

COMMONWEALTH OF PENNSYLVANIA
 Department of Environmental Protection
 Southwest Regional Office

MEMO

SUBJECT Review of Title V Operating Permit Renewal Application
 Equitrans, LP, Hartson Station
 Finleyville Boro, Washington County

DATE May 8, 2014

TO Air Quality Permit File: TVOP-63-00642

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BACKGROUND

Equitrans, LP (Equitrans), a subsidiary of EQT Corporation, operates a network of facilities in southwestern PA used for the production, storage, and transmission of natural gas. The Hartson Station is a natural gas storage and transmission facility covered under Standard Industrial Classification (SIC) Code 4922, located in Finleyville Boro, Washington County. The station consists of three (3) Cooper-Bessemer GMV-10 reciprocating internal combustion engines (rated at 1,350 hp each), one (1) natural gas-fired generator (367 hp) equipped with oxidation catalyst, a tri-ethylene glycol (TEG) dehydration unit, and six (6) miscellaneous small combustion units (rated at less than 1.5 mmbtu/hr each).

An initial TVOP was issued for this site on August 11, 1997. A renewal TVOP was issued on March 27, 2008. Another renewal TVOP application was received on September 28, 2012 and determined to be administratively complete on November 19, 2012.

Prior to 2009, there were two (2) gas-fired Emergency Generators (Sources 105 and 106) on site. On January 17, 2009, DEP exempted the installation and operation of a new engine/generator rated at 367 hp and equipped with oxidation catalyst. Sources 105 and 106 were removed from the site, and the new generator was designated Source 105A.

Plan Approval PA-63-00642A was issued on May 2, 2012 to authorize the installation of Cameron Compressor Systems CleanBurn Technology packages (CleanBurn) on the three existing engines, the uprate of the engines from 1,100 hp to 1,350 hp, and the establishment of federally enforceable natural minor emission limitations for the site. The manufacturer of the CleanBurn systems installed under PA-63-00642A guarantees emissions rates not to exceed 2.0 grams NO_x per brake-horsepower hour, 2.0 grams CO per brake-horsepower hour, and 0.7 grams VOC per brake-horsepower hour. Although this facility is no longer major, company has requested a TVOP be issued for the site.

SOURCES AND EMISSIONS

The Hartson Station has been in existence since the early 1950s. The station consists of three (3) Cooper-Bessemer GMV-10 reciprocating internal combustion engines (1,350 hp), one (1) natural gas-fired generator engine (367 hp), a closed loop tri-ethylene glycol (TEG) dehydrator, six (6) miscellaneous small combustion units grouped together as Source 104, and fugitive emissions units grouped together as Source 107. Source 104 - Miscellaneous Combustion Sources includes the following: dehydrator reboiler (0.75 mmbtu/hr), pipeline heater (1.5 mmbtu/hr), building heater #1 (0.165 mmbtu/hr), building heater #2 (0.165 mmbtu/hr), heating boiler (1.352 mmbtu/hr), and hot water heater (0.04 mmbtu/hr). Source 107 - Miscellaneous Fugitives includes the following: a condensate tank, pneumatic devices, venting and blowdowns, and equipment leaks. Emissions from this facility are shown in the table below.

Potential Emissions

Process	Source ID	NOx			CO			VOC			Formaldehyde		THAPs	SO2	PM	CO2e
		g/bhp	lb/hr	tpy	g/bhp	lb/hr	tpy	g/bhp	lb/hr	tpy	lb/hr	tpy	tpy	tpy	tpy	tpy
Eng #1	101	2.0	5.95	26.07	2.0	5.95	26.07	0.7	2.08	9.13	0.496	2.172	3.41	0.03	2.43	5,881
Eng #2	102	2.0	5.95	26.07	2.0	5.95	26.07	0.7	2.08	9.13	0.496	2.172	3.41	0.03	2.43	5,881
Eng #3	103	2.0	5.95	26.07	2.0	5.95	26.07	0.7	2.08	9.13	0.496	2.172	3.41	0.03	2.43	5,881
Misc Combustion	104	-	0.37	1.63	-	0.31	1.37	-	0.02	0.09	0.0012	0.001	0.03	0.01	0.25	1,951
Generator	105A	-	0.79	3.47	-	0.04	0.18	-	0.34	1.49	0.06	0.265	0.42	0.01	0.12	1,513
Misc Fugitives	107	-	-	-	-	-	-	-	0.213	0.95	-	-	0.0074	-	-	699
TOTAL		-	19.82	83.32	-	18.21	79.77	-	6.83	29.2	1.55	6.78	10.7	0.11	7.66	21,805

REGULATORY ANALYSIS

The following regulations have been evaluated for applicability to the Hartson Station.

