

COMMONWEALTH OF PENNSYLVANIA
Department of Environmental Protection
Southwest Regional Office

MEMO

TO: Air Quality Case File OP-03-00125/ Valley Compressor Station

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DATE: December 30, 2016

RE: Title V Operating Permit Renewal Application OP-03-00125
Peoples Natural Gas Company, LLC
Valley Compressor Station
Cowanshannock Township, Armstrong County
AUTHS # 1164396; APS # 930437; PF #244318

BACKGROUND

On December 06, 2016, the Department received a Minor Modification Application from Peoples Natural Gas Company, LLC (PNG) for the Valley Compressor Station (Valley CS) in Cowanshannock Township, Armstrong County. PNG operates facilities in Pennsylvania for the production, storage, distribution, and transmission of natural gas. The permit application lists the SIC for Valley as 4924, *Transportation & Utilities – Natural Gas Distribution* and the NAICS as 221210, *Natural Gas Distribution*. Operation of the equipment at Valley results in the emission of various air contaminants. As a result of the potential levels of NO_x emitted, Valley is a major stationary source as defined in Title I, Part D of the Clean Air Act Amendments. As such, the facility is subject to the Title V permitting requirements adopted at 25 Pa. Code, Chapter 127, Subchapter G.

This Minor Operating Modification is being requested to incorporate one (1) compressor engine decommissioning (Source 103), and restricting the annual operating hours on each of the three remaining compressor engines (Source ID 101, 104, and 105). These changes are requested to become effective on January 1, 2017, and are expected to result in a decrease in overall emissions from the facility.

The facility receives natural gas from local production wells as well as smaller compression facilities. Valley is referred to as a field and relay station; the field engines are used to “pull” gas into the facility while the relay engines compress the gas in order to boost its pressure and deliver it into the pipelines for transportation to PNG’ distribution system. Before entering the high pressure distribution pipelines, the gas is filtered and dehydrated as well.

The current site source inventory from the previous Title V operating permit for Valley is as follows:

<u>Source ID #</u>	<u>Permit Designation</u>
031	Miscellaneous Combustion Equipment (0.4MMBtu Total)
032	Dehydration Unit (1.0 MMBtu)
101	#1 Engine-I-R KVG-62 (660 bhp)
103	#3 Engine-I-R KVS-48 (1320 bhp)
104	#4 Engine-C-B GMV-6 (600 bhp)
105	#5 Engine-C-B GMV-4 (400 bhp)
106	CAT G3406TA Emergency Generator (276 bhp)
107	Miscellaneous Process Equipment
109	Tank C-1 2000 Gallon Methanol Tank
110	(2) 55-Gallon Parts Washers
111	Tank B-1 2000 Gallon Ethylene Glycol (50/50) Tank
C32	Dehy Thermal Oxidizer

Valley CS is currently operating under the Title V Operating Permit 03-00125 issued on September 23, 2016, and set to expire on September 23, 2021. As already stated, the minor modification is for decommission Source ID #103 (Engine #3 Engine-I-R KVS-48) rated at 1,320 bhp and reduce the hours of operation of three existing compressor engines; (Source ID 101, 104, and 105) as follows:

1. Source ID 101; #1 Engine-I-R KVG-62 (660 bhp)

Annual hours of operation will be reduced from 8,760 hours to 8,200 hours, accordingly the potential NO_x, CO, and VOC emissions will be reduced as shown below in Table 1 with the above mentioned changes.

**Table: 1
Emission Reduction for Source ID 101**

Pollutant	Change in Actual Emissions
NO _x	(-) 2.44 tpy
CO	(-) 1.23 tpy
VOC	(-) 0.62 tpy

2. Source ID 104: #4 Engine-C-B GMV-6 (600 bhp)

Annual hours of operation will be reduced from 8,760 hours to 5,825 hours, accordingly the potential NO_x, CO, and VOC emissions will be reduced as shown below in Table 2 with the above mentioned changes.

