Division of Air Quality

November 30, 2020

MEMORANDUM

To: Heather Carter, Fayetteville Regional Supervisor

From: Gary L. Saunders, Stationary Source Compliance Branch

Subject: The Chemours Company – Fayetteville Works
Fayetteville, Bladen County, North Carolina
Facility ID. No. 0900009, Permit No. 03735T47
Performance Testing for HFPO Dimer Acid Conducted on June 23, 2020
at Vinyl Ethers South (VES) Carbon Bed by O'Brien & Gere, Inc.
Tracking No. 2020-308ST

Summary of HFPO Dimer Acid Test Program

Sources Tested

The VES carbon bed adsorber was sampled on June 25, 2020. The carbon bed adsorber was returned service for controlling fugitive emissions from "room air" at the VES production area after the thermal oxidizer became operational. Testing was conducted to determine removal efficiency and emission rates from the VES fugitive emissions and controls.

Sampling Method

Testing was conducted using a modified EPA Method 0010 found in the SW-846 compendium of *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods*. This sampling train is a variation of the EPA Reference Method 5 found in 40 CFR 60, Appendix A. The Method 0010 train extracts a sample isokinetically from the gas stream, passes the sample through a temperature-controlled filter, through a temperature-controlled condenser and into a series of XAD-2 resin "traps" and impingers to capture and collect the materials that passed through the filter. The test method is designed to capture certain particulate and condensable materials for later recovery and analysis.

After sample recovery, the samples were sent to Chemours' contractor, Test America's laboratory in Denver, Colorado. GenX was extracted from the resin traps. The DAQ required split samples after extraction to be submitted for independent analysis. This summary of results only addresses the results provided by Test America for Chemours. Laboratory analysis and quantification was performed using a liquid chromatography column and a dual mass spectrometer (LC/MS/MS).

Test Results

The reported HFPO Dimer Acid test results reflect corrected emission rates accounting for dilution and spike recovery values.

Vinyl Ethers South Area Test Results

Inlet and outlet emissions from the VES carbon bed adsorber were measured on June 23, 2020 to determine the removal efficiency of HFPO Dimer Acid from the room air emissions. Each test run was 90 minutes in length. The process was operating normally and was producing PMVE and PEVE.

Table 1. Summary of Stack Test Results for VES Carbon Bed on June 23, 2020

Run Number	HFPO Dimer Acid Emission Rate		
	Inlet (lb/hr)	Outlet (lb/hr)	% Removal Efficiency
1	2.44E-04	1.46E-04	40.16
2	4.86E-04	1.75E-04	63.99
3	3.26E-04	1.44E-04	55.83
Average	3.52E-04	1.55E-04	55.97

Summary and Conclusions

NC DAQ was not on-site to observe this test due to COVID-19 safety concerns. NC DAQ concludes that the testing was conducted in accordance to the modified testing protocol submitted by Chemours and that the analytical results appear representative of the stack conditions and process operations during the testing.

Cc: Central Files – Bladen County
IBEAM Documents - 0900009