



ENERVEST

Id. No. 109-00129 Reg. G30-D196

Company Enervest Operating, LLC

9/18/2015

Facility Ravencliff Region 5

Initials MD



WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY
601 57th Street, SE
Charleston, WV 25304

Subject: EnerVest Operating Compression Downsizing Project RavenCliff Compressor G30 Permit application.

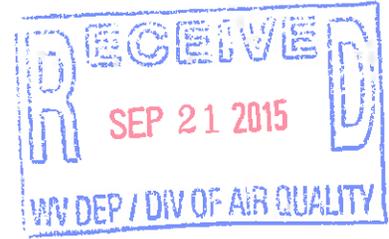
Dear Sir or Madame,

We are placing a Caterpillar G3306 rated at 145HP at this facility. This facility had a permit in the past but shutdown several years ago prior to Enervest ownership with the installation of this unit this facility will require a new permit. If you have any additional questions please feel free to call me at 304-414-8171 or email me at mdearing@enervest.net.

Sincerely,

Michael Dearing
Air Emissions Supervisor

Entire Document
NON-CONFIDENTIAL



ENERVEST

RavenCliff Compressor Station Permit Application



WEST VIRGINIA
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 DIVISION OF AIR QUALITY
 601 57th Street, SE
 Charleston, WV 25304
 Phone: (304) 926-0475 • www.dep.wv.gov/daq

APPLICATION FOR GENERAL PERMIT REGISTRATION
 CONSTRUCT, MODIFY, RELOCATE OR ADMINISTRATIVELY UPDATE
 A STATIONARY SOURCE OF AIR POLLUTANTS

CONSTRUCTION **MODIFICATION** RELOCATION CLASS I ADMINISTRATIVE UPDATE
 CLASS II ADMINISTRATIVE UPDATE

CHECK WHICH TYPE OF GENERAL PERMIT REGISTRATION YOU ARE APPLYING FOR:

- | | |
|--|---|
| <input type="checkbox"/> G10-D – Coal Preparation and Handling | <input type="checkbox"/> G40-C – Nonmetallic Minerals Processing |
| <input type="checkbox"/> G20-B – Hot Mix Asphalt | <input type="checkbox"/> G50-B – Concrete Batch |
| <input checked="" type="checkbox"/> G30-D – Natural Gas Compressor Stations | <input type="checkbox"/> G60-C – Class II Emergency Generator |
| <input type="checkbox"/> G33-A – Spark Ignition Internal Combustion Engines | <input type="checkbox"/> G65-C – Class I Emergency Generator |
| <input type="checkbox"/> G35-A – Natural Gas Compressor Stations (Flare/Glycol Dehydration Unit) | <input type="checkbox"/> G70-A – Class II Oil and Natural Gas Production Facility |

SECTION I. GENERAL INFORMATION

1. Name of applicant (as registered with the WV Secretary of State's Office): EnerVest Operating, LLC		2. Federal Employer ID No. (FEIN): . 76-0460809	
3. Applicant's mailing address: 300 Capitol Street, Suite 200, Charleston, WV, 25301		4. Applicant's physical address: _____ _____	
5. If applicant is a subsidiary corporation, please provide the name of parent corporation:			
6. WV BUSINESS REGISTRATION. Is the applicant a resident of the State of West Virginia? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			
<ul style="list-style-type: none"> - IF YES, provide a copy of the Certificate of Incorporation/ Organization / Limited Partnership (one page) including any name change amendments or other Business Registration Certificate as Attachment A. - IF NO, provide a copy of the Certificate of Authority / Authority of LLC / Registration (one page) including any name change amendments or other Business Certificate as Attachment A. 			

SECTION II. FACILITY INFORMATION

7. Type of plant or facility (stationary source) to be constructed, modified, relocated or administratively updated (e.g., coal preparation plant, primary crusher, etc.): natural gas compressor	8a. Standard Industrial Classification Classification (SIC) code: 1311	AND	8b. North American Industry System (NAICS) code: 211111
9. DAQ Plant ID No. (for existing facilities only): 109 - 00129	10. List all current 45CSR13 and other General Permit numbers associated with this process (for existing facilities only): _____ _____		

A: PRIMARY OPERATING SITE INFORMATION

11A. Facility name of primary operating site: ___ RavenCliff Compressor Station _____ _____	12A. Address of primary operating site: Mailing: ___ 300 Capitol Street, Suite 200, Charleston, WV, 25301 Physical: _____ _____	
13A. Does the applicant own, lease, have an option to buy, or otherwise have control of the proposed site? 9 YES 9 NO - IF YES, please explain: ___ Enervest has lease agreement with the land owner _____ _____ - IF NO, YOU ARE NOT ELIGIBLE FOR A PERMIT FOR THIS SOURCE.		
14A. - For Modifications or Administrative Updates at an existing facility, please provide directions to the present location of the facility from the nearest state road; - For Construction or Relocation permits, please provide directions to the proposed new site location from the nearest state road. Include a MAP as Attachment F. From Ravencliff post office head southeast on Glen Fork rd then turn right onto ravencliff road, Stay on ravencliff road for .6 miles then turn left onto McGraws Rd. Drive .25 miles to enervest office drive though parking out onto gravel road drive for .25 miles to compressor station. _____ _____		
15A. Nearest city or town: Sabine	16A. County: Wyoming	17A. UTM Coordinates: Northing (KM): ___ 457.478 _____ Easting (KM): ___ 4171.323 _____ Zone: ___ 17S _____
18A. Briefly describe the proposed new operation or change (s) to the facility: Swapping compressors		19A. Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits): Latitude: _____ Longitude: _____

