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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.:	R13-3238A
Plant ID No.:	051-00213
Applicant:	Rover Pipeline LLC (Rover)
Facility Name:	Majorsville Compressor Station
Location:	Dallas, Marshall County
NAICS Code:	486210 (Natural Gas Transmission)
Application Type:	Modification
Received Date:	June 27, 2017
Engineer Assigned:	Jerry Williams, P.E.
Fee Amount:	$2,000.00
Date Received:	June 27, 2017
Complete Date:	July 27, 2017
Due Date:	October 25, 2017
Applicant Ad Date	June 28, 2017
Newspaper:	*Moundsville Daily Echo*
UTM's:	Easting: 538.013 km Northing: 4,423.729 km Zone: 17
Description:	Addition of one (1) engine and increase in catalyst control efficiency for formaldehyde.

DESCRIPTION OF PROCESS

The following process description was taken from Permit Application R13-3238A:

This modification proposes the following changes: Addition of a reconstructed 4SLB G3612 Caterpillar SI RICE, update of emission factors for engines CE-1S and CE-2S to reflect greater control of formaldehyde by way of oxidation catalyst to ensure HAP values remain below major source threshold, and increase in fugitive emissions at the facility as result of the engine addition.

The compressor engines (CE-1S – CE-3S) will be used to increase pressure of the natural gas to the transmission pipeline's pressure. The compressors are natural gas fired and have associated engine blowdowns (BD) and start-ups (SV). Pigging operations (PIG) of the pipeline are conducted periodically to clean the pipeline. Liquids from the pipeline are purged into the slop tank (TK-1). The slop tank contents are loaded via trucks (LOAD-1) for off-site disposal.

The two (2) waste water tanks (TK-2, TK-3) operate in series. TK-3 is an underground storage tank (UST) which collects cleanup and sump water. TK-3 is pumped to TK-2. TK-2 contents are loaded via trucks (LOAD-2) for off-site disposal.

The station also has a small natural gas heater (HTR-1), an emergency generator (GE-1), and miscellaneous tanks (TK-4, TK-5, TK-6, TK-7). There are also emissions from equipment component leaks (FUG) as well as fugitive emissions from unpaved roads (R1).

SITE INSPECTION

A site inspection was conducted on March 25, 2015 by Al Carducci of the DAQ Enforcement Section. According to Mr. Carducci, the site location is appropriate for the proposed facility.

Latitude: 39.96285
Longitude: -80.55492

Directions to the facility are as follows:

From Elm Grove, WV. Take I-70 East for 5.4 miles and turn left onto Dallas Pike. Continue on Dallas Pike for 5.3 miles. Turn right onto Number 2 Ridge Road and travel 2.7 miles. Turn right onto Golden Ridge Road and travel 0.7 miles. Take a slight left on Ruth Hill Road for 0.7 miles. Ruth Hill Road dead ends at the facility.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Emissions associated with this modification application consist of the combustion emissions from three (3) natural gas fired compressor engines (CE-1E, CE-2E, CE-3E), one (1) emergency generator (GE-1) one (1) 300 bbl (12,600 gal) slop tank (TK-1), one (1) 300 bbl waste water tank (TK-2), one (1) 2,500 gallon underground waste water tank (TK-3), four (4) 100 bbl (4,200 gal) miscellaneous storage tanks (new oil, coolant, used coolant, used oil), two (2) product loadout racks (LOAD-1, LOAD-2), one (1) infrared heater (HTR-1), compressor blowdowns (BD), engine starter vents (SV), pigging operations (PIG), unpaved road emissions (R1) and fugitive piping emissions. Fugitive emissions for the facility are based on calculation methodologies presented in TCEQ Technical Guidance Document for Equipment Leak Fugitives. The following table indicates which methodology was used in the emissions determination:

