



west virginia department of environmental protection

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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.: R13-2258D
Plant ID No.: 041-00017
Applicant: Dominion Transmission
Facility Name: Weston Compressor Station
Location: Weston, Lewis County
NAICS Code: 48621
Application Type: Modification
Received Date: August 3, 2012
Engineer Assigned: Laura Jennings
Fee Amount: \$2,000.00
Date Received: August 9, 2012
Complete Date: September 12, 2012
Due Date: December 11, 2012
Applicant Ad Date: August 8, 2012
Newspaper: *The Weston Democrat*
UTM's: Easting: 549.78 km Northing: 4322.79 km Zone: 17
Description: The permit application covers the installation and operation of one natural gas fired auxiliary generator [EG-01].

DESCRIPTION OF PROCESS

Weston Station is a compressor facility that services a natural gas pipeline system. The purpose of the facility is to recompress natural gas flowing through a pipeline for transportation. The compressor engines [E1 and E2] at the facility receive natural gas from a valve on a pipeline and compress it to enable further transportation in the pipeline.

This project includes the installation of an emergency generator [EG01]. The proposed emergency generator will be used to supply the facility with critical electrical power when purchased power is interrupted.

The projected operating schedule is 2 hours/day, 5 days/week, and 50 weeks/year for 500 maximum annual operating hours.

The changes to the emissions table are provided in Table 1.

Table 1 - Emissions Unit Table

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed/ Modified	Design Capacity	Type and Date of Change	Control Device
EG01	EG01	Cummins Auxiliary Generator 100GGHH	2012	153.2 hp	New	Integrated 3-way catalyst

SITE INSPECTION

Directions to the site: Take Rt. 33 East from Weston. Turn left onto Smith Road. Go 1.5 miles and turn left onto a gravel road. Continue on the gravel road for 0.3 miles to the station. Station is on the left.

On July 18, 2011 James Robertson of DAQ's, Compliance and Enforcement Section performed a targeted full on site inspection. At the time of the inspection, the facility was found to be in compliance. No inspections of the facility are planned at this time.

No site inspection is planned for this permitting action.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Potential emissions for the auxiliary generator were calculated based on a combination of EPA, AP-42 emission factors and manufacturers data. AP-42 emission factors were used to calculate particulate matter, sulfur dioxide, formaldehyde, and total hazardous air pollutants. The manufacturer's data was used to calculate nitrogen oxides, carbon monoxide, and volatile organic compounds. The potential emissions are provided in Table 2.

The EPA emission factors were verified by the writer. The emissions calculations were verified by the writer.

Table 2 - Potential Emissions

Emission Point ID	Emission Unit ID	Air Pollution Control Device	Regulated Air Pollutant	Maximum Potential Controlled Emissions	
				lb/hr	tpy
EG01	EG01	Integrated 3-way catalyst	PM - Filterable	0.01	0.01
			PM10	0.01	0.01
			PM2.5	0.01	0.01

			PM - Condensables	0.01	0.01
			SO2	0.01	0.01
			NOX	0.01	0.01
			CO	0.01	0.01
			VOC	0.04	0.01
			Formaldehyde	0.02	0.01
			Total HAP	0.01	0.01

The existing permitted emissions for the facility are provided in the table below.

Table 3 - Facility Permitted Emissions

Emission Point ID	Emission Unit ID	Air Pollution Control Device	Regulated Air Pollutant	Maximum Potential Controlled Emissions	
				lb/hr	tpy
E1	E1	n/a	NOX	7.94	34.80
			CO	9.92	43.50
E2	E2	n/a	NOX	2.65	11.59
			CO	0.66	2.90
			VOC	1.19	5.21
D1	D1	F1	VOC	4.14	18.12
			n-Hexane	0.16	0.74
			Benzene	0.06	0.24
			Toluene	0.08	0.33
			Ethylbenzene	0.01	0.01
			Xylenes	0.16	0.71
Total	Total	n/a	NOX	10.59	46.39
			CO	10.58	46.40
			VOC	5.33	23.33
			n-Hexane	0.16	0.74
			Benzene	0.06	0.24
			Toluene	0.08	0.33
			Ethylbenzene	0.01	0.01

			Xylenes	0.16	0.71
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REGULATORY APPLICABILITY

The following state and federal regulations were reviewed as they relate to the changes included in this Class II Administrative Update.

STATE REQUIREMENTS:

45CSR13 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

The applicant meets the definition of “modification” under 45CSR13 §2.17.e.

The applicant has met the requirements of 45CSR13 by placing a Class I legal notice in *The Eston Democrat* on August 8, 2012, providing a complete permit application, and paying the required \$1,000 application fee and \$1,000 NSPS fee.