B: 1ST ALTERNATE OPERATING SITE INFORMATION (only available for G20, G40, & G50 General Permits)

11B. Name of 1 st alternate operating site: _____ _____ _____	12B. Address of 1 st alternate operating site: Mailing: _____ Physical: _____ _____ _____
13B. Does the applicant own, lease, have an option to buy, or otherwise have control of the proposed site? 9 YES 9 NO - IF YES, please explain: _____ _____ - IF NO, YOU ARE NOT ELIGIBLE FOR A PERMIT FOR THIS SOURCE.	

14B. – For Modifications or Administrative Updates at an existing facility, please provide directions to the present location of the facility from the nearest state road; – For Construction or Relocation permits , please provide directions to the proposed new site location from the nearest state road. Include a MAP as Attachment F. _____ _____		
15B. Nearest city or town:	16B. County:	17B. UTM Coordinates: Northing (KM): _____ Easting (KM): _____ Zone: _____
18B. Briefly describe the proposed new operation or change (s) to the facility:		19B. Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits): Latitude: _____ Longitude: _____

C: 2ND ALTERNATE OPERATING SITE INFORMATION (only available for G20, G40, & G50 General Permits):

11C. Name of 2 nd alternate operating site: _____	12C. Address of 2 nd alternate operating site: Mailing: _____ Physical: _____	
13C. Does the applicant own, lease, have an option to buy, or otherwise have control of the proposed site? 9 YES 9 NO – IF YES, please explain: _____ _____ – IF NO, YOU ARE NOT ELIGIBLE FOR A PERMIT FOR THIS SOURCE.		
14C. – For Modifications or Administrative Updates at an existing facility, please provide directions to the present location of the facility from the nearest state road; – For Construction or Relocation permits , please provide directions to the proposed new site location from the nearest state road. Include a MAP as Attachment F. _____ _____		
15C. Nearest city or town:	16C. County:	17C. UTM Coordinates: Northing (KM): _____ Easting (KM): _____ Zone: _____
18C. Briefly describe the proposed new operation or change (s) to the facility:		19C. Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits): Latitude: _____ Longitude: _____

<p>20. Provide the date of anticipated installation or change:</p> <p style="text-align: center;">__ 9 __ / __ 30 __ / __ 15 __</p> <p><input type="checkbox"/> If this is an After-The-Fact permit application, provide the date upon which the proposed change did happen: :</p> <p style="text-align: center;">__ / __ / __</p>	<p>21. Date of anticipated Start-up if registration is granted:</p> <p style="text-align: center;">__ 9 __ / __ 30 __ / __ 15 __</p>
<p>22. Provide maximum projected Operating Schedule of activity/activities outlined in this application if other than 8760 hours/year. (Note: anything other than 24/7/52 may result in a restriction to the facility's operation).</p> <p>Hours per day __ 24 __ Days per week __ 7 __ Weeks per year __ 52 __ Percentage of operation __ 100 __</p>	

SECTION III. ATTACHMENTS AND SUPPORTING DOCUMENTS

<p>23. Include a check payable to WVDEP – Division of Air Quality with the appropriate application fee (per 45CSR22 and 45CSR13).</p>
<p>24. Include a Table of Contents as the first page of your application package.</p>
<p>All of the required forms and additional information can be found under the Permitting Section (General Permits) of DAQ's website, or requested by phone.</p>
<p>25. Please check all attachments included with this permit application. Please refer to the appropriate reference document for an explanation of the attachments listed below.</p> <ul style="list-style-type: none"> 9 ATTACHMENT A : CURRENT BUSINESS CERTIFICATE 9 ATTACHMENT B: PROCESS DESCRIPTION 9 ATTACHMENT C: DESCRIPTION OF FUGITIVE EMISSIONS 9 ATTACHMENT D: PROCESS FLOW DIAGRAM 9 ATTACHMENT E: PLOT PLAN 9 ATTACHMENT F: AREA MAP 9 ATTACHMENT G: EQUIPMENT DATA SHEETS AND REGISTRATION SECTION APPLICABILITY FORM 9 ATTACHMENT H: AIR POLLUTION CONTROL DEVICE SHEETS 9 ATTACHMENT I: EMISSIONS CALCULATIONS 9 ATTACHMENT J: CLASS I LEGAL ADVERTISEMENT 9 ATTACHMENT K: ELECTRONIC SUBMITTAL 9 ATTACHMENT L: GENERAL PERMIT REGISTRATION APPLICATION FEE 9 ATTACHMENT M: SITING CRITERIA WAIVER 9 ATTACHMENT N: MATERIAL SAFETY DATA SHEETS (MSDS) 9 ATTACHMENT O: EMISSIONS SUMMARY SHEETS 9 OTHER SUPPORTING DOCUMENTATION NOT DESCRIBED ABOVE (Equipment Drawings, Aggregation Discussion, etc.) <p>Please mail an original and two copies of the complete General Permit Registration Application with the signature(s) to the DAQ Permitting Section, at the address shown on the front page of this application. Please DO NOT fax permit applications. For questions regarding applications or West Virginia Air Pollution Rules and Regulations, please refer to the website shown on the front page of the application or call the phone number also provided on the front page of the application.</p>

