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GENERAL PERMIT REGISTRATION APPLICATION
ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Registration No.:	G35-A107A
Plant ID No.:	033-00187
Applicant:	PDC Mountaineer, LLC
Facility Name:	PDC West Compressor
Location:	Clarksburg, Harrison County
SIC Code:	1311
Application Type:	Modification
Received Date:	March 11, 2015
Engineer Assigned:	Roy F. Kees, P.E.
Fee Amount:	$1,500
Date Received:	March 19, 2015
Complete Date:	April 14, 2015
Due Date:	May 29, 2015
Applicant Ad Date:	February 23, 2015
Newspaper:	*The Exponent Telegram*
UTM's:	Easting: 551.408 km Northing: 4347.731 km Zone: 17
Description:	Addition of four (4) new compressor engines.

TYPE OF PROCESS

The following process description was taken from Registration Application G35-A107A:

> A natural gas stream flows from the gathering system into the facility. Free liquids in the stream are removed via gravity separation and stored in one (1) tank on location. The natural gas then flows through one of two (2) Caterpillar G3516LE engine driven compressors which compresses the gas. The compressed natural gas is then routed through two TEG dehydration units with a 1 MMBtu/hr reboiler heater. Removed liquids are sent to the storage tanks. Most of the natural gas flows through a sales point to a central processing facility via a third party pipeline system. Some of the natural gas is re-routed to the compressor engines and reboilers. This modification proposes to add four (4) additional Caterpillar G3516LE driven compressors.

SITE INSPECTION

A site inspection was not deemed necessary by the writer at this time due to this being an existing compressor station. The new dehydration units will be located approximately 0.5 miles from the compressors, however, this will be considered as one facility.

Directions as given in the permit application are as follows:

I-79 to Route 50 West out of Clarksburg, WV. Follow Route 50W for approximately 3.5 miles to Old Route 50, left or south onto Davisson Run Road. Compressor site is ¼ mile on the right of Davisson Run Road.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Maximum controlled point source emissions from PDC's natural gas compressor station are summarized in the table below. The calculations were derived from manufacturer data as well as AP-42 and were found to be accurate by the writer

Source ID	Emission Source	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (tpy)
CE-1R	Caterpillar G3516B 1,380 bhp (Existing)	Nitrogen Oxides	1.52	6.66
		Carbon Monoxide	0.52	2.26
		Volatile Organic Compounds	0.73	3.20
		Sulfur Dioxide	<0.01	0.03
		Particulate Matter-10	0.09	0.40
		Formaldehyde	0.32	1.41
CE-2R	Caterpillar G3516B 1,380 bhp (Existing)	Nitrogen Oxides	1.52	6.66
		Carbon Monoxide	0.52	2.26
		Volatile Organic Compounds	0.73	3.20
		Sulfur Dioxide	<0.01	0.03
		Particulate Matter-10	0.09	0.40
		Formaldehyde	0.32	1.41
CE-3R	Caterpillar G3516B 1,380 bhp (New)	Nitrogen Oxides	1.52	6.66
		Carbon Monoxide	0.52	2.26
		Volatile Organic Compounds	0.73	3.20
		Sulfur Dioxide	<0.01	0.03
		Particulate Matter-10	0.09	0.40
		Formaldehyde	0.32	1.41
CE-4R	Caterpillar G3516B 1,380 bhp (New)	Nitrogen Oxides	1.52	6.66
		Carbon Monoxide	0.52	2.26
		Volatile Organic Compounds	0.73	3.20
		Sulfur Dioxide	<0.01	0.03
		Particulate Matter-10	0.09	0.40
		Formaldehyde	0.32	1.41

CE-5R	Caterpillar G3516B 1,380 bhp (New)	Nitrogen Oxides	1.52	6.66
		Carbon Monoxide	0.52	2.26
		Volatile Organic Compounds	0.73	3.20
		Sulfur Dioxide	<0.01	0.03
		Particulate Matter-10	0.09	0.40
		Formaldehyde	0.32	1.41
CE-6R	Caterpillar G3516B 1,380 bhp (New)	Nitrogen Oxides	1.52	6.66
		Carbon Monoxide	0.52	2.26
		Volatile Organic Compounds	0.73	3.20
		Sulfur Dioxide	<0.01	0.03
		Particulate Matter-10	0.09	0.40
		Formaldehyde	0.32	1.41
RSV-1	Dehy Still Vent 31 mmscf/day	Volatile Organic Compounds	0.20	0.88
		Benzene	<0.01	<0.01
		Ethylbenzene	<0.01	<0.01
		Toluene	<0.01	<0.01
		Xylenes	<0.01	<0.01
		n-Hexane	<0.01	<0.01
RBV-1	Reboiler 1.0 mmBtu/hr	Nitrogen Oxides	0.10	0.43
		Carbon Monoxide	0.08	0.36
		Volatile Organic Compounds	<0.01	0.02
		Sulfur Dioxide	<0.01	<0.01
		Particulate Matter-10	0.01	0.03
RSV-2	Dehy Still Vent 45 mmscf/day	Volatile Organic Compounds	0.20	0.89
		Benzene	<0.01	<0.01
		Ethylbenzene	<0.01	<0.01
		Toluene	<0.01	<0.01
		Xylenes	<0.01	<0.01
		n-Hexane	<0.01	<0.01
RBV-2	Reboiler 1.0 mmBtu/hr	Nitrogen Oxides	0.10	0.43
		Carbon Monoxide	0.08	0.36
		Volatile Organic Compounds	<0.01	0.02
		Sulfur Dioxide	<0.01	<0.01
		Particulate Matter-10	0.01	0.03
TK-1	Storage Tank	Volatile Organic Compounds	0.02	0.10
		Total HAPs	<0.01	0.01
TK-2	Catch Tank	Volatile Organic Compounds	0.01	0.02
		Total HAPs	<0.01	<0.01

GENERAL PERMIT ELIGIBILITY

The proposed construction and operation of this facility meets the eligibility, siting, limitations, and emissions controls as specified in General Permit G35-A. PDC is subject to 40CFR60 Subpart JJJJ, because all of the engines were manufactured after 2010.

RECOMMENDATION TO DIRECTOR

PDC's request to update a natural gas compressor station at the Clarksburg, Harrison County, WV site meets the requirements of General Permit G35-A and all applicable rules and regulations and therefore should be granted a General Permit Registration to construct and operate the said facility.

Roy F. Kees, P.E.
Engineer – NSR Permitting

5/24/15
Date