Emission Unit ID#	Process Equipment	Calculation Methodology
CE-1S, CE-2S, CE-3S	3,550 hp Caterpillar G3612 4SLB Reciprocating Internal Combustion Engine (RICE) w/ oxidation catalyst	Manufacturer's Data, EPA AP-42 Emission Factors
GE-1	766 hp Caterpillar C15 ACERT diesel fired emergency generator	Manufacturer's Data, EPA AP-42 Emission Factors
BD	Compressor Engine Blowdowns	Engineering Estimate
SV	Engine Starter Vents	Engineering Estimate
PIG	Pigging Operations	Engineering Estimate
FUG	Piping Fugitives	TCEQ Guidance Document
HTR-1	0.51 MMBTU/hr CIG Flameless Gas Infrared Catalytic Heater	EPA AP-42 Emission Factors
TK-1 – TK-7	Storage Tanks	EPA Tanks 4.09d
LOAD-1, LOAD-2	Slop Truck Loading, Waste Water Truck Loading	EPA AP-42 Emission Factors
R1	Unpaved Haul Roads	EPA AP-42 Emission Factors

The following table indicates the control device efficiencies that are required for this facility:

Emission Unit	Pollutant	Control Device	Control Efficiency
3,550 hp Caterpillar G3612 4SLB RICE w/ Oxidation Catalyst (CE-1S, CE-2S, CE-3S)	Carbon Monoxide	Oxidation Catalyst	80 %
	Volatile Organic Compounds		50 %
	Formaldehyde		70 %

The total facility PTE for the Majorsville Compressor Station is shown in the following table:

Pollutant	**R13-3238 PTE (tons/year)**	**R13-3238A PTE (tons/year)**	**Change (tons/year)**
Nitrogen Oxides	35.97	53.11	17.14
Carbon Monoxide	38.04	56.90	18.86
Volatile Organic Compounds	32.62	43.59	10.97
Particulate Matter-10/2.5	2.58	4.26	1.68
Sulfur Dioxide	0.22	0.29	0.07
Formaldehyde	8.92	8.02	-0.90
Total HAPs	12.00	11.45	-0.55
Carbon Dioxide Equivalent	28,150	42,009	13,859

Maximum detailed controlled point source emissions were calculated by Rover and checked for accuracy by the writer and are summarized in the table on the next page.

Rover Pipeline LLC – Majorsville Compressor Station (R13-3238A)