SECTION IV. CERTIFICATION OF INFORMATION

This General Permit Registration Application shall be signed below by a Responsible Official. A Responsible Official is a President, Vice President, Secretary, Treasurer, General Partner, General Manager, a member of a Board of Directors, or Owner, depending on business structure. A business may certify an Authorized Representative who shall have authority to bind the Corporation, Partnership, Limited Liability Company, Association, Joint Venture or Sole Proprietorship. Required records of daily throughput, hours of operation and maintenance, general correspondence, Emission Inventory, Certified Emission Statement, compliance certifications and all required notifications must be signed by a Responsible Official or an Authorized Representative. If a business wishes to certify an Authorized Representative, the official agreement below shall be checked off and the appropriate names and signatures entered. Any administratively incomplete or improperly signed or unsigned Registration Application will be returned to the applicant.

FOR A CORPORATION (domestic or foreign)

G I certify that I am a President, Vice President, Secretary, Treasurer or in charge of a principal business function of the corporation

FOR A PARTNERSHIP

G I certify that I am a General Partner

FOR A LIMITED LIABILITY COMPANY

G I certify that I am a General Partner or General Manager

FOR AN ASSOCIATION

G I certify that I am the President or a member of the Board of Directors

FOR A JOINT VENTURE

G I certify that I am the President, General Partner or General Manager

FOR A SOLE PROPRIETORSHIP

G I certify that I am the Owner and Proprietor

G I hereby certify that (please print or type) James McKinney is an Authorized Representative and in that capacity shall represent the interest of the business (e.g., Corporation, Partnership, Limited Liability Company, Association Joint Venture or Sole Proprietorship) and may obligate and legally bind the business. If the business changes its Authorized Representative, a Responsible Official shall notify the Director of the Office of Air Quality immediately, and/or,

I hereby certify that all information contained in this General Permit Registration Application and any supporting documents appended hereto is, to the best of my knowledge, true, accurate and complete, and that all reasonable efforts have been made to provide the most comprehensive information possible

Signature  Responsible Official Date 9/16/15

Name & Title Sr. Vice President and General Manager EVOC

Signature _____ Authorized Representative (if applicable) Date _____

Applicant's Name _____

Phone & Fax _____ Phone _____ Fax _____

Email _____

Attachment A - Current Business Certificate

**WEST VIRGINIA
STATE TAX DEPARTMENT
BUSINESS REGISTRATION
CERTIFICATE**

ISSUED TO:
**ENERVEST OPERATING LLC EASTERN DIVISION
300 CAPITOL ST 200
CHARLESTON, WV 25301-1794**

BUSINESS REGISTRATION ACCOUNT NUMBER: 1051-6031

This certificate is issued on: **05/27/2011**

*This certificate is issued by
the West Virginia State Tax Commissioner
in accordance with Chapter 11, Article 12, of the West Virginia Code*

*The person or organization identified on this certificate is registered
to conduct business in the State of West Virginia at the location above.*

This certificate is not transferrable and must be displayed at the location for which issued.
This certificate shall be permanent until cessation of the business for which the certificate of registration was granted or until it is suspended, revoked or cancelled by the Tax Commissioner.

Change in name or change of location shall be considered a cessation of the business and a new certificate shall be required.

**TRAVELING/STREET VENDORS: Must carry a copy of this certificate in every vehicle operated by them.
CONTRACTORS, DRILLING OPERATORS, TIMBER/LOGGING OPERATIONS: Must have a copy of
this certificate displayed at every job site within West Virginia.**

