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Evaluation Memo

Application Number: R13-2365H
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: August 26, 2015
Complete Date: August 27, 2015
Due Date: October 26, 2015
Permit Writer: Mike Egnor

Overview:

This Class I Administrative update application is the result of the removal of conditions regarding Ammonium Perfluorooctanate (APFO), as well as the addition of a requirement that the Permittee not manufacture, use or purchase the material.

Process Description and Proposed Changes:

PFA is a copolymer of various monomers produced in a semi-batch polymerization process. The reaction requires a pre-charge of water, ethane, aqueous fluorosurfactants, water-soluble initiator salts and the monomers. During polymerization, the monomers and some make-up initiator are continually added to the reactor. The system is also designed to produce a low molecular weight

Poly-TFE product, which is similar to PFA.

At batch end, un-reacted monomers will be vented down to 5 psig to the Thermal Converter (T7IMC) covered by permit 1823. When the Thermal converter is not operational, the unreacted monomers will be vented to Monomer's internal recovery device (T1GN). From 5 psig to a slight vacuum, the reactor will be vented to the atmosphere. See emissions summary sheet for vented amounts.

The aqueous emulsion produced in the reactor is transferred to the Isolation facility for further processing and then transferred to the Finishing system. Some of the aqueous surfactant added during polymerization is driven off in the drying step, and recovered by C1FSC2 and C1FSC3.

The dried polymer is pneumatically conveyed to various vessels, compacted, and then extruded to produce small pellets or cubes. A small amount of dry polymer bypasses the extruder and is packed out as fluff.

The cubes are blended in downstream facilities, and then either packed out for sale to customers, or transferred to the fluorination facilities. Material sent to the fluorination facilities is transferred into a reactor where the polymer end groups react with a fluorine/nitrogen mixture to produce a more stable product. The un-reacted fluorine and reaction byproducts are vented to C1FEC. The cubes are then cooled, sampled, and packed out for sale to customers.

The changes submitted in this Class I Administrative update R13-2365H include:

1. Removed the limitation of APFO from Condition A.1 for Emission Point ID C1FSE as well as Footnote 1 describing APFO and renumbered Footnote 2 as Footnote 1.
2. Removed the APFO screening limit of Condition A.4 and replaced it with "The Permittee shall not purchase, manufacture, store, or use Ammonium Perfluorooctanoate (APFO) within the Chemours' Washington Works Facility."
3. Removed the emission point specifications and threshold test given in Conditions A.5 and B.7, and replaced the language with "Reserved".
4. Removed the APFO column from the monthly emissions recordkeeping from Attachment B.
5. Removed the APFO table from the annual emissions recordkeeping for equipment ID C1FS from Attachment C. The other pollutants that require annual emissions recordkeeping remain in this Attachment for emission units source C1FS.
6. Miscellaneous changes to update the Permit to R13-2365H, including the revision of Conditions B.8, C.3, and Attachments A, B, and C.

Emissions:

By no longer using Ammonia Perfluorooctanate (APFO), there will be a reduction of 0.22 lbs/hr and 0.54 TPY of APFO.

Recommendation:

The writer recommends that the Class I Administrative Update Permit R13-2365H 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.