Emission	Source	NO_x		CO		VOC		PM-10/2.5		SO_2		Formaldehyde		Total HAPs		CO2e
Point ID#		lb/hr	ton/year	lb/hr	ton/year	lb/hr	ton/year	lb/hr	ton/year	lb/hr	ton/year	lb/hr	ton/year	lb/hr	ton/year	ton/year
CE-1E	Compressor Engine #1	4.30	17.14	4.74	18.85	3.47	13.82	0.27	1.17	0.02	0.07	0.67	2.67	0.87	3.80	13680
CE-2E	Compressor Engine #2	4.30	17.14	4.74	18.85	3.47	13.82	0.27	1.17	0.02	0.07	0.67	2.67	0.87	3.80	13680
CE-3E	Compressor Engine #3	4.30	17.14	4.74	18.85	3.47	13.82	0.27	1.17	0.02	0.07	0.67	2.67	0.87	3.80	13680
GE-1	Emergency Generator	6.48	1.47	0.65	0.15	0.07	0.02	0.06	0.01	0.34	0.08	<0.01	<0.01	<0.01	<0.01	128
HTR-1	Catalytic Heater	0.05	0.22	0.04	0.19	<0.01	0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	263
TK-1	Slop Storage Tank	-	-	-	-	0.32	<0.01	-	-	-	-	-	-	<0.01	<0.01	-
TK-2	Waste Water Tank	-	-	-	-	0.31	<0.01	-	-	-	-	-	-	<0.01	<0.01	-
TK-3	Waste Water Tank	-	-	-	-	0.07	<0.01	-	-	-	-	-	-	<0.01	<0.01	-
LOAD-1	Slop Truck Loading	-	-	-	-	0.67	<0.01	-	-	-	-	-	-	<0.01	<0.01	-
LOAD-2	Waste Water Loading	-	-	-	-	0.67	<0.01	-	-	-	-	-	-	<0.01	<0.01	-
BD	Compressor Engine Blowdowns	-	-	-	-	4.89	0.09	-	-	-	-	-	-	0.12	<0.01	99
SV	Engine Starter Vents	-	-	-	-	2.20	0.12	-	-	-	-	-	-	0.06	<0.01	130
PIG	Pigging Operations	-	-	-	-	24.58	0.04	-	-	-	-	-	-	0.61	0.04	41
Total Point Source		**19.43**	**53.11**	**14.91**	**56.90**	**44.19**	**41.73**	**0.87**	**3.54**	**0.40**	**0.29**	**2.01**	**8.02**	**3.39**	**11.45**	**41701**
FUG	Pipeline Fugitive Emissions	-	-	-	-	0.42	1.86	-	-	-	-	-	-	<0.01	<0.01	308
R1	Unpaved Haulroads	-	-	-	-	-	-	0.46	0.72	-	-	-	-	-	-	-
Total Fugitive		**0**	**0**	**0**	**0**	**0.42**	**1.86**	**0.46**	**0.72**	**0**	**0**	**0**	**0**	**0.00**	**0.00**	**308**
Total Sitewide		**19.43**	**53.11**	**14.91**	**56.90**	**44.61**	**43.59**	**1.33**	**4.26**	**0.40**	**0.29**	**2.01**	**8.02**	**3.39**	**11.45**	**42009**

REGULATORY APPLICABILITY

The following rules apply to this modification:

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)

A 45CSR13 modification permit applies to this source due to the fact that Rover is subject to 40CFR60 Subpart JJJJ and OOOOa.

Rover paid the appropriate application fee and published the required legal advertisement for a modification permit application.

45CSR16 (Standards of Performance for New Stationary Sources Pursuant to 40 CFR Part 60)

45CSR16 applies to this source by reference of 40CFR60, Subparts JJJJ and OOOOa. These requirements are discussed under those rules below.

45CSR22 (Air Quality Management Fee Program)

Rover is not subject to 45CSR30. The Majorsville Compressor Station is subject to 40CFR60 Subparts IIII, JJJJ and OOOOa, however they are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided they are not required to obtain a permit for a reason other than their status as an area source.

Rover is required to pay the appropriate annual fees and keep their Certificate to Operate current.

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

40CFR60 Subpart JJJJ establishes emission standards for applicable SI ICE.

The 3,550 hp Caterpillar G3612 RICE (CE-3E) was originally manufactured on July 1, 2002. The engine was rebuilt in 2017. Therefore, this engine will be classified as a reconstructed engine and will be subject to the emission standards in 40CFR60.4233 (f)(4).

Engine (CE-3E) will be subject to the following emission limits: NOx – 3.0 g/hp-hr (23.48 lb/hr); CO – 4.0 g/hp-hr (31.31lb/hr); and VOC – 1.0 g/hp-hr (7.83 lb/hr). Based on the catalyst specifications for these engines, the emission standards will be met.

The 3,550 hp Caterpillar G3612 RICEs (CE-3E) is not certified by the manufacturer to meet the emission standards listed in 40CFR60 Subpart JJJJ. Therefore, Rover will be required to conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or three (3) years, whichever comes first, to demonstrate compliance.