45CSR30 OPERATING PERMITS

The applicant was previously a non-major source that was subject to 45CSR30. They continue to be subject to 45CSR30 as a non-major source because they do not meet the major source threshold. The applicant does not have the potential to emit 100 tpy or more of any regulated pollutant, 10 tpy or more of any hazardous air pollutant, or 25 tpy or more of any combination of hazardous air pollutants.

The fugitive emissions of a stationary source shall not be considered in determining whether it is a major stationary source for the purposes of §302(j) of the Clean Air Act, unless the source belongs to one of the categories of stationary sources listed in 45CSR30-2.26.b. Natural gas processing facilities are listed as b.38. Natural gas compressor stations are not considered a natural gas processing facility; therefore, fugitive emissions are not considered when determining major source status.

FEDERAL REQUIREMENTS:

40 CFR 60, Subpart OOOO
 STANDARDS OF PERFORMANCE FOR CRUDE OIL AND NATURAL GAS PRODUCTION, TRANSMISSION AND DISTRIBUTION (Effective date October 15, 2012)

NSPS, Subpart OOOO was published in the Federal Register on August 16, 2012 and became effective October 15, 2012. This subpart establishes emissions standards and compliance schedules for the control of volatile organic compounds (VOC) and sulfur dioxide (SO2) emissions from affected facilities that commence construction, modification,

or reconstruction after August 23, 2011.

The Weston compressor station commenced construction prior to August 23, 2011 and is not subject to NSPS, Subpart OOOO.

40CFR60, Subpart JJJJ

STANDARDS OF PERFORMANCE FOR STATIONARY SPARK IGNITION
INTERNAL COMBUSTION ENGINES

This subpart was issued by the USEPA on January 18, 2008 and last amended on January 30, 2013. This rule outlines standards of performance for all new, modified, or reconstructed units meeting the applicability of the rule. The rule segments applicability by unit horsepower and manufactured date. Based on the proposed unit horsepower of 152.3 and manufactured after January 1, 2009, the new natural gas fired auxiliary generator will be subject to 40 CFR 60, Subpart JJJJ [§60.4230(a)(3)(iv)]. As such, it will be subject to the following emissions standards of §60.4233(e), Table 1.

Pollutant	Limitation (g/hp-hr)
NOx	2.0
CO	4.0
VOC	1.0

The auxiliary generator will be a certified emergency unit. Therefore, it is exempt from performance testing as long as it is installed, maintained, and operated according to manufacturer's written instructions. Additionally, the unit will be required to maintain a maintenance plan and associated records. The applicable requirements are: §60.4230, §60.4233, §60.4234, §60.4237, §60.4243, §60.4245, and §60.4248.

Compliance with §60.4233(3), Table 1 and §60.4237(b) is met because engine [EG-01] is a certified engine. The EPA exhaust emission compliance statement was provided as supplemental information to the permit application. Compliance with other requirements will be demonstrated with compliance to permit conditions.

40 CFR63, Subpart ZZZZ

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR
POLLUTANTS FOR SOURCE CATEGORIES FROM STATIONARY
RECIPROCATING INTERNAL COMBUSTION ENGINES - AREA
SOURCE

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

The Weston compressor station is a minor source of HAPs and is considered an area source for the purposes of this subpart. The proposed new unit is subject to this subpart for area source emergency generators; however, compliance is demonstrated by compliance with NSPS, Subpart JJJJ and there are no other requirements per §63.6590(c)(1).

(c) Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

(1) A new or reconstructed stationary RICE located at an area source;

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

There are no new regulated hazardous air pollutants associated with the proposed change.

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 is not required for this permit application.

MONITORING OF OPERATIONS

- Recordkeeping requirements for natural gas consumption and operating hours for EG-01.
- Monitoring requirements per NSPS, Subpart JJJJ for emergency engines >130 HP and < 500 HP

CHANGES TO PERMIT R13-2258C

In addition to general permit updates such as to reflect the current permit revision, the following changes have been made:

- 1.0 - Emission Units Table has been updated to add EG01
- 5.0 - Added 5.1.5 for the natural gas consumption limit and 5.1.6 for the emission limits for EG01. Revised 5.2.1 to reflect 5.1.5 and 5.1.6 and added 5.2.2 to record operating hours for EG01.
- 8.0 - Added section for NSPS, Subpart JJJJ Requirements for the emergency engine

RECOMMENDATION TO DIRECTOR

It is the recommendation of the writer that Modification Permit R13-2258D be granted to Dominion Transmission, Inc., Weston Compressor Station facility located in Lewis County, WV. Based on the information provided in the permit application, the applicant meets all applicable federal and state air regulations pertaining to the requested change.

Laura Jennings
Permit Engineer

Date