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MEMORANDUM

To: Beverly McKeone, P.E. – New Source Review Program Manager

From: Ed Andrews, P.E. - Engineer 

Date: June 10, 2015

Subject: Review of Class I Administrative Update Request of Permit R13-0462A (R13-0462B) for Petroleum Fuel & Terminal Company (009-00018)

On October 23, 2014, Petroleum Fuel & Terminal Company (PF&TC) filed a Class I Administrative Update request of Permit R13-0462A to receive, store, and load-out natural gas liquids (natural gasoline) at the Weirton Terminal. Currently, R13-0462A only allows PF&TC to handle natural gas condensate, crude oil, vacuum gas oil (VGO), and Fuel Oil #2 through #6.

The applicant proposed to only store 1,825,000 barrels of natural gasoline in Tank 55-5 at the Weirton Terminal. This throughput of natural gasoline would yield a VOC emission rate of 3.2 tpy, which is less than the permitted limit. Permit R13-0462A sets an annual total VOC limit for the five vessels by restricting the annual throughput and type of volatile organic liquid being stored at the terminal.

The writer repeated the TANKs runs using Tank 54-5 at the maximum annual throughput limit of 40,466,410 barrels per year treating the natural gasoline as gasoline with a Reid Vapor Pressure of 15 psia. The VOC emission rate from this volume of natural gasoline was predicted to be 4.55 tpy. Tank 54-5 is the smallest vessel at the Weirton Terminal and therefore would have the highest potential for withdrawal losses from any of the vessels at the terminal.

Permit R13-0462A limited the VOC emissions from the five storage tanks to 21.27 tpy. Based on the writer's repeated run of TANKs, the VOC emissions from storing natural gasoline would be less than the permitted limit.

The VOC emissions created by loading marine barges were estimated to be 49.14 tpy, which was based on loading a maximum of 30,000,000 barrels per year (See Condition 4.1.2.a. for the throughput limit). The VOC limit set in the permit is 52.6 tpy, which only applies to loading natural gas condensate and crude oil. The loading of VGO and fuel oils are not required to be controlled by the flare.

The writer concluded that allowing natural gasoline to be stored and loaded out at the Weirton Terminal would not increase the potential emissions at the facility using the existing permitted controls (i.e. internal floating roof, vapor capture system with flare).

Natural gasoline is not the same as gasoline under EPA regulations. Thus, the only applicable regulation would be Subpart Kb to Part 60. The five vessels are subject to Subpart Kb for being allowed to store natural gas condensate and crude oil. The applicant provided information that the Maximum True Vapor Pressure of the natural gasoline going to be stored was 7.45 psia at a temperature of 71⁰F. Thus, the next level of control under Subpart Kb is not required for the storage vessels.

The changes to Permit R13-0462A include adding "natural gasoline" in Table 4.1.1a., Condition 4.1.2.a. & e. Other changes were the omission of the boiler GACT requirements for the oil fired boiler, which included Conditions 4.1.3.a through d. & g; 4.2.4; 4.2.5; and 4.5.6. The source has disconnected the oil fired boiler, which was verified by Mr. Carducci of the EPRO on February 25, 2015. To add clarity to the permit, the initial flare was omitted (Condition 4.3.1.), the five year tank inspection requirement was omitted because the applicant is doing the 10 year inspection with annual visual inspection option under Subpart Kb for all five tanks.

This change to Permit R13-0462A (R13-0462B) does not affect the facility's status as a non-major source subject to 45 CSR 30 or make the facility subject to any additional rule or regulation that is not otherwise covered by the permit. The information provided in the permit application indicates the proposed changes of the emission sources will meet all the requirements of the applicable rules and regulations when operated in accordance with the permit application. Therefore, the writer recommends granting Petroleum Fuel & Terminal Company a Class I Administrative Update Permit for the Weirton Terminal.