40CFR60 Subpart OOOOa (Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution for which Construction, Modification or Reconstruction Commenced after September 18, 2015)

EPA published its New Source Performance Standards (NSPS) and air toxics rules for the oil and gas sector on August 16, 2012. EPA published amendments to the Subpart on September 23, 2013 and June 3, 2016. 40CFR60 Subpart OOOOa establishes emission standards and compliance schedules for the control of the pollutant greenhouse gases (GHG). The greenhouse gas standard in this subpart is in the form of a limitation on emissions of methane from affected facilities in the crude oil and natural gas source category that commence construction, modification or reconstruction after September 18, 2015. This subpart also establishes emission standards and compliance schedules for the control of volatile organic compounds (VOC) and sulfur dioxide (SO_2) emissions from affected facilities that commence construction, modification or reconstruction after September 18, 2015. The effective date of this rule is August 2, 2016.

a. Each gas well affected facility, which is a single natural gas well.

There are no gas wells at this facility. Therefore, all requirements regarding gas well affected facilities under 40 CFR 60 Subpart OOOO would not apply.

b. Each centrifugal compressor affected facility, which is a single centrifugal compressor using wet seals that is located between the wellhead and the point of custody transfer to the natural gas transmission and storage segment. For the purposes of this subpart, your centrifugal compressor is considered to have commenced construction on the date the compressor is installed (excluding relocation) at the facility. A centrifugal compressor located at a well site, or an adjacent well site and servicing more than one well site, is not an affected facility under this subpart.

There are no centrifugal compressors located at this facility. Therefore, all requirements regarding centrifugal compressors under 40 CFR 60 Subpart OOOO would not apply.

c. Each reciprocating compressor affected facility, which is a single reciprocating compressor located between the wellhead and the point of custody transfer to the natural gas transmission and storage segment. For the purposes of this subpart, your reciprocating compressor is considered to have commenced construction on the date the compressor is installed (excluding relocation) at the facility. A reciprocating compressor located at a well site, or an adjacent well site and servicing more than one well site, is not an affected facility under this subpart.

There are reciprocating internal combustion engines located at Majorsville Compressor Station that were constructed after September 18, 2015. Therefore, the requirements regarding reciprocating compressors under 40 CFR 60 Subpart OOOOa will apply to the compressor engine for CE-3S. Rover will be required to perform the following:

- Replace the reciprocating compressor rod packing at least every 26,000 hours of operation or 36 months or installation of a rod packing emissions collection system.

- Demonstrate initial compliance by continuously monitoring the number of hours of operation or track the number of months since the last rod packing replacement.

- Submit the appropriate start up notifications.

- Submit the initial annual report for the reciprocating compressors.

- Maintain records of hours of operation since last rod packing replacement, records of the date and time of each rod packing replacement, and records of deviations in cases where the reciprocating compressor was not operated in compliance.

d. Pneumatic Controllers

- Each pneumatic controller affected facility, which is a single continuous bleed natural gas-driven pneumatic controller operating at a natural gas bleed rate greater than 6 scfh which commenced construction after August 23, 2011, and is located between the wellhead and the point of custody transfer to the natural gas transmission and storage segment and not located at a natural gas processing plant.

- Each pneumatic controller affected facility, which is a single continuous bleed natural gas-driven pneumatic controller which commenced construction after August 23, 2011, and is located at a natural gas processing plant.

All pneumatic controllers at the facility will be intermittent. Therefore, there are no applicable pneumatic controllers which commenced construction after September 18, 2015. Therefore, all requirements regarding pneumatic controllers under 40 CFR 60 Subpart OOOOa would not apply.

e. Each storage vessel affected facility, which is a single storage vessel, located in the oil and natural gas production segment, natural gas processing segment or natural gas transmission and storage segment.

40CFR60 Subpart OOOO defines a storage vessel as a unit that is constructed primarily of non-earthen materials (such as wood, concrete, steel, fiberglass, or plastic) which provides structural support and is designed to contain an accumulation of liquids or other materials. The following are not considered storage vessels:

- Vessels that are skid-mounted or permanently attached to something that is mobile (such as trucks, railcars, barges or ships), and are intended to be

located at a site for less than 180 consecutive days. If the source does not keep or are not able to produce records, as required by §60.5420(c)(5)(iv), showing that the vessel has been located at a site for less than 180 consecutive days, the vessel described herein is considered to be a storage vessel since the original vessel was first located at the site.

