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west virginia department of environmental protection

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Earl Ray Tomblin, Governor  
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**MEMORANDUM**

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

**From:** Ed Andrews, Engineer *EJA*

**Date:** December 9, 2015

**Subject:** Permit Determination Request for the use of Quaternary Ammonium Salt in solution with different solvent (PD15-0103) for Elementis Specialties (039-00031)

On October 30, 2015, Mr. Todd Shrewsbury, P.E. of the Compliance & Enforcement Section with this writer discussed the proposed switch of receiving Quaternary Ammonium Salt (quat) in solution. Currently the facility receives the salt in solution with ethanol. In the past, the facility had received quat in solution with isopropanol. This solvent that quat is in solution with is merely a medium that allows the facility to handle and utilize the quat in their process. This solvent is not utilized in the actual manufacturing process at the facility. The applicant is not proposing an increase in the finished production or an increase of utilization of quat in the process. Thus, the VOC emissions from the process or facility should not change.

Permit R13-1847E currently restricts the VOC content of the quat to 15% by weight, which is Condition 4.1.17. In ensure compliance, Elementis has developed an internal receiving process that reviews the VOC content of each shipment prior to acceptance and rejects any delivery that exceeds a VOC content of 14% by weight.

The permit does not specifically restrict the solvent that the quat is in solution with. Thus, no changes to the current permit should be necessary to allow the facility to received quat in solution with isopropanol as long as the VOC content does not exceed 15% by weight. In addition to the restriction on the VOC content of the quat, the permit requires the facility to record the composition of each shipment of quat accepted at the facility.

Isopropanol and ethanol are only classified as VOCs. Therefore, only 45 CSR 21 would potentially be affected. However, the facility is permitted to limit its VOC emissions below the Section 40 trigger threshold of 100 tpy of VOCs in Permit R13-1847E. Because the change would not exceed the VOC content covered by Permit R13-1847E, the change does not affect the facility's applicable status with Rule 21.

Memo to Ms. McKeone on PD15-103

December 9, 2015

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This writer recommends issuing a "No Permit Needed" letter in response to this proposed change in quat to be received at Elementis Specialties' Charleston Plant.