



west virginia department of environmental protection

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Earl Ray Tomblin, Governor  
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**MEMORANDUM**

**To:** Bev McKeone  
**From:** Jerry Williams   
**Date:** June 29, 2016  
**Subject:** R13-3068B, Triad Hunter, LLC (Triad) – Buffalo Run Production Facility (103-00063)

**SUMMARY**

Triad submitted R13-3068B on April 29, 2016. Permit application R13-3068B was submitted to replace one (1) compressor engine at the facility. The permitted Caterpillar G342NA compressor engine will be replaced with a Caterpillar G3306TA compressor engine. There are no other proposed changes.

The Caterpillar G3306TA compressor engine is controlled by a Miratech NSCR catalyst. The following table indicates the control efficiencies required of this catalyst:

<b>Pollutant</b>	<b>Control Efficiency</b>
Nitrogen Oxides	92 %
Carbon Monoxide	91 %
Volatile Organic Compounds	82 %
Formaldehyde	92 %

The following table represents the maximum emissions associated with this engine:

<b>Pollutant</b>	<b>Maximum Hourly Emissions (lb/hr)</b>	<b>Maximum Annual Emissions (ton/year)</b>
Nitrogen Oxides	0.58	2.53
Carbon Monoxide	0.65	2.85
Volatile Organic Compounds (includes Formaldehyde)	0.02	0.08
Total Hazardous Air Pollutants	0.13	0.58

The total potential to emit (PTE) after this proposed administrative update 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	4.52	4.25	-0.27
Carbon Monoxide	4.42	4.29	-0.13
Volatile Organic Compounds	1.54	2.50	0.96
Particulate Matter-10/2.5	0.31	0.29	-0.02
Sulfur Dioxide	0.02	0.02	0
Total HAPs	0.30	1.15	0.85

40CFR60 Subpart JJJJ regulates stationary spark ignition internal combustion engines. For engines with a maximum engine power less than 500 hp, the rule manufacture applicability date is July 1, 2008. The proposed Caterpillar G3306TA compressor engine was manufactured on February 6, 2007. Therefore, this engine is not subject to 40CFR60 Subpart JJJJ. This engine is considered “new” with respect to 40CFR63 Subpart ZZZZ since construction commenced on or after June 12, 2006. Therefore, this engine does fall in the window where it is located at an area source of HAPs, is new under 40CFR63 Subpart ZZZZ, but manufactured before the applicability dates of 40CFR60 Subpart JJJJ. According to an October 19, 2010 memo by Melanie King of USEPA OAQPS, the proposed engine does not have to meet the requirements of either rule.

Permit R13-3068A contained a control efficiency of 99% for the VCU controlling the condensate tanks and 70% for the VCU controlling the truck loading. This control efficiency is above the standard control efficiency allowed by the DAQ. Therefore, I contacted the company and had them recalculate their emissions based on 98% and 69% respectively. Permit conditions 8.1.2, 8.1.3, and 8.1.11 were updated to reflect the correct control efficiencies.

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<sub>2</sub>) 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 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. No “modification” for the purposes of 40CFR60 Subpart OOOOa occurred as a result of this engine replacement.

Because the emission increases associated with this engine are below modification thresholds (6 lb/hr and 10 ton/year) and does not trigger a substantive requirement under an emission control rule, it is my opinion that this request qualifies for a Class II administrative update. The Class I legal advertisement was published in the *Wetzel Chronicle* on May 4, 2016.