- Process vessels such as surge control vessels, bottoms receivers or knockout vessels.

- Pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere.

This rule requires that the permittee determine the VOC emission rate for each storage vessel affected facility utilizing a generally accepted model or calculation methodology within 30 days of startup, and minimize emissions to the extent practicable during the 30 day period using good engineering practices. For each storage vessel affected facility that emits more than 6 tpy of VOC, the permittee must reduce VOC emissions by 95% or greater within 60 days of startup. The compliance date for applicable storage vessels is October 15, 2013.

The storage vessels located at the Majorsville Compressor Station emit less than 6 tpy of VOC. Therefore, Rover is not required by this section to further reduce VOC emissions by 95%.

f. The group of all equipment, except compressors, within a process unit is an affected facility.

- Addition or replacement of equipment for the purpose of process improvement that is accomplished without a capital expenditure shall not by itself be considered a modification under this subpart.

- Equipment associated with a compressor station, dehydration unit, sweetening unit, underground storage vessel, field gas gathering system, or liquefied natural gas unit is covered by §§60.5400, 60.5401, 60.5402, 60.5421 and 60.5422 of this subpart if it is located at an onshore natural gas processing plant. Equipment not located at the onshore natural gas processing plant site is exempt from the provisions of §§60.5400, 60.5401, 60.5402, 60.5421 and 60.5422 of this subpart.

- The equipment within a process unit of an affected facility located at onshore natural gas processing plants and described in paragraph (f) of this section are exempt from this subpart if they are subject to and controlled according to subparts VVa, GGG or GGGa of this part.

The Majorsville Compressor Station is not a natural gas processing plant. Therefore, Leak Detection and Repair (LDAR) requirements for onshore natural gas processing plants would not apply.

g. Sweetening units located at onshore natural gas processing plants that process natural gas produced from either onshore or offshore wells.

- Each sweetening unit that processes natural gas is an affected facility; and
- Each sweetening unit that processes natural gas followed by a sulfur recovery unit is an affected facility.
- Facilities that have a design capacity less than 2 long tons per day (LT/D) of hydrogen sulfide (H_2S) in the acid gas (expressed as sulfur) are required to comply with recordkeeping and reporting requirements specified in §60.5423(c) but are not required to comply with §§60.5405 through 60.5407 and paragraphs 60.5410(g) and 60.5415(g) of this subpart.
- Sweetening facilities producing acid gas that is completely reinjected into oil-or-gas-bearing geologic strata or that is otherwise not released to the atmosphere are not subject to §§60.5405 through 60.5407, 60.5410(g), 60.5415(g), and 60.5423 of this subpart.

There are no sweetening units at the Majorsville Compressor Station. Therefore, all requirements regarding sweetening units under 40 CFR 60 Subpart OOOO would not apply.

h. Collection of fugitive emission components.

The rule requires quarterly leak monitoring at natural gas compressor stations. In addition to optical gas imaging (OGI), the rule allows owners/operators to use Method 21 with a repair threshold of 500 ppm as an alternative for finding and repairing leaks. Method 21 is an EPA method for determining VOC emissions from process equipment. The method utilizes a portable VOC monitoring instrument.

40CFR63 Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines)

Subpart ZZZZ establishes national emission limitations and operating limitations for HAPs emitted from stationary 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 engine (CE-3E) at the Majorsville Compressor Station is subject to the area source requirements for spark and compression ignition engines.

The applicability requirements for new stationary RICEs located at an area source of HAPs, is the requirement to meet the standards of 40CFR60 Subparts IIII and JJJJ. These requirements were outlined above. The proposed engines meet these standards.

