

Division of Air Quality

December 11, 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 September 1, 2020
at Vinyl Ethers South (VES) Carbon Bed by O'Brien & Gere, Inc.
Tracking No. 2020-310ST

Summary of HFPO Dimer Acid Test Program

Sources Tested

The VES carbon bed adsorber was sampled on September 1, 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. HFPO Dimer Acid was extracted from the resin traps. This summary of results only addresses the results provided by Eurofins (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 September 1, 2020 to determine the removal efficiency of HFPO Dimer Acid from the process room air emissions. Each test run was nominally 90 minutes in length. The process was operating normally and was producing PMVE and PEVE.

The report incorrectly references a contamination issue for XAD-2 Breakthrough Resin Trap for Run 1. The analytical data does not support this and NC DAQ believes that this report inadvertently confuses the analytical results for the VEN test during this test series. NC DAQ did note a higher value than expected for the XAD-2 Breakthrough Resin Trap value for the Run 3 outlet run. However, this higher than expected value was not subtracted out from the total HFPO Dimer Acid recovered in the sample train.

Table 1. Summary of Stack Test Results for VES Carbon Bed on September 1, 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	*NA
3	3.26E-04	1.44E-04	55.83
Average	3.52E-04	1.55E-04	55.97

*Not Applicable as the removal efficiency was negative.

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 except as noted above.

Cc: Central Files – Bladen County
IBEAM Documents - 0900009