engine.

DESCRIPTION OF PROCESS

The Burnsville Compressor Station is a natural gas gathering and transmission facility covered under SIC code 4922. The station has the potential to operate 24 hours per day, 7 days per week. The Burnsville station currently consists of the following equipment:

- One (1) 600-hp natural gas reciprocating engine/integral compressor;
- Two (2) 1,350-hp natural gas reciprocating engine/intergral compressor;
- One (1) 251-hp natural gas reciprocating engine driven generator;
- One (1) 34 MMSCFD triethylene glycol (TEG) dehydration unit equipped with associated reboiler and flare;
- One (1) natural gas heating reboiler; and
- Six (6) miscellaneous storage tanks with capacities less than 15,000 gallons.

The process of the compression of natural gas at the Burnsville Compressor Station occurs in the following way:

Natural gas enters the compressor station, undergoes compression to increase the pressure for transfer via transmission pipeline. The gas then enters the glycol tower where the TEG glycol absorbs the water out of the gas stream. The water is boiled out of the glycol at the reboiler and recirculated through a closed loop system. In the event of a loss of power to the station, the Kohler emergency generator will provide backup power to the facility.

Equitrans is proposing to install a 302 bhp Doosan D111TIC four-stroke rich-burn natural gas fired certified emergency generator engine [G002A] which will have a non-selective catalyst and will provide emergency power to the facility.

SITE INSPECTION

The facility is an existing Title V facility. The site was last inspected on February 20, 2014 by Eric Ray of the Compliance and Enforcement Section. The facility was not found to be in compliance at the time of the inspection; however, the violation is not related to the proposed new emergency generator.

Directions to the site: From Charleston, take Interstate 79 North to the Burnsville Exit. Go to the Exxon station and turn left. Turn left at the next intersection. Stay on this road, as it passes the grade school and goes under the interstate. Cross the railroad tracks and go down the bank. Station is on the right.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Table 1: Emissions Summary Table For Emissions Unit G-002A

Pollutant	lbs/hr	tpy	Emission Calculation Method
NO _x	0.01	<0.01	Kohler
CO	0.17	0.04	Kohler
VOC	0.17	0.04	Kohler
PM ₁₀	0.02	0.01	AP-42
PM _{2.5}	0.02	0.01	AP-42
Formaldehyde	0.05	0.01	AP-42
CO _{2e}	309	77	Table C-1 and C-2 of 40CFR Part 98 for distillate oil #2 combustion

REGULATORY APPLICABILITY

State Rules and Federal Regulations:

45CSR4

This facility shall not cause the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public. 45CSR4 states that an objectionable odor is an odor that is deemed objectionable when in the opinion of a duly authorized representative of the Air Pollution Control Commission (Division of Air Quality), based upon their investigations and complaints, such odor is objectionable.

45CSR13

The proposed engine is subject to 40CFR60 subpart JJJJ and is required to obtain a permit.

G60C Applicability Requirements:

The emergency generator engine data sheet for [G-002] states that the engine will operate less than 500 hours/year. The engine is located at a Title V major source; however this is allowed under the applicability requirement 2.3.1 of the G60-C General Permit if the emergency generator is not a major source as defined by 45CSR14, 45CSR19, or 45CSR30 which it is not.

45CSR14

The Burnsville Station is located in an area classified as attainment for all pollutants. The Burnsville Compressor Station is a major source with respect to the NSR program because the potential emissions of NO_x are above the major source threshold.

The emissions from the proposed project are below all major modification thresholds. PSD permitting is not triggered by the proposed change.

45CSR16

45CSR16 incorporates by reference the standards of performance for new stationary sources (40CFR60). This facility is subject to 40CFR60 subpart JJJJ and therefore this facility is subject to 45CSR16.

5CSR30

The Burnsville station is currently classified as a major source for the Title V program and operates under Title V operating permit R30-00700006-2013. This general permit registration for an emergency generator will not affect the major source status.

40CFR60 Subpart JJJJ (Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (SI ICE))

40CFR60 Subpart JJJJ sets forth emission limits, fuel requirements, installation requirements, and monitoring requirements based on the date of construction, date of manufacture, and horsepower (hp) of the spark ignition internal combustion engine. All proposed engines will commence construction after June 12, 2006.

G-002A is subject to this subpart due to the manufacturer's date of the engine. G-002A is a certified engine and the Certificate on Conformity will be available in the file. To keep the designation of certified this engine must be operated and maintained to the manufacturer's emission-related written instructions and must keep records of conducted maintenance to demonstrate compliance.

40CFR60, Subpart OOOO (NSPS for Crude Oil and Natural Gas Production, Transmission, and Distribution)

The emergency generator is not an affected source under NSPS, Subpart OOOO.

40CFR63, Subpart ZZZZ (NESHAP for Stationary Reciprocating Internal Combustion Engines)

The Burnsville facility is an area source of Hazardous Air Pollutants. The proposed Kohler emergency generator engine is considered a new area source RICE and will comply with Subpart ZZZZ by complying with 40 CFR 60 Subpart JJJJ.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

The majority of non-criteria regulated pollutants fall under the definition of HAPs which, with some revision since, were 188 compounds identified under Section 112(b) of the Clean Air Act (CAA) as pollutants or groups of pollutants that EPA knows or suspects may cause cancer or other serious human health effects. This facility has the the following HAPs as emitted in substantive amounts (at least 20 pounds (0.01 tons) per year) in their emissions estimate: Formaldehyde. The following table lists each HAP's carcinogenic risk (as based on analysis provided in the Integrated Risk Information System (IRIS)):

Table 2: Potential HAPs - Carcinogenic Risk

HAPs	Type	Known/Suspected Carcinogen	Classification
Formaldehyde	VOC	Yes	Category B1 - Probable Human Carcinogen

All HAPs have other non-carcinogenic chronic and acute effects. These adverse health effects may be associated with a wide range of ambient concentrations and exposure times and are influenced by source-specific characteristics such as emission rates and local meteorological conditions. Health impacts are also dependent on multiple factors that affect variability in humans such as genetics, age, health status (e.g., the presence of pre-existing disease) and lifestyle. As stated previously, *there are no federal or state ambient air quality standards for these specific chemicals*. For a complete discussion of the known health effects of each compound refer to the IRIS database located at www.epa.gov/iris.

AIR QUALITY IMPACT ANALYSIS

The proposed project does not meet the definition of a major modification according to the definitions in 45CSR14 and 45CSR19; therefore, modeling will not be performed for this permit application.

RECOMMENDATION TO DIRECTOR

The information provided in the permit application indicates compliance with all state and federal air quality requirements will be satisfied and this facility is expected to meet the requirements of General Permit GG0-C. Therefore Equitrans Limited Partnership's request to modify and operate their emergency generator engine to be located in Braxton County, WV is recommended to the Director of Air Quality.

David Keatley
Permit Writer - NSR Permitting

August 12, 2015

Date