



**west virginia department of environmental protection**

Division of Air Quality  
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**ENGINEERING EVALUATION / FACT SHEET**

**BACKGROUND INFORMATION**

Application No.: R13-3092A  
Plant ID No.: 017-00057  
Applicant: Crestwood Marcellus Midstream LLC (Crestwood)  
Facility Name: Perkins Compressor Station  
Location: Salem, Doddridge County  
NAICS Code: 221210 (Natural Gas Distribution)  
Application Type: Modification  
Received Date: May 14, 2014  
Engineer Assigned: Jerry Williams, P.E.  
Fee Amount: \$1,000.00  
Date Received: May 14, 2014  
Complete Date: June 9, 2014  
Due Date: September 7, 2014  
Applicant Ad Date: May 20, 2014  
Newspaper: *The Herald Record*  
UTM's: Easting: 535.021 km      Northing: 4,344.449 km      Zone: 17  
Description: Modification of a natural gas compressor station for as-built changes.

**Promoting a healthy environment.**

## DESCRIPTION OF PROCESS

Natural gas from surrounding pipelines will enter the facility through two (2) receivers and associated slug catchers. From there, the natural gas will be metered and routed through a scrubber and filter separator. Any produced liquids from the scrubber or separator are sent to the 400 barrel (bbl) settling tank (T-1). Natural gas from the filter separator is sent to one (1) of ten (10) 1,680 HP Waukesha compressor engines (CE-1 – CE-10). The ten (10) compressor engines are controlled with non-selective catalytic reduction (NSCR) catalysts and air-fuel ratio controllers. The compressed natural gas is then routed to another filter separator, with produced fluids going to the settling tank and natural gas going to the two (2) TEG dehydrators.

The two (2) TEG dehydrators each contain a flash gas tank and 1.5 MMBtu/hr reboiler. The dehydrators have a design rate of 60 million standard cubic feet per day (mmscfd) each. Within the dehydrator units, vent gas from the flash tank is routed to the reboilers (RBV-1, RBV-2) to be used as fuel, with an assumed 95% efficiency for combusting the gas. Emissions from the reboilers are routed to the atmosphere. The dehydrator still vents (RSV-1, RSV-2) are controlled by condensers and combustion recycle (CC1, CC2) to their respective reboilers (RBV-1, RBV-2). The dry natural gas from the dehydration process is either routed to a fuel gas scrubber, metered, and routed to the compressors as fuel gas or metered and sent to plant discharge.

All produced fluids enter one (1) 400 bbl settling tank (T-1) where the fluids settle out as either condensate or produced water. The produced water goes to two (2) 400 bbl produced water tanks (T-2, T-3) and the condensate goes to two (2) 400 bbl condensate tanks (T-4, T-5). Flashing only occurs at the settling tank as the fluids stabilize in the settling tank before going to the other storage tanks. All five (5) tanks are connected to a vapor recovery unit (VRU) where tank vapors are collected and recycled back into the gas system right before the initial filter scrubber. The produced fluids are trucked out via tanker trucks as needed (LR-1) with a projected capacity of 146,000 bbl/yr.

One (1) 400 horsepower (hp) natural gas fired generator will be utilized as power for the facility.

There will also be small storage tanks located at the facility for storage of waste oil, glycol makeup, compressor lube oil, coolant, and engine lube oil. Any emissions from the miscellaneous tanks are, based on the vapor pressures of the materials stored, considered insignificant. Fugitive emissions from component leaks and emissions from venting or blowdown events will also occur.

The purpose of this permit application is for the following:

- Revise the compressor engines horsepower (HP) rating from 1,627 HP to 1,680 HP on the ten (10) compressor engines (CE-1 – CE-10) to reflect revised information from the engine vendor.
- Add a new 250 kW (400 hp) emergency generator engine (GEN-1) instead of the previously permitted generator engines (GEN-1, GEN-2) which were never installed.
- Provide a revised NSCR catalyst specification sheet of the engine catalysts.

- Add a safety factor of 20% to the regenerator emissions for the glycol dehydration units (RSV-1, RSV-2) to account for gas composition variability.
- Revise glycol flash tank to be controlled by routing vapors to dehydrator reboiler for 95% control efficiency.
- Revise the vapor recovery unit (VRU) capture efficiency to 95%.
- Revise storage tank (T-1 – T-5) and loading rack (LR-1) throughputs to better reflect actual site throughputs.
- Minor revisions to storage tank capacities to reflect changes to the previously permitted storage tanks.