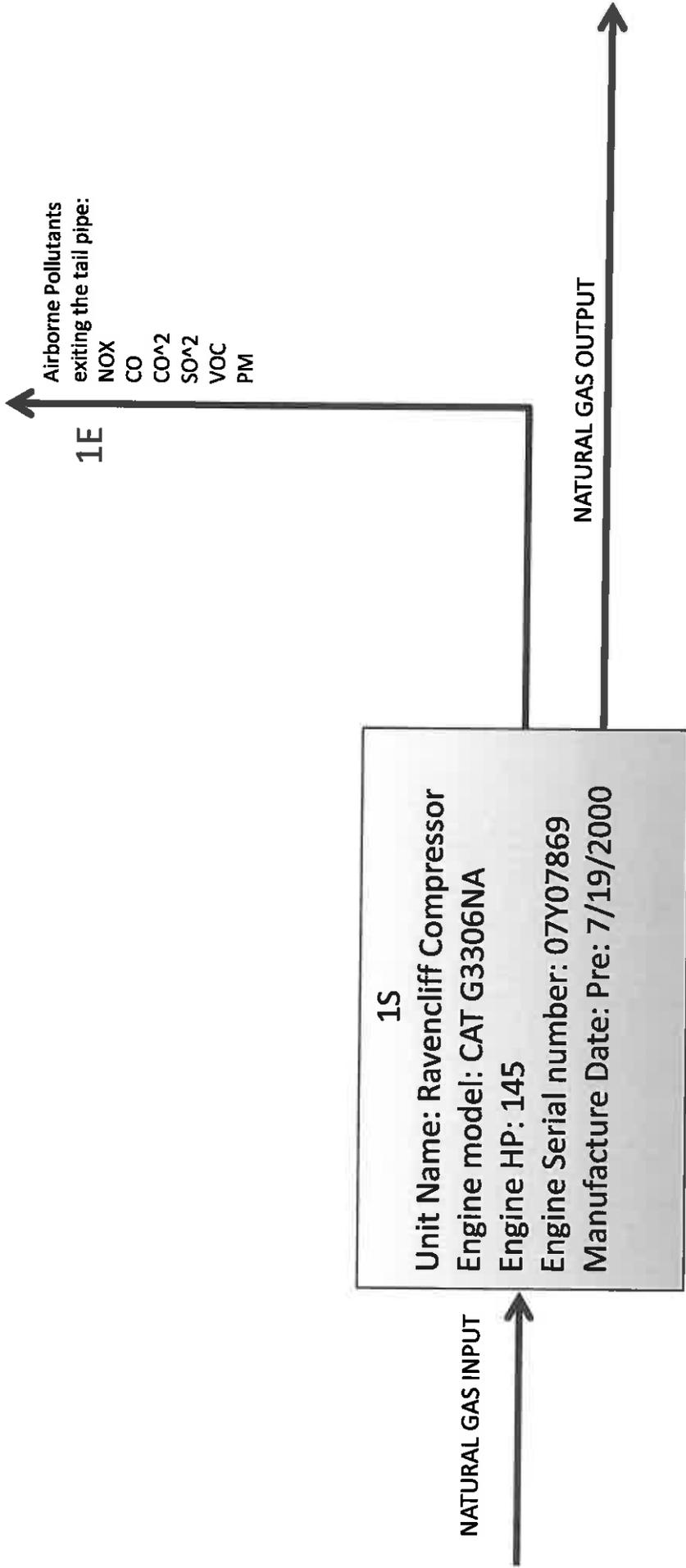
Attachment B - Process Description

Natural Gas is produced from Coalbed Methane wells as well as conventional wells where is then transported via pipeline to the Ravenclyff compressor station. Natural gas is then combusted in the engine and natural gas is compressed so that EnerVest may produce more efficiently.

Attachment C – Description of Fugitive Emissions

Fugitive emissions occur at the threaded and flanged connections of the piping on the site as well on the seals and connections on the compressor.

Attachment D – Process Flow Diagram



Attachment E – Plot Plan

EnerVest Operating, LLC

CE-1 Compressor
Wyoming Co. WV

Attachment "E"

