



west virginia department of environmental protection

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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.:	R13-2585B
Plant ID No.:	005-00020
Applicant:	Cranberry Pipeline Corporation
Facility Name:	Danville Station
Location:	Danville, Boone
SIC Code:	1311 - Crude Petroleum & Natural Gas
Application Type:	Modification
Received Date:	December 11, 2009
Engineer Assigned:	Roy F. Kees
Fee Amount:	\$2000.00
Date Received:	December 15, 2009
Complete Date:	January 8, 2010
Due Date:	April 8, 2010
Applicant Ad Date:	December 16, 2009
Newspaper:	<i>Coal Valley News</i>
UTM's:	Easting: 422.07 km Northing: 4214.25 km Zone: 17
Description:	Applicant proposes to install an natural gas-fired emergency generator rated at 155 horsepower.

DESCRIPTION OF PROCESS

Cranberry will utilize a PSI/Kohler Model 100REZG emergency generator to provide backup electrical power in the event of utility electric power failure. The emergency generator utilizes an EPA certified, natural gas-fired engine with a rated capacity of 155.2 horsepower at 1,800 revolutions per minute. The maximum electrical output is 115.7 kilowatts.

SITE INSPECTION

A site inspection was not deemed necessary due to the small size of the generator and its proposed location inside of a large natural gas compressor station. The facility was inspected on September 30, 2009 by Fred Teel of the enforcement section.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

The hourly emission rates were calculated using manufacturer data for the particular engine being used. This engine is EPA certified and meets the allowable limits of Subpart JJJJ. A control efficiency of 90% is assumed based on manufacturer data sheets for the engine & catalyst.

Table #1 - Engine Emissions		
Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)*
PM ₁₀	0.011	0.0028
SO ₂	0.0007	0.0002
NO _x	0.044	0.011
CO	0.059	0.015
VOC	0.134	0.033

* - Annual Emission Rate is based on operating 500 hours at max load.

REGULATORY APPLICABILITY

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

Cranberry is subject to 45CSR§13-5.1., which states “no person shall cause, suffer, allow permit the construction, modification, or location of any stationary source to be commenced without notifying the Secretary of such intent and obtaining a permit to construct, modify, or relocate the stationary source as required in this rule or any stationary as required in this rule or any other applicable rule promulgated by the Secretary.” This source is a stationary source because it is subject to a substantive rule (Subpart JJJJ) as per 45CSR§13-2.24.a. Cranberry has complied with the public review procedures in 45CSR§13-8.3. by publishing a legal ad in the *Coal Valley News* on December 16, 2009.

45CSR16 Standards of Performance for New Stationary Sources
40 CFR 60 Subpart JJJJ: Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

According to 40CFR§60.4230(a), Cranberry's engine is subject to Subpart JJJJ because is was built after January 1, 2009 and is an emergency engine with a maximum engine power greater than 25 HP.

45CSR30 *Requirements for Operating Permits*

In accordance with 45CSR30 Major Source Determination, the emergency generator will be a non-major source which is subject to NSPS Subpart JJJJ. The facility's potential to emit for any regulated air pollutant will be far less than the 45CSR30 threshold of 100 TPY. Therefore, the facility will be subject to 45CSR30 and classified as a Title V deferred non-major source.

AIR QUALITY IMPACT ANALYSIS

This writer deemed that an air dispersion modeling study or analysis was not necessary, because the proposed temporary emission increase does not meet the definition as a "major source" per 45CSR§14-2.43.b.

MONITORING OF OPERATIONS

Cranberry proposes to monitor the fuel usage and hours of operation of this engine. The writer believes that monitoring these parameters is more than sufficient for this type of emission unit.

Because the engine was built prior to January 1, 2011, the non-resettable hour meter requirement of Subpart JJJJ does not apply.

RECOMMENDATION TO DIRECTOR

The information provided in the permit application indicates that Cranberry's proposed emergency generator meets all the requirements of the applicable rules when operated in accordance with the permit application. Therefore, this writer recommends granting Cranberry Pipeline Corporation a Rule 13 Modification for their proposed emergency generator.

Roy F. Kees
Engineer - NSR Permitting

Date

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Cranberry Pipeline Corporation
Danville Station