## SITE INSPECTION

A compliance inspection was conducted on June 3, 2014 by Doug Hammell of the DAQ Enforcement Section. The facility was operating in compliance.

Latitude: 39.24865  
Longitude: -80.59414

Directions as given in the permit application are as follows:

*From West Union: From the intersection of US Route 50 and State Route 23, travel south on County Route 50/73 for about one (1) miles to downtown Salem. Turn left on West Main Street and proceed for about 0.2 mile. Turn right onto South Street and proceed on South Street which becomes Patterson Road, then County Route 29/Patterson Fork Road for about 2.5 miles on County Route 29/Patterson Fork Road, then bear right onto County Route 17/Greenbrier Road. Proceed about 1.5 miles to 5435 Greenbrier Road, then turn right into the Perkins Compressor Station.*



ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Emissions associated with this modification application consist of the combustion emissions from ten (10) natural gas fired compressor engines (CE-1 – CE-10), one (1) emergency generator (GEN1), two (2) TEG dehydrator still vents (RSV-1, RSV-2), two (2) TEG dehydrator reboilers (RBV-1, RBV-2), five (5) 400 bbl tanks (condensate, produced water, settling) (T-1 – T-5), five (5) miscellaneous storage tanks (waste oil, glycol makeup, compressor lube oil, coolant, engine lube oil), one (1) product loadout rack (LR-1), two (2) vapor recovery units (VRU-1, VRU-2) and fugitive emissions. Fugitive emissions for the facility are based on calculation methodologies presented in EPA Protocol for Equipment Leak Emission Estimates. The following table indicates which methodology was used in the emissions determination:

<b>Emission Point ID#</b>	<b>Process Equipment</b>	<b>Calculation Methodology</b>
CE-1 – CE-10	1,680 hp Waukesha 7044 GSI Reciprocating Internal Combustion Engine (RICE) w/ NSCR	Manufacturer’s Data, EPA AP-42 Emission Factors
GEN1	400 HP Natural Gas Fired Emergency Generator	Manufacturer’s Data, EPA AP-42 Emission Factors
RSV-1 RSV-2	60 mmscfd TEG Dehydrator Still Vent w/ Condenser/Recycle	GRI-GlyCalc 4.0
RBV-1 RBV-2	1.5 MMBtu/hr TEG Dehydrator Reboiler	EPA AP-42 Emission Factors
T-1	400 bbl (16,800 gal) Produced Water/Condensate Settling Tank	EPA Tanks 4.09d and Gas Oil Ratio Method (Flashing)
T-2	400 bbl (16,800 gal) Produced Water Storage Tank	EPA Tanks 4.09d
T-3	400 bbl (16,800 gal) Produced Water Storage Tank	EPA Tanks 4.09d
T-4	400 bbl (16,800 gal) Condensate Storage Tank	EPA Tanks 4.09d
T-5	400 bbl (16,800 gal) Condensate Storage Tank	EPA Tanks 4.09d
T-6	2,000 gal Waste Oil Storage Tank	Negligible
T-7	1,000 gal Bulk Glycol Makeup Storage Tank	Negligible
T-8	2,000 gal Compressor Lube Oil Storage Tank	Negligible
T-9	1,000 gal Coolant Storage Tank	Negligible
T-10	2,000 gal Engine Lube Oil Storage Tank	Negligible
LR-1	14,600 bbl/yr Condensate 131,400 bbl/yr Produced Water Loadout Rack	EPA AP-42 Emission Factors, TCEQ Guidance. Submerged Loading
VRU-1	Vapor Recovery Unit #1	Electric Driven
VRU-2	Vapor Recovery Unit #2	Electric Driven

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

<b>Emission Unit</b>	<b>Pollutant</b>	<b>Control Device</b>	<b>Control Efficiency</b>
1,680 hp Waukesha 7044 GSI RICE w/ NSCR (CE-1 – CE-10)	Nitrogen Oxides	NSCR	96.3 %
	Carbon Monoxide		96.1 %
	Volatile Organic Compounds		22 %
	Formaldehyde		20 %
	Methane		37 %
60 mmscfd TEG Dehydrator Still Vents (RSV-1, RSV-2)	Volatile Organic Compounds	Condenser and Combustion Recycle	98 %
	Hazardous Air Pollutants		98 %

On January 1, 2014 (effective date of rule) there were revisions to the Greenhouse Gas (GHG) Rule that will affect the Global Warming Potential (GWP) values of several pollutants. The GWP for methane increased from 21 to 25 and nitrous oxide decreased from 310 to 298. Crestwood utilized these revised factors in this permit application in the calculation of their GHG potential.