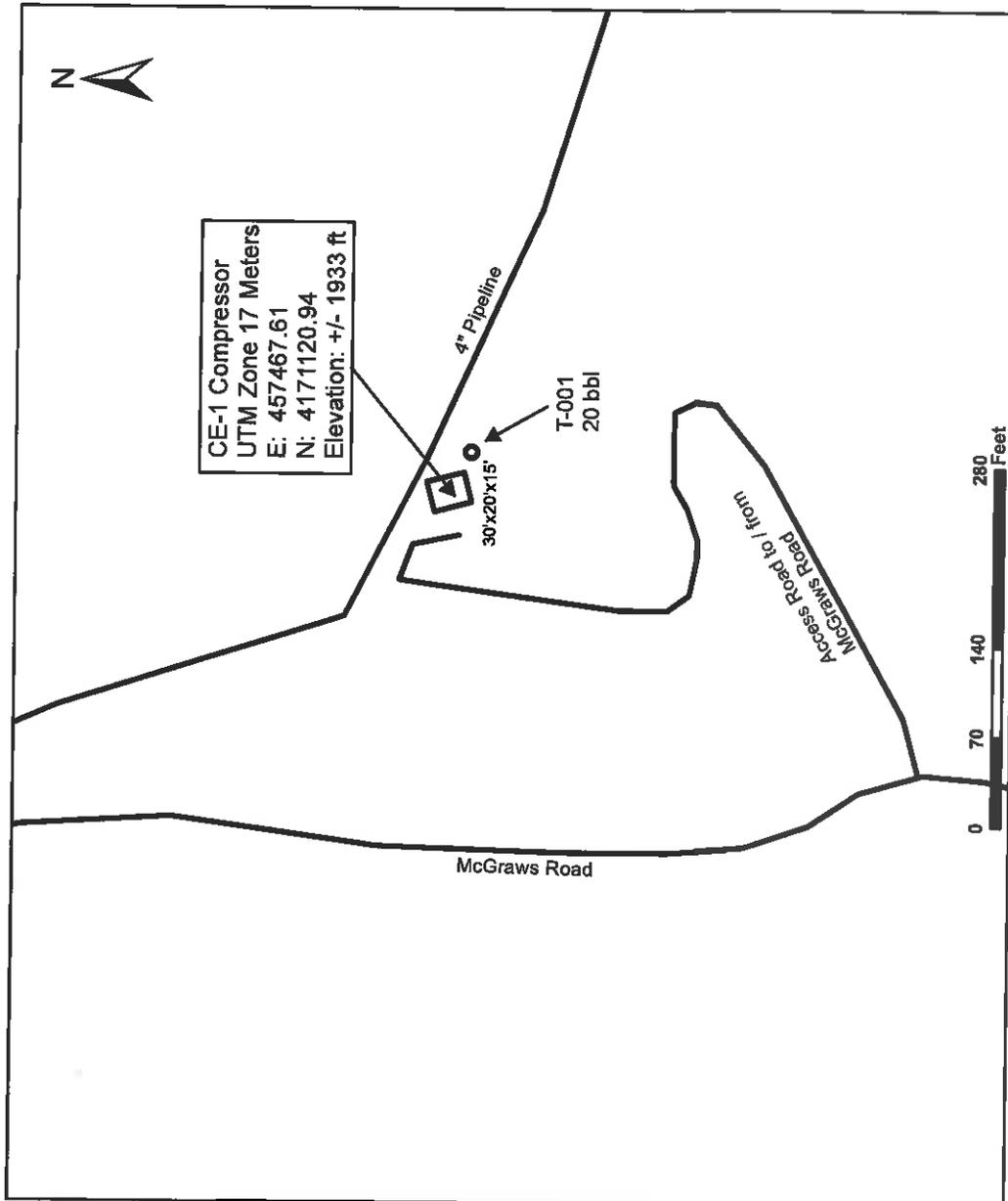
Base Elevation: +/- 1933 ft

Scale: 1in = 135 ft

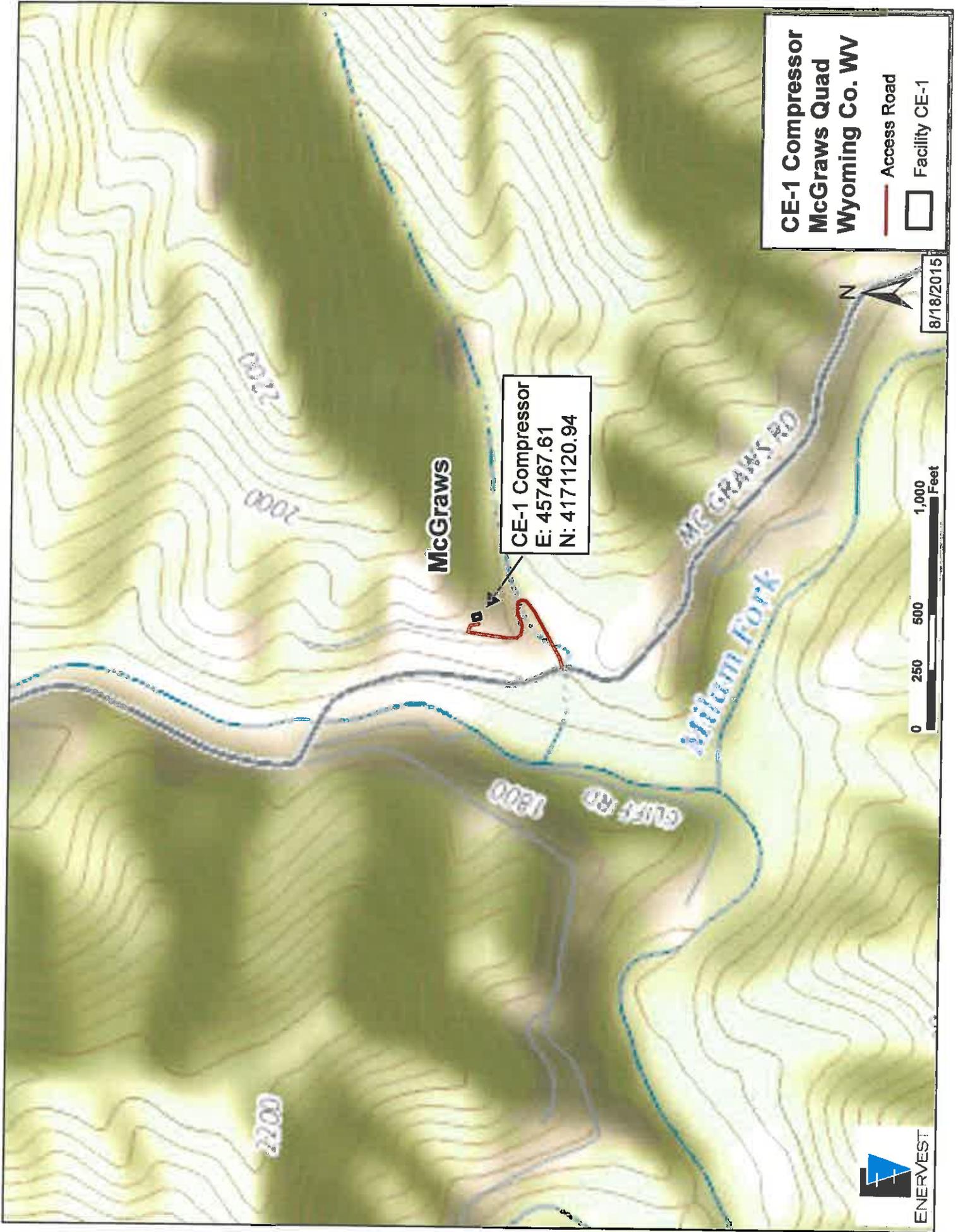
Map Date: 8/18/2015



ENERVEST



Attachment F – Area Map



Attachment G – Affected Source Sheets

G30-D REGISTRATION APPLICATION FORMS

NATURAL GAS COMPRESSOR/GENERATOR ENGINE DATA SHEET

Source Identification Number ¹		CE-1					
Engine Manufacturer and Model		Caterpillar G3306NA					
Manufacturer's Rated bhp/rpm		145 HP / 1800RPM					
Source Status ²							
Date Installed/Modified/Removed ³		9/20/15					
Engine Manufactured/Reconstruction Date ⁴		8/28/1995					
Is this a Certified Stationary Spark Ignition Engine according to 40CFR60 Subpart JJJJ? (Yes or No) ⁵		yes					
Engine, Fuel and Combustion Data	Engine Type ⁶		RB4S				
	APCD Type ⁷		NONE				
	Fuel Type ⁸		RG				
	H ₂ S (gr/100 scf)		0				
	Operating bhp/rpm		145 / 1800				
	BSFC (Btu/bhp-hr)		7543				
	Fuel throughput (ft ³ /hr)		1093				
	Fuel throughput (MMft ³ /yr)		9.58				
	Operation (hrs/yr)		8760				
Reference ⁹	Potential Emissions ¹⁰	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
MD	NO _x	7.707	33.758				
MD	CO	0.448	1.960				
MD	VOC	0.051	0.224				
AP-42	SO ₂	0.001	0.003				
AP-42	PM ₁₀	0.010	0.046				
MD	Formaldehyde	0.074	0.322				

- Enter the appropriate Source Identification Number for each natural gas-fueled reciprocating internal combustion compressor/generator engine located at the compressor station. Multiple compressor engines should be designated CE-1, CE-2, CE-3 etc. Generator engines should be designated GE-1, GE-2, GE-3 etc. If more than three (3) engines exist, please use additional sheets.
- Enter the Source Status using the following codes:

NS	Construction of New Source (installation)	ES	Existing Source
MS	Modification of Existing Source	RS	Removal of Source

NATURAL GAS FIRED BOILER/LINE HEATER DATA SHEET

Source ID # ¹	Status ²	Design Heat Input (mmBtu/hr) ³	Hours of Operation (hrs/yr) ⁴	Fuel Heating Value (Btu/scf) ⁵	

1. Enter the appropriate Source Identification Numbers (Source ID #) for each boiler or line heater located at the compressor station. Boilers should be designated BLR-1, BLR-2, BLR-3, etc. Heaters or Line Heaters should be designated HTR-1, HTR-2, HTR-3, etc. Enter glycol dehydration unit Reboiler Vent data on the *Glycol Dehydration Unit Data Sheet*.
2. Enter the Status for each boiler or line heater using the following:
 EXIST Existing Equipment
 REM Equipment Removed
 NEW Installation of New Equipment
3. Enter boiler or line heater design heat input in mmBtu/hr.
4. Enter the annual hours of operation in hours/year for each boiler or line heater.
5. Enter the fuel heating value in Btu/standard cubic foot.

STORAGE TANK DATA SHEET

Source ID # ¹	Status ²	Content ³	Volume ⁴	Dia ⁵	Throughput ⁶	Orientation ⁷	Liquid Height ⁸