40 CFR 60 Subparts D, Da, Db and Dc: These subparts apply to steam generating units of various sizes, all rated at greater than 10 mmbtu/hr. The Hartson Station does not have any steam generating units rated at greater than 10 mmbtu/hr, therefore the requirements of these subparts do not apply.

40 CFR 60 Subparts K, Ka and Kb: Depending on the size and date of construction, reconstruction or modification, these subparts apply to various volatile organic liquid storage tanks. The smallest tanks with applicable requirements have capacities equal to or greater than 19,813 gallons. All storage tanks at Hartson have capacities less than 19,813 gallons; therefore the requirements of these subparts do not apply.

40 CFR 60 Subpart KKK – Equipment Leaks of VOC from Onshore Natural Gas Processing Plants: An Onshore Natural Gas Processing Plant means any processing site engaged in the extraction of natural gas liquids from field gas, fractionation of mixed natural gas liquids to natural gas products, or both. The operations at the Hartson facility do not meet the definition of an Onshore Natural Gas Processing Plant; therefore the requirements of this subpart do not apply.

40 CFR 60 Subpart LLL - SO₂ Emissions from Onshore Natural Gas Processing: This subpart applies to each sweetening unit, and each sweetening unit followed by a sulfur recovery unit, at a natural gas processing plant. Again, the operations at the Hartson facility do not meet the definition of an Onshore Natural Gas Processing Plant; therefore the requirements of this subpart do not apply.

40 CFR 60 Subpart IIII - Stationary Compression Ignition Internal Combustion Engines: The three Cooper Bessemer compression engines as well as the emergency generator engine are all natural gas fired, spark ignition engines; therefore the requirements of this subpart do not apply.

40 CFR 60 Subpart JJJJ - Stationary Spark Ignition Internal Combustion Engines: This subpart is applicable to manufacturers, owners and operators of new stationary spark ignition internal combustion engines manufactured on or after July 1, 2007. Emergency generator engines are subject to this NSPS if they were manufactured on or after January 1, 2009. The three Cooper Bessemer engines at Hartson are existing units that were manufactured before July 1, 2007 and have not been modified or reconstructed as those terms are defined at 40 CFR §60.14 and § 60.15. Therefore, the requirements of this subpart do not apply to the Cooper Bessemer engines. The emergency generator engine at this site was manufactured after July 1, 2007 and is permitted for full-time use. Therefore, this engine is subject to 40 CFR 63, Subpart JJJJ. The emergency generator engine is equipped with catalytic oxidation to meet the applicable emission limitations established in Table 1 to 40 CFR §60.4233(e)(5). Permittee must also comply with other applicable monitoring, recordkeeping, reporting, and work practice standards. These requirements have been added to the proposed TVOP.

40 CFR 60 Subpart OOOO – Oil and Gas Production, Transmission and Distribution: This subpart is applicable to affected facilities that have been constructed, reconstructed or modified after August 23, 2011. None of the equipment at the Hartson facility meets the definition of an affected facility for this rule; therefore the requirements of this subpart do not apply.

40 CFR 63 Subpart HH – Oil and Gas Production Facilities: This rule establishes requirements for dehydration units located at natural gas production facilities. Hartson does not meet the definition of a natural gas production facility; therefore the requirements of this subpart do not apply.

40 CFR 63 Subpart HHH – Natural Gas Production and Storage Facilities: This rule applies to facilities that are major sources of Hazardous Air Pollutants (HAPs) that transport or store natural gas prior to entering the transmission pipeline to end users. Hartson is not a major source of HAPs; therefore the requirements of this subpart do not apply.

40 CFR 63 Subpart ZZZZ - Stationary Reciprocating Internal Combustion Engines (RICE): This rule applies to stationary RICE at facilities that are major or area sources of HAPs. Hartson is an area source of HAPs. The Cooper Bessemer engines at Hartson are existing sources installed before 2006 that have not been reconstructed. They are classified as 2-stroke, lean-burn, non-emergency units with ratings of 1,350 hp each. As such, they are subject to the requirements for existing, 2-stroke, lean-burn, non-emergency spark ignition units at area sources identified Table 2d to 40 CFR 63.6603. This includes the requirements to change oil and filter every 2,160 hours of operation or annually, whichever comes first, inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary. Additionally, permittee must minimize the engines' time spent at idle during startup and minimize the engines' startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, and comply with other applicable monitoring, recordkeeping, reporting, and work practice standards. These requirements have been added to the proposed TVOP.

40 CFR 63 Subpart DDDDD – Industrial, Commercial and Institutional Boilers and Process Heaters: This rule applies to certain boilers and process heaters of various sizes and fuel types at facilities that are major for HAPs. Hartson is not a major source of HAPs; therefore the requirements of this subpart do not apply.