The total facility emissions after this proposed modification are shown in the following table:

<b>Pollutant</b>	<b>Maximum Pre-Modification Annual Facility Wide Emissions (tons/year)</b>	<b>Maximum Post-Modification Annual Facility Wide Emissions (tons/year)</b>	<b>Net Facility Wide Emissions Changes (tons/year)</b>
Nitrogen Oxides	28.92	82.85	53.93
Carbon Monoxide	56.32	83.09	26.77
Volatile Organic Compounds	70.68	90.44	19.76
Particulate Matter-10/2.5	11.92	11.97	0.05
Sulfur Dioxide	0.31	0.37	0.06
Formaldehyde	2.22	6.51	4.29
Total HAPs	12.68	17.84	5.16

Maximum detailed controlled point source emissions were calculated by Crestwood and checked for accuracy by the writer and are summarized in the table on the next page. 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, therefore, CO<sub>2</sub>e emissions for Title V and PSD applicability purposes for the facility will be 91,759 tons per year.

## Crestwood Marcellus Midstream LLC – Perkins Compressor Station (R13-3092A)

Emission Unit ID#	Source	NO <sub>x</sub>		CO		VOC		PM-10/2.5		SO <sub>2</sub>		Formaldehyde		Total HAPs		CO <sub>2</sub> e
		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-1	Compressor Engine #1	1.85	8.12	1.85	8.12	1.13	4.94	0.27	1.19	<0.01	0.04	0.15	0.65	0.31	1.38	8910
CE-2	Compressor Engine #2	1.85	8.12	1.85	8.12	1.13	4.94	0.27	1.19	<0.01	0.04	0.15	0.65	0.31	1.38	8910
CE-3	Compressor Engine #3	1.85	8.12	1.85	8.12	1.13	4.94	0.27	1.19	<0.01	0.04	0.15	0.65	0.31	1.38	8910
CE-4	Compressor Engine #4	1.85	8.12	1.85	8.12	1.13	4.94	0.27	1.19	<0.01	0.04	0.15	0.65	0.31	1.38	8910
CE-5	Compressor Engine #5	1.85	8.12	1.85	8.12	1.13	4.94	0.27	1.19	<0.01	0.04	0.15	0.65	0.31	1.38	8910
CE-6	Compressor Engine #6	1.85	8.12	1.85	8.12	1.13	4.94	0.27	1.19	<0.01	0.04	0.15	0.65	0.31	1.38	8910
CE-7	Compressor Engine #7	1.85	8.12	1.85	8.12	1.13	4.94	0.27	1.19	<0.01	0.04	0.15	0.65	0.31	1.38	8910
CE-8	Compressor Engine #8	1.85	8.12	1.85	8.12	1.13	4.94	0.27	1.19	<0.01	0.04	0.15	0.65	0.31	1.38	8910
CE-9	Compressor Engine #9	1.85	8.12	1.85	8.12	1.13	4.94	0.27	1.19	<0.01	0.04	0.15	0.65	0.31	1.38	8910
CE-10	Compressor Engine #10	1.85	8.12	1.85	8.12	1.13	4.94	0.27	1.19	<0.01	0.04	0.15	0.65	0.31	1.38	8910
GEN1	Generator Engine	1.76	0.44	3.53	0.88	0.88	0.22	0.07	0.02	<0.01	<0.01	0.08	0.02	0.11	0.03	111
RSV-1	Dehydrator Still Vent	0.00	0.00	0.00	0.00	2.59	11.33	0.00	0.00	0.00	0.00	0.00	0.00	0.34	1.46	514
RBV-1	Dehydrator Reboiler	0.14	0.61	0.12	0.51	0.01	0.03	0.01	0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	734
RSV-2	Dehydrator Still Vent	0.00	0.00	0.00	0.00	2.59	11.33	0.00	0.00	0.00	0.00	0.00	0.00	0.34	1.46	514
RBV-2	Dehydrator Reboiler	0.14	0.61	0.12	0.51	0.01	0.03	0.01	0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	734
T-1	Settling Tank	0.00	0.00	0.00	0.00	16.12	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05	55
T-2	Condensate Tank	0.00	0.00	0.00	0.00	0.02	0.10	0.00	0.00	0.00	0.00	0.00	0.00	<0.01	0.01	0
T-3	Condensate Tank	0.00	0.00	0.00	0.00	0.02	0.10	0.00	0.00	0.00	0.00	0.00	0.00	<0.01	0.01	0
T-4	Produced Water Tank	0.00	0.00	0.00	0.00	<0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	<0.01	0.01	0
T-5	Produced Water Tank	0.00	0.00	0.00	0.00	<0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	<0.01	0.01	0
<b>Total Point Source</b>		<b>20.54</b>	<b>82.85</b>	<b>22.27</b>	<b>83.09</b>	<b>33.54</b>	<b>75.57</b>	<b>2.79</b>	<b>11.97</b>	<b>0.09</b>	<b>0.37</b>	<b>1.58</b>	<b>6.51</b>	<b>3.90</b>	<b>16.82</b>	<b>91759</b>