Table: 2
Emission Reduction for Source ID 104

Pollutant	Change in Actual Emissions
NO _x	(-) 11.61 tpy
CO	(-) 5.88 tpy
VOC	(-) 2.93 tpy

3. Source ID 105: #5 Engine-C-B GMV-4 (400 bhp)

Annual hours of operation will be reduced from 8,760 hours to 3,800 hours, accordingly the potential NO_x, CO, and VOC emissions will be reduced as shown below in Table 3 with the above mentioned changes.

Table: 3
Emission Reduction for Source ID 105

Pollutant	Change in Actual Emissions
NO _x	(-) 34.46 tpy
CO	(-) 4.46 tpy
VOC	(-) 2.22 tpy

The Minor Operating Permit Modification is decommissioning Source 103; #3 Engine-I-R KVS-48 (1320 bhp). The NO_x, CO, and VOC emissions will be reduced on removing Engine #3 from services as shown below in Table 4.

Table: 4
Emission Reduction for Source ID 105

Pollutant	Change in Actual Emissions
NO _x	(-) 76.20 tpy
CO	(-) 38.60 tpy
VOC	(-) 19.30 tpy

Valley CS is a major stationary source for NO_x as defined in Title I, Part D of the Clean Air Act

Amendments. As such, the facility is subject to the Title V permitting requirements adopted pursuant to 25 Pa. Code, Chapter 127, Subchapter G Additional RACT Requirements for Major Sources of NO_x and VOCs (“RACT II”) became effective on April 23, 2016. RACT II applies to major NO_x and VOC emitting facilities that were in existence on or before July 20, 2012. RACT II does not apply to the owner or operator of a facility which is not a major NO_x and/or VOC emitting facility on or before January 1, 2017. PNG’s modification request limits the potential NO_x emissions below major thresholds which alleviates PNG from RACT II requirements. Potential NO_x emissions will be reduced from 221.71 tpy to 97.0 tpy with the above mentioned changes.

Facility-wide emissions will be reduced as follows per Table 5

Table: 5

Source ID	NO _x (tpy)	CO (tpy)	VOC (tpy)
101	-2.44	-1.23	-0.62
104	-11.61	-5.88	-2.93
105	-34.46	-4.46	-2.22
103	-76.20	-38.60	-19.30
Total Reduction	-124.71	-50.17	-25.07

The following conditions will be incorporated into the operating permit:

- Source 101 shall not exceed 8,200 hours per consecutive 12-month period and shall not emit more than 35.71 tons of NO_x per consecutive 12-month period.
- Source 104 shall not exceed 5,825 hours per consecutive 12-month period and shall not emit more than 23.04 tons of NO_x per consecutive 12-month period.
- Source 105 shall not exceed 3,800 hours per consecutive 12-month period and shall not emit more than 26.41 tons of NO_x per consecutive 12-month period.

Source 103 will be decommissioned/dismantled from the site and removed from the operating permit. PNG will be required to notify the Department in writing on how and when Source 103 is decommissioned.

The requested modification limits the NO_x emissions below major threshold values. Valley CS is already non-major for VOC. Therefore, the facility is no longer considered a major source for

NO_x and the Title V Operating Permit will be converted to a Synthetic Minor Operating Permit.

CONCLUSIONS AND RECOMMENDATIONS

Pursuant to 25 Pa Code §127.462(c), the applicant notified the municipality (South Bend Township and Armstrong County) and EPA Region III that was received on December 2, 2016. Valley CS is not located within 50 miles of any state who's air quality may be affected by the proposed change. All notifications were received by November 29, 2016. The applicant also published a notice in Trib Total Media on November 21, 22, and 23, 2016. All notices clearly indicated that any person may comment to the Department and the facility concerning the proposed change within 21 days from the date of submission of the proposed minor permit modification to the Department and EPA. No comments were received to date.

It is my recommendation that the Minor Operating Permit Modification for Peoples Natural Gas Co., LLC / Valley Compressor Station, SOOP 03-00125, be issued.