T01	exist	Pipeline liquids / lube oils	820			Very	1'

1. Enter the appropriate Source Identification Numbers (Source ID #) for each storage tank located at the compressor station. Tanks should be designated T01, T02, T03, etc.
2. Enter storage tank Status using the following:
 EXIST Existing Equipment
 REM Equipment Removed
 NEW Installation of New Equipment
3. Enter storage tank content such as condensate, pipeline liquids; glycol (DEG or TEG), lube oil, etc.
4. Enter storage tank volume in gallons.
5. Enter storage tank diameter in feet.
6. Enter storage tank throughput in gallons per year.
7. Enter storage tank orientation using the following:
 VERT Vertical Tank
 HORZ Horizontal Tank
8. Enter storage tank average liquid height in feet.

General Permit Levels Construction, Modification, Relocation, Administrative Update

Class II General Permits – G10-C (Coal Preparation and Handling), G20-B (Hot Mix Asphalt), G30-D (Natural Gas Compressor Stations), G35-A (Natural Gas Compressor Stations with Glycol Dehydration Units, Flares, or Other Specified Control Devices Herein), G40-B (Nonmetallic Minerals Processing), G50-B (Concrete Batch Plant), G60-B (Emergency Generators)

Class I General Permit - G65-B (Emergency Generators)

General Permit	Public Notice	Review Period as 45CSR13	Application Fee	Criteria	Application Type
Class II General Permit (Construction)	30 days (applicant)	90 days	\$500 + applicable NSPS fees	6 lb/hr and 10 tpy of any regulated air pollutant OR 144 lb/day of any regulated air pollutant, OR 2 lb/hr of any hazardous air pollutant OR 5 tpy of aggregated HAP OR 45CSR27 TAP (10% increase if above BAT triggers or increase to BAT triggers) or subject to applicable standard or rule, but subject to specific eligibility requirements	Registration Application
Class II General Permit (Modification)	30 days (applicant)	90 days	\$500 + applicable NSPS fees	Same as Class II General Permit (Construction) but subject to specific eligibility requirements	Registration Application
Administrative Update (Class I)	None	60 days	None	Decrease in emissions or permanent removal of equipment OR more stringent requirements or change in MRR that is equivalent or superior	Registration Application or Written Request
Administrative Update (Class II)	30 days (applicant)	60 days	\$300 + applicable NSPS fees	No change in emissions or an increase less than Class II Modification levels	Registration Application
Relocation	30 days (applicant)	45 days	\$500 + applicable NSPS fees	No emissions increase or change in facility design or equipment	Registration Application
Class I General Permit	None	45 days	\$250	Same as Class II General Permit (Construction) but subject to specific eligibility requirements	Registration Application