Fugitive	Engine Rod Packing	0.00	0.00	0.00	0.00	0.05	0.20	0.00	0.00	0.00	0.00	0.00	0.00	<0.01	0.04	44
LR-1	Loadout Rack	0.00	0.00	0.00	0.00	37.80	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.02	0
Fugitive	Component Leak	0.00	0.00	0.00	0.00	NA	8.72	0.00	0.00	0.00	0.00	0.00	0.00	NA	0.87	600
Fugitive	Venting Episodes	0.00	0.00	0.00	0.00	NA	4.42	0.00	0.00	0.00	0.00	0.00	0.00	NA	0.09	823
<b>Total Fugitive</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>37.85</b>	<b>14.87</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.36</b>	<b>1.02</b>	<b>1467</b>
<b>Total Sitewide</b>		<b>20.54</b>	<b>82.85</b>	<b>22.27</b>	<b>83.09</b>	<b>71.39</b>	<b>90.44</b>	<b>2.79</b>	<b>11.97</b>	<b>0.09</b>	<b>0.37</b>	<b>1.58</b>	<b>6.51</b>	<b>4.26</b>	<b>17.84</b>	<b>93226</b>

## 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)

45CSR13 applies to this source due to the fact that Crestwood will exceed the modification threshold of 6 lb/hr and 10 ton/year of emissions for nitrogen oxides and carbon monoxide.

Crestwood paid the appropriate application fee and published the required legal advertisement for a construction permit application.

**45CSR22** (Air Quality Management Fee Program)

Crestwood is not subject to 45CSR30. The Perkins Compressor Station is subject to 40CFR60 Subparts JJJJ and OOOO, 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.

Crestwood 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 1,680 hp Waukesha 7044 GSI RICEs (CE-1 – CE-10) were manufactured after the July 1, 2010 date for engines with a maximum rated power capacity greater than or equal to 500 hp.

The proposed 1,680 hp Waukesha 7044 GSI RICEs (CE-1 – CE-10) will be subject to the following emission limits: NO<sub>x</sub> – 1.0 g/hp-hr (3.71 lb/hr); CO – 2.0 g/hp-hr (7.42 lb/hr); and VOC – 0.7 g/hp-hr (2.59 lb/hr). Based on the manufacturer's specifications for these engines and catalysts, the emission standards will be met.

The proposed 1,680 hp Waukesha 7044 GSI RICEs (CE-1 – CE-10) are not certified by the manufacturer to meet the emission standards listed in 40CFR60 Subpart JJJJ. Therefore, Crestwood 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.

The proposed new emergency generator (GEN-1) is a certified stationary spark ignition internal combustion engine. Therefore, this engine must be operated and maintained in accordance with the manufacturer's emission related written instructions. If the certified

engine is not operated and maintained appropriately, the engine will be a non-certified engine and must demonstrate compliance with the emission standards through performance testing.