Because these engines are not certified by the manufacturer, Rover will be required to perform an initial performance test within 180 days from startup, and subsequent testing every 8,760 hours or 3 years, whichever comes first.

The following rules do not apply to the facility:

45CSR14 (Permits for Construction and Major Modification of Major Stationary Sources of Air Pollutants)

45CSR19 (Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution which Cause or Contribute to Nonattainment)

On September 30, 2013, EPA approved a redesignation request and State Implementation Plan (SIP) revision submitted by the State of West Virginia. The West Virginia Department of Environmental Protection (WVDEP) requested that the West Virginia portion of the Wheeling, WV–OH fine particulate matter ($PM_{2.5}$) nonattainment area (''Wheeling Area'' or ''Area'') be redesignated as attainment for the 1997 annual $PM_{2.5}$ national ambient air quality standard (NAAQS).

The Majorsville Compressor Station is located in Marshall County, which is located in this metropolitan statistical area and is an attainment county for all pollutants. Therefore the Majorsville Compressor Station is not subject to 45CSR19.

As shown in the following table, Rover is not subject to 45CSR14 or 45CSR19 review. According to 45CSR14 Section 2.43.e, fugitive emissions are not included in the major source determination because it is not listed as one of the source categories in Table 1. Therefore, the fugitive emissions are not included in the PTE below.

Pollutant	**PSD (45CSR14) Threshold (tpy)**	**NANSR (45CSR19) Threshold (tpy)**	**Majorsville PTE (tpy)**	**45CSR14 or 45CSR19 Review Required?**
Carbon Monoxide	250	NA	56.90	No
Nitrogen Oxides	250	NA	53.11	No
Sulfur Dioxide	250	NA	0.29	No
Particulate Matter 2.5	250	NA	3.54	No
Ozone (VOC)	250	NA	41.73	No

45CSR30 (Requirements for Operating Permits)

Rover is not subject to 45CSR30. The Majorsville Compressor Station is subject to 40CFR60 Subparts IIII, JJJJ and OOOOa, however they are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided they are not required to obtain a permit for a reason other than their status as an area source.

40CFR60 Subpart Kb (Standards of Performance for VOC Liquid Storage Vessels)

40CFR60 Subpart Kb does not apply to storage vessels with a capacity less than 75 cubic meters. The largest tanks that Rover has installed are 47.70 cubic meters each. Therefore, Rover would not be subject to this rule.

40CFR60 Subpart KKK (Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants)

40CFR60 Subpart KKK applies to onshore natural gas processing plants that commenced construction after January 20, 1984, and on or Before August 23, 2011. The Majorsville Compressor Station is not a natural gas processing facility, therefore, Rover is not subject to this rule.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

The majority of non-criteria regulated pollutants fall under the definition of HAPs which, with some revision since, were 188 compounds identified under Section 112(b) of the Clean Air Act (CAA) as pollutants or groups of pollutants that EPA knows or suspects may cause cancer or other serious human health effects. The following HAPs are common to this industry. The following table lists each HAP's carcinogenic risk (as based on analysis provided in the Integrated Risk Information System (IRIS)):

HAPs	Type	Known/Suspected Carcinogen	Classification
Formaldehyde	VOC	Yes	Category B1 - Probable Human Carcinogen
Benzene	VOC	Yes	Category A - Known Human Carcinogen
Ethylbenzene	VOC	No	Inadequate Data
Toluene	VOC	No	Inadequate Data
Xylenes	VOC	No	Inadequate Data

All HAPs have other non-carcinogenic chronic and acute effects. These adverse health effects may be associated with a wide range of ambient concentrations and exposure times and are influenced by source-specific characteristics such as emission rates and local meteorological conditions. Health impacts are also dependent on multiple factors that affect variability in humans such as genetics, age, health status (e.g., the presence of pre-existing disease) and lifestyle. As stated previously, *there are no federal or state ambient air quality standards for these specific chemicals*. For a complete discussion of the known health effects of each compound refer to the IRIS database located at *www.epa.gov/iris*.

