



west virginia department of environmental protection

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MEMORANDUM

To: Beverly D. McKeone, PE
From: Steven R. Pursley, PE *SAP*
Date: 07/20/2016
Subject: PD16-039

On June 14, 2016 Transflo Terminal Services, Inc submitted a request for a permit determination. The request was necessitated by Transflo consolidating its Clarksburg and Fairmont operations. The combined facility will operate at the current Fairmont facility. Currently, the Fairmont facility is permitted to transfer sand and cement. Moving the Clarksburg capacity to Fairmont will increase the actual amount of sand transferred at the Fairmont facility but not above its current permitted levels. The Clarksburg facility has never transferred cement, therefore that limit and associated emissions will also remain unchanged. However, the Clarksburg facility DID transfer ammonium nitrate, which is not currently permitted at the Fairmont facility. With this determination, Transflo is requesting the ability to handle ammonium nitrate at the Fairmont facility.

According to Transflo's calculations, the maximum amount of ammonium nitrate that could be transferred at the facility is 50 tons per hour. Using the batch drop equation from AP-42 Chapter 13.2.4, Transflo estimated that PM emissions from the ammonium nitrate operations would be 0.784 pounds per hour. They based annual emissions of 0.13 tons PM per year on 168 rail cars per year. The 168 rail cars per year is based on a ratio of actual rail cars per hour of operation scaled up to 8,760 hours of operation per year.

In the writers opinion, both hourly and annual emissions were not correctly calculated for permit determination purposes. Firstly, a control efficiency of 90% was taken for two of the three transfer points. If this control efficiency is removed, hourly emissions become **7.38 pounds per hour**. Secondly, the annual emissions are based on unloading one rail car approximately every two operating days. This may be a reasonable, even conservative, estimate of what the facility will actually process. However, it does not reflect the true potential to emit. The conveyors are capable of moving 50 tons per hour meaning a 100 ton rail car can be unloaded in two hours. At 14.75 pounds of PM per railcar (7.38 pounds per hour X 2 hours to unload a rail car) the facility would only have to process 1,356 cars per year to exceed the 45SCR13 trigger level of 10 tons of PM per year. This equates to 3.7 railcars per day or 7.4 hours per day of unloading time. Even accounting for the time it takes to move the cars into and out of position to be unloaded, it's clear that the facility is capable of exceeding the threshold. Therefore, since the PTE of the facility exceeds 6 pounds per hour and 10 tons per year of PM, a permit modification is required.

It should be noted that because *controlled* emissions are well under 6 pounds per hour and 10 tons per year, Transflo would be able to accommodate the change with a Class II administrative update to permit R13-2962.