**40CFR63 Subpart HH** (National Emission Standards for Hazardous Air Pollutants for Oil and Natural Gas Production Facilities)

Subpart HH establishes national emission limitations and operating limitations for HAPs emitted from oil and natural gas production facilities located at major and area sources of HAP emissions. The glycol dehydration unit at the Perkins Compressor Station is subject to the area source requirements for glycol dehydration units. However, because the facility is an area source of HAP emissions and the actual average benzene emissions from the glycol dehydration unit is below 0.90 megagram per year (1.0 tons/year) it is exempt from all requirements of Subpart HH except to maintain records of actual average flowrate of natural gas to demonstrate a continuous exemption status.

**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 engines (CE-1 – CE-10) at the Perkins Compressor Station are subject to the area source requirements for non-emergency spark 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 Subpart JJJJ. These requirements were outlined above. The proposed engine meets these standards.

Because these engines will not be certified by the manufacturer, Crestwood 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:

**45CSR30** (Requirements for Operating Permits)

Crestwood is not subject to 45CSR30. The Perkins Compressor Station is subject to 40CFR60 Subparts JJJJ and OOOO, 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 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 Perkins Compressor Station is not a natural gas processing facility, therefore, Crestwood is not subject to this rule.

**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)

The Perkins Compressor Station is located in Doddridge County, which is an unclassified county for all criteria pollutants, therefore 45CSR19 is not applicable to the Perkins Compressor Station.

As shown in the following table, Crestwood is not a major source 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, therefore, CO<sub>2e</sub> emissions for Title V and PSD applicability purposes for the facility will be 91,759 tons per year.

<b>Pollutant</b>	<b>PSD (45CSR14) Threshold (tpy)</b>	<b>NANSR (45CSR19) Threshold (tpy)</b>	<b>Perkins PTE (tpy)</b>	<b>45CSR14 or 45CSR19 Review Required?</b>
Carbon Monoxide	250	NA	83.09	No
Nitrogen Oxides	250	NA	82.85	No
Sulfur Dioxide	250	NA	0.37	No
Particulate Matter 2.5	250	NA	11.97	No
Ozone (VOC)	250	NA	75.57	No

## 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. Crestwood included the following HAPs as emitted in substantive amounts in their emissions estimate: Benzene, Ethylbenzene, Formaldehyde, Toluene, and Xylene. 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](http://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 Perkins Compressor Station is located in Doddridge County and will be operated by Crestwood.

- The Perkins Compressor Station will operate under SIC code 4932 (Natural Gas Distribution). There are other compressor stations operated by Crestwood that share the same two-digit major SIC code of 49 for natural gas transmission. Therefore, the Perkins Compressor Station does share the same SIC code as other Crestwood compressor stations.
- “Contiguous or Adjacent” determinations are made on a case by case basis. These determinations are proximity based, and it is important to focus on this and whether or not it meets the common sense notion of a plant. The terms “contiguous” or “adjacent” are not defined by USEPA. Contiguous has a dictionary definition of being in actual contact; touching along a boundary or at a point. Adjacent has a dictionary definition of not distant; nearby; having a common endpoint or border.

There are no Crestwood properties in question that are considered to be on contiguous or adjacent property with the Perkins Compressor Station. The closest Crestwood facility is more than one (1) mile from this site. The land between these sites is not owned or managed by Crestwood. Operations separated by these distances do not meet the common sense notion of a plant. Therefore, the properties in question are not considered to be on contiguous or adjacent property.

- Common control. The natural gas well sites that supply the incoming natural gas streams to the Perkins Compressor Station are not under common control, and are owned and operated by Crestwood Resources.

Because the facilities are not considered to be on contiguous or adjacent properties, the emissions from the Perkins Compressor Station should not be aggregated with other facilities in determining major source or PSD status.

## MONITORING OF OPERATIONS

Crestwood 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 JJJJ and OOOO.

Crestwood 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 JJJJ and OOOO.
- The records shall be maintained on site or in a readily available off-site location maintained by Crestwood for a period of five (5) years.

## RECOMMENDATION TO DIRECTOR

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

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Jerry Williams, P.E.  
Engineer

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Date