



west virginia department of environmental protection

Division of Air Quality
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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.: G30-D195
Plant ID No.: 019-00115
Applicant: EQT Gathering, LLC
Facility Name: Pocahontas Station
Location: Fayette County
NAICS Code: 211111
Application Type: Construction
Received Date: April 20, 2015
Engineer Assigned: Caraline Griffith
Fee Amount: \$3,000
Date Received: April 21, 2015
Complete Date: May 18, 2015
Due Date: July 2, 2015
Applicant Ad Date: May 7, 2015
Newspaper: *Fayette Tribune*
UTM's: Easting: 480.47 km Northing: 4,217.22 km Zone: 17
Description: The Pocahontas Creek Compressor Station was start-up in its current location in 2004.

DESCRIPTION OF PROCESS

Natural gas is produced from surrounding gas wells and routed to this central compressor station. The pipeline gas suction line feeds into a natural gas fueled, internal combustion engine (CAT-001) that is present at the compressor station. The combustion engine is a CAT 3306TA natural gas fueled internal combustion engine with a design capacity of 203 brake horsepower. Three tanks, a Lube Oil Tank (LOT-002), Used Oil Tank (UOT-003), and a Methanol Tank (MT-004) are also on site and are used to store fluids. This permit is for the compressor station as constructed in 2004 with no changes being made.

SITE INSPECTION

The Pocahontas Station in Robson, Fayette County, WV was inspected on April 22, 2015 at 2:51 p.m. by Todd Shrewsbury and myself. The site was found to meet the specified criteria of having no dwellings within 300 feet of the site and having one (1) 1,000 gallon Lube Oil Tank (LOT-002), one (1) 500 gallon Used Oil Tank (UOT-003), one (1) 500 gallon Methanol Tank (MT-004), one (1) 30 gallon Methanol Tank, and one (1) Caterpillar CAT 3306TA Compressor Engine (CAT-001). Enforcement is now aware that the compressor station exists and will not need to pursue any further enforcement actions.

The directions are as follows:

From Charleston, merge on to I-64 E/I-77 S. Take Exit 96 and merge onto US-60. Continue on US-60 and take the exit toward County Rd. 61/ Montgomery/ WVU Tech. Turn right onto WV-6 S/Montgomery Bridge. Turn right onto WV-61 S/Fayette Pike W. Turn right to stay on WV-61 S. Turn left onto Dempsey Branch Rd. Facility is on the right.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Emissions for CAT-001 for PM₁₀, SO₂, Benzene, Ethylbenze, Xylene, and Toluene come from AP-42 Chapter 3.2. Emissions for NO_x, CO, VOC's, and CO₂ come from Caterpillar.

The following table represents the estimated controlled emissions.

Source ID	Emission Source	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (tpy)
CAT-001	Caterpillar CAT 3306TA Compressor Engine	Nitrogen Oxide	10.19	44.62
		Carbon Monoxide	0.57	2.51
		Volatile Organic Compounds	0.05	0.22
		PM ₁₀	0.01	0.06
		Sulfur Dioxide	0.001	0.004
		Benzene	0.002	0.01

		Ethylbenzene	0.000	0.000
		Formaldehyde	0.07	0.29
		Xylene	0.000	0.001
		Toluene	0.001	0.004
		Carbon Dioxide	222.02	972.43
		Methane	0.000	0.00
		N_2O^4	0.003	0.015
		CO_2e	223.04	976.91

The following table represents the estimated controlled tank emissions.

Source ID	Emission Source	Pollutant	Maximum Annual Emissions (lbs)
LOT-002	Lube Oil Tank (1000 gallons)	Lube Oil	0.02
UOT-003	Used Oil Tank (500 gallons)	Used Oil	0.01
MT-004	Methanol Tank (500 gallons)	Methyl Alcohol	27.73

REGULATORY APPLICABILITY

The following rules apply to General Permit G30-D:

45CSR2 To Prevent and Control Particulate Air Pollution From Combustion of Fuel in Indirect Heat Exchangers

45CSR2 establishes emission limitations for smoke and particulate matter which are discharged from fuel burning units. All fuel burning units will be subject to the weight emission standard for particulate matter set forth in 45CSR2. Each registrant is also subject to all applicable opacity requirements set forth in 45CSR2 Section 3.2.

This regulation does not apply because there are no indirect heat exchangers on site.

45CSR4 To Prevent and Control the Discharge of Air Pollutants into the Open Air which Causes or Contributes to an Objectionable Odor or Odors

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. All facilities are inspected by the DAQ Enforcement Section.

CAT 3306TA is an internal combustion engine. According to §45-4-7 this qualifies as an exemption to 45CSR4.

45CSR10 To Prevent and Control Air Pollution from the Emission of Sulfur Oxides

The purpose of this rule is to prevent and control air pollution from the emission of sulfur oxides. All fuel burning units will be subject to the weight emission standard for sulfur dioxide set forth in 45CSR10.

§45-10-1 states: Any fuel burning units having a design heat input under ten (10) million BTU's per hour will be exempt from section 10.3 (the sulfur dioxide weight emission standard) and sections 10.6 (Registration), 10.7 (Permits), and 10.8 (Testing, Monitoring, Record keeping, and Reporting).