Attachment I - Emissions Calculations

Rich Burn Engines 4 Stroke AP 42 Table 3.2-1

Emissions Unit ID:	Ravencliff CS	BHP	145	BTU Content of Gas:	1000
Fuel Usage in MMBTU/hr:	1.094	Fuel Consumption BTU/BHP-hr	7543	Date of manufacture:	7/19/200
Make:	Caterpillar	Model:	G3306NA	Serial number:	07Y03358
Pollutants		Emission Factor	lbs./hr	Tons Year	G/bhp-hr
SOX ton/yr		0.000588	0.001	0.003	0.002
PM10 (filterable)		0.009500	0.010	0.046	0.093
PM Condensable		0.009910	0.011	0.047	0.094
Calculations		EF	MMBTU x EF = lbs/hr	(lbs/hr)/2000	(lbs-hr*453.592)/BPH

Emissions Calculator Based on Spec sheet Data @ 100% Load

Pollutant	Unit BHP	Emissions g/BHP-Hr	Grams Per hour	lbs-hr	Tons/yr
NOX	145	24.11	3496.0	7.707	33.758
CO2	145	492	71340.0	157.278	688.876
CO	145	0.16	23.2	0.051	0.224
SO	145	1.4	203.0	0.448	1.960
Formaldehyde (H2CO)	145	0.23	33.4	0.074	0.322
Calculations			(BHP*G/HP-hr)*8760	g-hr * 0.00220462	lbs-hr*8760/2000

Fuel Usage Calculator

Rated BHP	BTU/BHP-Hr	MMBTU/ Hr	BTU Content:	Total BTU/Hr	Total BTU Year
145	7543	1.094	1000	1093735	9581118600
		(Bhp x Btu/Bhp-hr)/1,000,000		Bhp x Btu/Bhp-hr	TBtu/Bhp-hr x 8760
MMBTU/hr	MCF/HOUR	SCF / HOUR	SCF/YR	MCF/YEAR	MMSCF/YR
1.093735	1.093735	1093.735	9581118.6	95811186	9.5811186
	SCF-HR/1000	TBtu HR/ Btu Content	SCF-HR*8760	SCF-YR/1000	SCF-YR/1,000,000

G3306 NA

GAS COMPRESSION APPLICATION

GAS ENGINE SITE SPECIFIC TECHNICAL DATA



ENGINE SPEED (rpm):	1800	FUEL SYSTEM:	LPG IMPCO
COMPRESSION RATIO:	10.5:1	SITE CONDITIONS:	
JACKET WATER OUTLET (°F):	210	FUEL:	Nat Gas
COOLING SYSTEM:	JW+OC	FUEL PRESSURE RANGE(psig):	1.5-5.0
IGNITION SYSTEM:	MAG	FUEL METHANE NUMBER:	84.8
EXHAUST MANIFOLD:	WC	FUEL LHV (Btu/scf):	905
COMBUSTION:	Standard	ALTITUDE(ft):	500
EXHAUST O2 EMISSION LEVEL %:	2.0	MAXIMUM INLET AIR TEMPERATURE(°F):	77
SET POINT TIMING:	30.0	NAMEPLATE RATING:	145 bhp@1800rpm

RATING	NOTES	LOAD	MAXIMUM RATING	SITE RATING AT MAXIMUM INLET AIR TEMPERATURE		
			100%	100%	75%	50%
ENGINE POWER	(1)	bhp	145	145	109	73
INLET AIR TEMPERATURE		°F	77	77	77	77

ENGINE DATA						
FUEL CONSUMPTION (LHV)	(2)	Btu/bhp-hr	7543	7543	8064	9134
FUEL CONSUMPTION (HHV)	(2)	Btu/bhp-hr	8367	8367	8945	10132
AIR FLOW	(3)(4)	lb/hr	996	996	804	610
AIR FLOW WET (77°F, 14.7 psia)	(3)(4)	scfm	225	225	181	138
INLET MANIFOLD PRESSURE	(5)	in Hg(abs)	26.4	26.4	22.3	17.8
EXHAUST STACK TEMPERATURE	(6)	°F	1040	1040	993	943
EXHAUST GAS FLOW (@ stack temp, 14.5 psia)	(7)(4)	ft3/min	697	697	545	399
EXHAUST GAS MASS FLOW	(7)(4)	lb/hr	1051	1051	848	644

EMISSIONS DATA						
NOx (as NO2)	(8)	g/bhp-hr	24.11	24.11	21.09	22.10
CO	(8)	g/bhp-hr	1.40	1.40	1.50	1.50
THC (mol. wt. of 15.84)	(8)	g/bhp-hr	1.60	1.60	1.46	1.91
NMHC (mol. wt. of 15.84)	(8)	g/bhp-hr	0.24	0.24	0.22	0.29
NMNEHC (VOCs) (mol. wt. of 15.84)	(8)(9)	g/bhp-hr	0.16	0.16	0.15	0.19
HCHO (Formaldehyde)	(8)	g/bhp-hr	0.23	0.23	0.24	0.28
CO2	(8)	g/bhp-hr	492	492	526	596
EXHAUST OXYGEN	(10)	% DRY	2.0	2.0	2.4	2.6

