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Evaluation Memo

Application Number: **R13-0815I**

Facility ID Number: **107-00182**

Name of Applicant: **The Chemours Company FC, LLC**

Name of Facility: **Washington Works**

Application Type: **Class I Administrative Update**

Received Date: **May 21, 2015**

Complete Date: **June 1, 2015**

Due Date: **July 31, 2015**

Permit Writer: **Mike Egnor**

Overview:

This Class I Administrative update application is the result of a new Permittee Name and Facility ID Number, references to a R13-3223 that replaced CO-R21-97-47, and one Condition language update.

Process Description and Proposed Changes:

Teflon® T6 area produces TFE based homopolymers in four agitated batch reactors. The reaction takes place in an aqueous medium, and a white raw polymer dispersion in water is produced. A portion of the raw dispersion production is dried and sold as powder, and a portion is processed and sold as a finished aqueous dispersion.

A batch is started by adding water and other ingredients to the reactor. The major raw material, Tetrafluoroethylene, is fed to the reactors from high-pressure weigh tanks. Polymerization takes place in the aqueous phase at high temperature and pressure. At the end of each batch, most of the unreacted material is recycled to the monomers area for reuse, but a small portion is vented to the atmosphere.

The dispersion product is made by partially concentrating the reactor output in a water/solids separation vessel where some of the water is removed. For product sold as fine powder, the raw dispersion from the reactors is dried (three dryers) at high temperature. The dried product is cooled and packaged.

The Permittee and Facility ID will be changed from "E.I. Du Pont de Nemours and Company" and "107-00001" to "The Chemours Company FC, LLC" and "107-00182" respectively. Condition A.2 will replace "R13-1823D" with "R13-1823" as any revisions are covered under the existing "or any Amendments hereto". Table B.2 will reference "R13-3223", which replaced the "Consent Order R21-97-47". The revision number of permit will be revised.

Emissions:

The emission calculations from emission unit T5HM originate in the T5 Area of the Fluoropolymer area and were reviewed by the writer during the engineering evaluation for permit update R13-1353F that was received by DAQ the same day that this permit update evaluation was received. There were no changes to the emissions from emission point T6IUE from any of the other emission units located within the T6 Area as a result of this application (T6IL, T6PB, T6PI, T6IU, T6QM, and T6PJ). There is an increase of 0.3 tpy maintenance related emissions from T5HM as a result of increasing the frequency of shutdown/start-up cycles to reflect actual practices that was address in the R13-1353F application.

DuPont uses the engineering calculation software TK Solver to calculate emissions using a combination of equations and analytical measurements. The VOC emission reduction calculations were reviewed by the writer. Emissions are calculated based on the ideal gas law or on the equation of state for non-ideal situations. For annual emissions that are based on events, air measurements determine the emissions per event and then the number of events per year are used to calculate annual emissions.

Polymer rates may have a surrogate such as motor amps, screw speed, etc for hourly emissions or number of batches for annual emissions. Emissions per pound of polymer are either engineering estimates, determined by off gas analysis, scaling up from a pilot plant, or simple stack measurements.

Emission changes associated with this application are shown in the table below.

Emission Summary Table:

There will be no change in emissions as a result of this modification.

Changes made to R13-0815H:

- Miscellaneous changes relating to current permit version
- The Permittee and Facility ID will be changed from "E.I. Du Pont de Nemours and Company" and "107-00001" to "The Chemours Company FC, LLC" and "107-00182" respectively.
- Condition A.2 will replace "R13-1823D" with "R13-1823".
- References is Table B.2 will reference "R13-3223" instead of "Consent Order R21-97-47"

Recommendation:

The writer recommends that the Class I Administrative Update Permit R13-0815I be granted to Chemours, Washington Works facility located in Wood County, WV. Based on the information provided in the permit application, the applicant meets all applicable federal and state air regulations pertaining to the requested change.