40 CFR 63 Subpart JJJJJ - Industrial, Commercial and Institutional Boilers: This rule applies to certain boilers and process heaters of various sizes and fuel types at facilities that are not major for HAPs. All boilers at the Hartson are fired exclusively on natural gas. In accordance with 40 CFR 63.11195(e), natural gas boilers are not subject to this rule.

40 CFR Part 64 Compliance Assurance Monitoring: The Compliance Assurance Monitoring (CAM) requirements of 40 CFR §§ 64.1-64.10 have been evaluated for applicability to sources at the Hartson Station. The CAM rule was promulgated by EPA in 1997 and it is intended to provide a reasonable assurance of compliance with applicable requirements under the Clean Air Act (CAA). In accordance with 40 CFR § 64.2(a), CAM applies to each pollutant-specific emission unit (PSEU) that is located at a major source that is required to obtain a Title V permit. Federally enforceable emission limits were established in PA-63-00642A that made the Hartson Station is a synthetic minor source. Therefore the provisions of the CAM rule are not applicable to this facility.

40 CFR Part 68 Chemical Accident Prevention Provisions: This part sets forth the list of regulated substances and thresholds and the requirements for owners or operators of stationary sources concerning the prevention of accidental releases. The substances and threshold quantity that are considered a regulated substance under this part are listed in Tables 1, 2, 3, and 4 to 40 § 68.130. Equitrans does not store any of the listed compounds at the Hartson Station; therefore the requirements of this subpart do not apply.

40 CFR Part 98 Mandatory Greenhouse Gas Reporting: This part was promulgated on October 30, 2009, and November 30, 2010. In accordance with 40 CFR § 98.2(a), the Greenhouse Gas (GHG) reporting requirements and related monitoring, recordkeeping, and reporting requirements of this part apply to the owners and operators of any facility that is located in the United States and that meets the requirements of either paragraph 40 CFR § 98.2 (a)(1), (a)(2), or (a)(3) of this section.

However, public comments to the Greenhouse Gas Mandatory Reporting Rule (GHG MRR) questioned the requirements of this rule to meet current definitions of “applicable requirement” at 40 CFR §§ 70.2 and 71.2. The commentators requested that USEPA confirm their interpretation of the regulations. The EPA provided the

following response: "As currently written, the definition of "applicable requirement" in 40 CFR §§ 70.2 and 71.2 does not include a monitoring rule such as today's action, which is promulgated under CAA sections 114(a)(1) and 208." The preamble of the final version of the GHG MRR, located at 74 Fed Reg 209, pp. 56287-56288, states that the GHG MRR is not considered an "applicable requirement" under the Title V Operating Permit program. Therefore, this Subpart, while it may be an obligation for this facility, is not considered an applicable condition for this Title V Operating Permit.

40 CFR Parts 51 and 52 Greenhouse Gas Tailoring Rule: This regulation was issued on May 13, 2010. This rule establishes a process for conducting Prevention of Significant Deterioration (PSD) reviews, including Best Available Control Technology (BACT) determinations for control of greenhouse gases (GHG) when a new source or a modification to an existing source results in emissions of GHGs in excess of certain thresholds. The applicability of the Greenhouse Gas Tailoring Rule was evaluated during the review of the application for Plan Approval PA-63-00642A. New industrial facilities that emit the equivalent of 100,000 tons of carbon dioxide per year and modified sources that increase their emissions by 75,000 tons annually are required to get PSD approvals for greenhouse gas emissions. Prior to the installation of the CleanBurn packages on the three Cooper Bessemer engines, Hartson Station had baseline CO₂e emissions of 17,838 tons per year. After the installation of the CleanBurn packages on the three Cooper Bessemer engines, facility-wide emissions of CO₂e are 21,105 tons per year, an increase of 4,818 tons per year CO₂e. Therefore, a PSD application for greenhouse gas emissions was not required for the installation of the CleanBurn packages on the Cooper Bessemer engines under PA-63-00642A due to these low levels of GHG emissions.

25 Pa Code Chapters 121-145: The applicable requirements of state regulations have been included in the proposed TVOP. Applicant has proposed to demonstrate compliance with emission limits through EPA Reference Method stack testing no less often than once every five years, and portable analyzer testing at least twice per year for all engines operating more than 750 hours during the previous year. Hours of operation, fuel usage and other available operating parameters shall be monitored and records of these shall be kept for five years and be made available to the Department upon request.

CONCLUSIONS and RECOMMENDATIONS

I recommend that this proposed TVOP be sent out for public comment in accordance with 25 Pa. Code §§ 127.424, 127.425 and 127.521. Arrangements will be made to publish a Notice of Intent in the Pa Bulletin and in a local newspaper, and the proposed TVOP renewal will be sent to EPA for their 45-day review.