Id. No. 109-00129 Reg. G30-D196
Company Enervest Operating, LLC
Facility Ravencliff Region 5
Initials TEM

west virginia department of environmental protection

Division of Air Quality
601 57th Street SE
Charleston, WV 25304
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

BACKGROUND INFORMATION

Application No.:	G30-D196
Plant ID No.:	109-00129
Applicant:	Enervest Operating, LLC
Facility Name:	Ravencliff Station
Location:	Wyoming County
NAICS Code:	211111
Application Type:	Construction
Received Date:	September 21, 2015
Engineer Assigned:	Thornton E. Martin Jr.
Fee Amount:	$1,500
Date Received:	September 23, 2015
Complete Date:	October 02, 2015
Applicant Ad Date:	August 31, 2015
Newspaper:	*The Wyoming County Report*
UTM's:	Easting: 457.478 km Northing: 4,171.323 km Zone: 17
Description:	Installation of one (1) 145 hp natural gas fired engine. Installation of a pipeline liquids tank.

DESCRIPTION OF PROCESS

Coal bed methane is pumped out of the inactive coal mine workings. Natural gas is produced from coal bed methane wells as well as conventional wells where it is transported via pipeline to the Ravencliff compressor station where it will be compressed to a higher pressure. It is then discharged into the pipeline system. Pipeline liquids will be removed from the natural gas stream and sent to a 20 bbl pipeline liquids tank(T-001). Pipeline quality natural gas is combusted in the 145 hp Caterpillar G3306NA four-stroke rich-burn compressor engine (E-1).

Entire Document
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SITE INSPECTION

Directions: From Ravencliff Post Office, head southeast on Glen Fork Rd., turn right onto Ravencliff Rd., stay on Ravencliff Rd. for 0.6 miles, turn left onto Mcgraws Rd.. Drive 0.25 miles to the Enervest Office, drive through the parking lot out onto gravel road and follow gravel road for 0.25 miles to compressor station.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Maximum controlled point source emissions from Enervest Operating, LLC's natural gas compressor station are summarized in the table below.

Source ID	Emission Source	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (tpy)
E-1	Caterpillar G3306NA 145 hp	Nitrogen Oxides	7.71	33.76
		Carbon Monoxide	0.45	1.96
		Volatile Organic Compounds	0.05	0.23
		Sulfur Dioxide	0.001	0.003
		PM_{10}	0.01	0.046
		Formaldehyde	0.074	0.322

REGULATORY APPLICABILITY

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

The facility is subject to the requirements of 45CSR4 and shall not allow the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.

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

The proposed construction is subject to the requirements of 45CSR13 because Enervest Operating, LLC has voluntarily submitted a permit application.

45CSR22 *Air Quality Management Fee Program*

This source is subject to this rule due to the construction application fee and the annual operating fee.

GENERAL PERMIT ELIGIBILITY

The proposed construction and operation of this facility meets the eligibility, siting, limitations, and emissions controls as specified in General Permit G30-D. Enervest Operating, LLC is not subject to 40CFR60 Subpart IIII or 40CFR60 Subpart JJJJ.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

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).

RECOMMENDATION TO DIRECTOR

Enervest Operating, LLC's request to modify a natural gas compressor station at the Ravencliff, Wyoming County, WV site meets the requirements of General Permit G30-D and all applicable rules and regulations and therefore should be granted a General Permit Registration to modify and operate the said facility.

Thornton E. Martin Jr.
Permit Engineer

October 02, 2015
Date