CAT 3306TA has a maximum heat input rate of 1.54 Million BTU's per hour, therefore it qualifies for this exemption.

45CSR13 Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, and Procedures for Evaluation

As provided in 45CSR13, the Secretary may issue Class II General Permits involving the same or similar processes or pollutants. For eligible applicants and/or registrants, Class II General Permit registration satisfies the construction, modification, relocation and operating permit requirements of 45CSR13.

EQT Gathering, LLC submitted a complete G30-D registration application, published the required Class II legal advertisement, and paid the appropriate fees. The Class II legal advertisement ran in *The Fayette Tribune*, on May 7, 2015.

Based on the information provided in the application along with the site inspection conducted by DAQ, the proposed facility will not be constructed within 300 feet of any occupied dwelling, business, public building, school, church, community,

Fact Sheet G30-D195
EQT Gathering, LLC
Pocahontas Station

institutional building or public park. The application meets all other requirements for registration under a G30-D general permit.

45CSR22 Air Quality Management Fee Program

The facility has paid the applicable \$2,500 NESHAP fees and is required to maintain a current Certificate to Operate.

40CFR60 Subpart IIII (Standards of Performance for Stationary Compression Ignition Internal Combustion Engines)

Subpart IIII sets forth emission limits, fuel requirements, installation requirements, and monitoring requirements based on the year of installation of the subject emergency generator.

CAT 3306TA was built in 2004 therefore it is exempt from this rule.

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

Subpart JJJJ sets forth emission limits, fuel requirements, installation requirements, and monitoring requirements based on the year of installation of the subject internal combustion engine.

CAT 3306TA engine was built in 1993 and installed at the Pocahontas Station in 2004 therefore it is exempt from this rule.

45CSR30 (Requirements for Operating Permits)

Since the facility was not subject to 40CFR60 Subpart IIII, it is not subject to 45CSR30.

45CSR34 (Emission Standards for Hazardous Air Pollutants)

By reviewing the information in the Permit Application for the Pocahontas Station facility it is deemed that the facility is subject to NESHAP standard 40CFR63 Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). The facility must comply with all regulations in 40CFR63 Subpart ZZZZ that pertains to it.

§63.6605 states:

(a) You must be in compliance with the emission limitations, operating limitations, and other requirements in this subpart that apply to you at all times.

(b) At all times you must operate and maintain any affected source, including

Fact Sheet G30-D195
EQT Gathering, LLC
Pocahontas Station

associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

Small amounts of non-criteria regulated hazardous air pollutants such as Benzene, Toluene, Ethylbenzene, Xylene, and Formaldehyde may be emitted when natural gas is combusted in reciprocating engines, combusted in the fuel burning units, or combusted in one of the combustion type air pollution control devices. The summary information for Formaldehyde is provided below.

Formaldehyde:

Formaldehyde is used mainly to produce resins used in particle board products and as an intermediate in the synthesis of other chemicals. Exposure to formaldehyde may occur by breathing contaminated indoor air, tobacco smoke, or ambient urban air. Acute (short-term) and chronic (long-term) inhalation exposure to formaldehyde in humans can result in respiratory symptoms, and eye, nose, and throat irritation. Limited human studies have reported an association between formaldehyde exposure and lung and nasopharyngeal cancer. Animal inhalation studies have reported an increased incidence of nasal squamous cell cancer. EPA considers formaldehyde a probable human carcinogen (Group B1).

AIR QUALITY IMPACT ANALYSIS

Modeling was not required of this source due to the fact that the facility is not subject to 45CSR14 (Permits for Construction and Major Modification of Major Stationary Sources of Air Pollutants) because it does not meet the definition of a Major Stationary Source.

MONITORING OF OPERATIONS

G30-D registrants will be required to perform the following monitoring:

1. Monitor and record calendar monthly and calendar annual quantity of natural gas consumed and hours of operation for all engines and combustion sources.
2. Monitor and record calendar annual quantity of organic liquid throughput in all

registered storage tanks.

3. Conduct visual observations of all vent points listed in the permit that are subject to 45CSR2 opacity limits.

4. Conduct annual preventative maintenance/inspection, and all routine maintenance service and repairs as required, to facilitate proper control device performance, for the control devices listed in the registration.

G30-D registrants will be required to perform the following recordkeeping:

1. Maintain on-site a tabulation of actual emissions for each calendar year annual period, showing emission totals for the air pollutants regulated in the registration.

2. Maintain records on-site of all required monitoring parameters for the emission units and control devices listed in the registration.

3. Maintain records relating to inspection, maintenance, failure, replacement, and/or repair of catalytic reduction devices, and associated auxiliary air pollution control devices for each calendar year. Such records shall include a summary of any engine or air pollution control device and/or auxiliary air pollution control device failure, preventative maintenance or corrective action performed.

4. These records shall be maintained on-site for a minimum of five (5) years from the date of record creation.

RECOMMENDATION TO DIRECTOR

It is recommended that General Permit Registration G30-D195 be granted to EQT Gathering, LLC, Pocahontas Station facility located in Robson, Fayette County, WV. Based on the information provided in the application including all supplemental information received, the applicant should meet all applicable state and federal requirements.

Caraline Griffith
Permit Engineer

DATE

Fact Sheet G30-D195
EQT Gathering, LLC
Pocahontas Station