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) or 45CSR19 (Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution which Cause or Contribute to Nonattainment) as shown in the table listed in the Regulatory Discussion section under 45CSR14/45CSR19.

SOURCE AGGREGATION

"Building, structure, facility, or installation" is defined as all the pollutant emitting activities which belong to the same industrial grouping, are located on one or more contiguous and adjacent properties, and are under the control of the same person.

The Source Determination Rule for the oil and gas industry was published in the Federal Register on June 3, 2016 and became effective on August 2, 2016. EPA defined the term "adjacent" and stated that equipment and activities in the oil and gas sector that are under common control will be considered part of the same source if they are located on the same site or on sites that share equipment and are within ¼ mile of each other.

The Majorsville Compressor Station will operate under SIC code 4922 (Natural Gas Transmission). There is one other compressor station operated by Rover that shares the same two-digit major SIC code of 49 for natural gas transmission. The Sherwood Compressor Station is located in Doddridge County is approximately 50 miles away. These compressor stations operate on different lateral pipelines.

There are no Rover properties in question that are considered to be on contiguous or adjacent property with the Majorsville Compressor Station. The closest Rover property is located approximately 50 miles from the proposed facility. Therefore, the properties in question are not considered to be on contiguous or adjacent property.

Because there are no facilities that are under common control, located on contiguous or adjacent properties and operating under the same standard industrial classification code, the emissions from the Majorsville Compressor Station should not be aggregated with other facilities in determining major source or PSD status.

MONITORING OF OPERATIONS

Rover will be required to perform the following monitoring:

- Monitor and record quantity of natural gas consumed for all engines and combustion sources.
- Monitor all applicable requirements of 40CFR60 Subparts IIII, JJJJ and OOOOa.

Rover will be required to perform the following recordkeeping:

- Maintain records of the amount of natural gas consumed and hours of operation for all engines and combustion sources.
- Maintain records of testing conducted in accordance with the permit. Said records shall be maintained on-site or in a readily accessible off-site location
- Maintain the corresponding records specified by the on-going monitoring requirements of and testing requirements of the permit.
- Maintain records of the visible emission opacity tests conducted per the permit.
- Maintain a record of all potential to emit (PTE) HAP calculations for the entire facility. These records shall include the natural gas compressor engines and ancillary equipment.
- Maintain records of all applicable requirements of 40CFR60 Subparts IIII, JJJJ and OOOOa.
- The records shall be maintained on site or in a readily available off-site location maintained by Rover for a period of five (5) years.

CHANGES TO R13-3238

Section 1.0 – Addition of CE-3S
Section 1.1 – Increase in formaldehyde control efficiency
Section 5.0 - Addition of CE-3S for RICE requirements
Section 6.0 – Removal of 45CSR2 requirements for HTR-1. This regulatory language was included in the original permit. However, this unit uses direct infrared radiant heat and is not classified as an indirect heat exchanger. Therefore, the unit would not be subject to 45CSR2.
Section 9.0 - Addition of CE-3S for 40CFR60 Subpart JJJJ RICE requirements
Section 11.0 - Addition of CE-3S for 40CFR60 Subpart OOOOa reciprocating compressor requirements
Section 12.0 - Addition of 40CFR60 Subpart OOOOa LDAR requirements
Section 13.0 - Addition of CE-3S for 40CFR63 Subpart ZZZZ requirements
Section 14.0 - Addition of blowdown, compressor startup and pigging operations

RECOMMENDATION TO DIRECTOR

The information provided in the permit application indicates that Rover meets all the requirements of applicable regulations. Therefore, impact on the surrounding area should be minimized and it is recommended that the Majorsville Compressor Station should be granted a 45CSR13 modification permit for their facility.

_____
Jerry Williams, P.E.
Engineer

_____
Date