



west virginia department of environmental protection

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Evaluation Memo

Application Number: PD15-036
Facility ID Number: 061-00006
Name of Applicant: Addivant USA, LLC
Name of Facility: Morgantown South Plant
Location of Facility: Morgantown, Monongalia County
Latitude/Longitude: 39.600667/-79.971859°
Application Type: Permit Determination
Submission Date: April 22, 2015
Complete Date: April 22, 2015
Due Date: **June 3, 2015**
Engineer: Joe Kessler

Background Information

On April 22, 2015 Addivant USA, LLC (Enviromine), submitted a Permit Determination Form (PDF) for proposed changes at their Morgantown South Plant located at the Morgantown Industrial Park, Morgantown, WV. According to Addivant, the facility was constructed in the 1960's and the majority of the facility is considered grandfathered under 45CSR13. The facility was the subject of several permits in the 1970's and early 1980's (with the last permit issued on August 1, 1980). Many previous permit determinations have also been submitted for the facility (the last in 2013). There is no Title V permit for the facility.

Statutory Authority of the DAQ

The statutory authority of the of the DAQ is given under the Air Pollution Control Act (APCA) - West Virginia Code §22-5-1, et. seq. Based on the language under §22-5-1, et. seq., the DAQ, in making "stationary source" determinations under 45CSR13, does not take into

consideration non-air quality issues such as nuisance potential (noise, sight line obstruction, traffic) or non-air quality environmental impacts.

Description of Process

Addivant is proposing to add a new product variant to an existing chemical manufacturing unit at its South Plant facility. This change will utilize an existing reactor to make a slightly different product. According to Addivant, the reactor is a grandfathered unit constructed in the 1970's. One of the products currently produced at the South Plant is Tris-nonylphenyl phosphite (TNPP), which is produced using a batch production process in three 2,000 gallon reactors. Addivant proposes to utilize one of these existing reactors to produce a new (but similar) product. The new product will be TriTolyl Phenylphosphite (TTP). Addivant received a no permit needed determination (PD13-092) from the DAQ in 2013 for a trial production run of this product. However, the production process has changed since that determination was issued. A detailed description of the complex TTP production process (including a process flow diagram) was included with the permit determination form.

Air Emissions and Calculation Methodologies

Addivant submitted extensive, complex, and detailed emissions calculations of the emissions increase associated with the proposed change discussed above. They based the calculations on the following basic parameters: TTP production occurs in a 16-hour batch process and produces a maximum of 15,000 pounds/batch. According to Addivant, this batch time is chemistry-based and is otherwise not limited by artificial constraints. The amount produced per batch is the maximum based on the size of the reactor vessel. The annual production of TTP is based on the maximum number of 16-hour batches that can be made in 8,760 hours. The amount of raw materials used in the production process was based on the chemistry of the TTP production process. Addivant zeroed out all control device efficiencies pursuant to DAQ policies in calculating maximum potential emissions in a permit determination process. The emissions increase was additionally based on only the additional and new raw materials used in the production of TTP over the use of the materials used in the grandfathered production of TNPP. This is acceptable as the production occurs in the existing grandfathered reactor.

Based on the submitted calculations, the maximum emissions increase with the proposed changes are estimated to be a maximum of 0.82 lb-VOC/hr (1.17 lbs-HAPs/hr) and 3.23 tons-VOCs/year (3.26 tons-HAPs/year). The complete and detailed calculations are available in the file.

Determination of Permit Applicability

Pursuant to §45-13-5.1, “[n]o person shall cause, suffer, allow or permit the . . . modification . . . and operation of any stationary source to be commenced without . . . obtaining a permit to . . . modify.” The definition of “modify” is given under Section 2.17 of 45CSR13 and primarily defines various emission levels that would define any proposed changes as a modification and require Addivant to get a permit prior to construction. Based on the emission estimate submitted by Addivant as discussed above, the proposed changes do not exceed any of the modification thresholds under §45-13-2.17.

Summary and Recommendation

Based on the information provided by Addivant, I recommend the issuance of a “no permit needed” letter to Addivant USA, LLC for the proposed changes at their Morgantown South Plant.



Joe Kessler, PE
Engineer



Date