HEAT REJECTION						
HEAT REJ. TO JACKET WATER (JW)	(11)	Btu/min	5652	5652	4964	4213
HEAT REJ. TO ATMOSPHERE	(11)	Btu/min	729	729	585	441
HEAT REJ. TO LUBE OIL (OC)	(11)	Btu/min	924	924	812	689

HEAT EXCHANGER SIZING CRITERIA			
TOTAL JACKET WATER CIRCUIT (JW+OC)	(12)	Btu/min	7326

CONDITIONS AND DEFINITIONS

Engine rating obtained and presented in accordance with ISO 3046/1, adjusted for fuel, site altitude and site inlet air temperature.
 100% rating at maximum inlet air temperature is the maximum engine capability for the specified fuel at site altitude and maximum site inlet air temperature.
 Max. rating is the maximum capability for the specified fuel at site altitude and reduced inlet air temperature.
 Lowest load point is the lowest continuous duty operating load allowed. No overload permitted at rating shown.

For notes information consult page three.

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Identification and Physical Characteristics

Identification

User Identification: T0011
 City: Huntington
 State: West Virginia
 Company: Enervest Operating
 Type of Tank: Vertical Fixed Roof Tank
 Description: Slop Tank

Tank Dimensions

Shell Height (ft): 6.00
 Diameter (ft): 5.00
 Liquid Height (ft) : 5.00
 Avg. Liquid Height (ft): 2.00
 Volume (gallons): 734.40
 Turnovers: 1.00
 Net Throughput(gal/yr): 734.40
 Is Tank Heated (y/n): N

Paint Characteristics

Shell Color/Shade: White/White
 Shell Condition: Good
 Roof Color/Shade: White/White
 Roof Condition: Good

Roof Characteristics

Type: Cone
 Height (ft) 0.50
 Slope (ft/ft) (Cone Roof) 0.20

Breather Vent Settings

Vacuum Settings (psig): -0.03
 Pressure Settings (psig) 0.03

Meteorological Data used in Emissions Calculations: Huntington, West Virginia (Avg Atmospheric Pressure = 14.33 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

T0011 - Vertical Fixed Roof Tank
Huntington, West Virginia

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.	Max.		Avg.	Min.	Max.					
Crude oil (RVF 5)	All	56.53	51.44	61.62	54.87	2.6870	2.4255	2.9708	50.0000			207.00	Option 4: RVF=5

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

T0011 - Vertical Fixed Roof Tank
Huntington, West Virginia

Components	Losses (lbs)			Total Emissions
	Working Loss	Breathing Loss		
Crude oil (RVP 5)	1.76	36.89		38.65

Attachment L - General Permit Registration Application Fee

**AFFIDAVIT OF PUBLICATION
THE WYOMING COUNTY REPORT
WYOMING COUNTY, WEST VIRGINIA**

COPY OF PUBLICATION

STATE OF WEST VIRGINIA
COUNTY OF WYOMING, to wit:

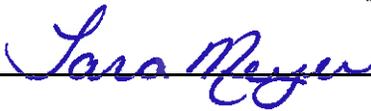
I, Tara Meyer, of The Wyoming County Report, a weekly zoned edition newspaper published in Wyoming County, West Virginia, do Certify that the notice attached hereto under the caption:

AIR QUALITY PERMIT NOTICE /
NOTICE OF APPLICATION
(Description of Notice)

was published once a week for oen successive week on the following day: August 31, 2015.

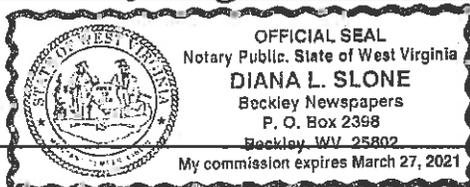
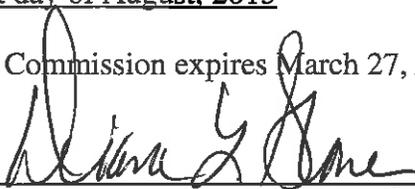
Publication Fee \$38.70

Signed:



Taken, subscribed and sworn before me this
31st day of August, 2015

My Commission expires March 27, 2021.



**AIR QUALITY
PERMIT NOTICE
Notice of Application**

Notice is given that EnerVest Operating, LLC has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a General Permit Registration for a Natural Gas Compressor located on Saulsville - Ravencloff Road, near Millam, in Wyoming County, West Virginia. The latitude and longitude coordinates are: Latitude: 37.688132 Longitude: -81.482283.

The applicant estimates the potential to discharge the following Regulated Air Pollutants will be: PM (0.047 TON/YR), PM10 (0.046 TON/YR), VOCS (0.224 TON/YR), CO (1.960 TON/YR), NOx (33.758 TON/YR), SO2 (0.003 TON/YR), and HAPS (0.322 TON/YR).

Startup of operation is planned to begin on or about the 30th day of September, 2015. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street SE, Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, extension 1250, during normal business hours. Dated this the 18th day of August, 2015.

By: EnerVest Operating, LLC.
James McKinney
Senior Vice President and General Manager
EVOC
300 Capitol Street,
Suite 200
Charleston, WV 25301
8-31-WCR-1; LG 57