DEQ Public Information Session – Bladen County August 30, 2018

Chemours Permit Application to Install Thermal Oxidizer/Scrubber System

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Department of Environmental Quality

Chemours Air Quality Permit Application to Install Thermal Oxidizer/Scrubber System

- Project Background
- Description of Current Facility Configuration
- Description of Facility Proposed Installation of Thermal Oxidizer/Scrubber System
- Compliance Methods: Testing, Monitoring, Recordkeeping, Reporting
- Timeline



Project Background

January 2018

- Chemours begins testing emissions points for GenX
- Rainwater sampling begins

April 6, 2018

- DAQ Notifies Chemours of Intent to Open Air Permit within 60 days
- Response required by April 27.

April 27, 2018

- Chemours Responds to April 6th Letter with alternate conditions:
- 99% overall reduction of GenX emissions from baseline
- Installation of Thermal Oxidizer/ Scrubber System and Carbon Adsorbers
- Other

May 2018

- Chemours begins operation of Carbon Adsorption Systems
- PPA Room Air and Process Vents
- VEN Room Air

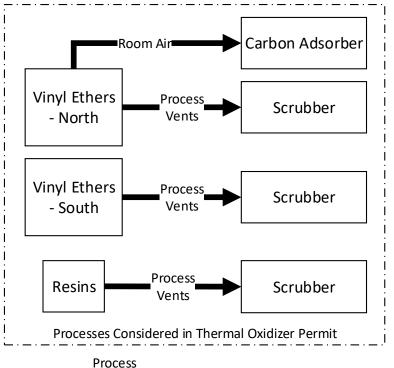
July 2, 2018

Chemours submits
 Permit Application for Installation of Thermal Oxidizer/
 Scrubber System





Current Facility Configuration



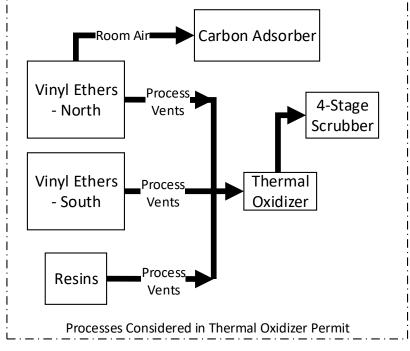
Polymer Processing Aid Room Scrubber Carbon Adsorber

Department of Environmental Quality

- Carbon adsorbers installed May 2018.
 - Emission Reductions confirmed by performance testing
 - > VEN carbon adsorber = 98.7% control
 - > PPA carbon adsorber = 99.6% control
- Scrubbers are effective at reducing reactive per- and poly-fluoroalkyl substances (PFAS) but not all PFAS.
 - > e.g., GenX is a reactive PFAS
 - Non-reactive PFAS pass through the scrubbers uncontrolled



Proposed Thermal Oxidizer/Scrubber System Installation



Process
Vents
Polymer
Processing Aid
Room
Air

Department of Environmental Quality

- Removing scrubbers from Vinyl Ethers North & South and Resins
- Installing a Thermal Oxidizer (TO) and 4-stage Caustic scrubber system
 - ➤ Destruction of fluorinated and sulfur-containing compounds will generate HF and SO₂ respectively
 - ➤ HF and SO₂ will be removed in the scrubber
- Once all control devices are operational, an overall GenX emission reduction of 99% from the 2016 baseline (facility-wide)
- Permit will include emission limits:
 - ➤ TO: required to reduce VOC and total PFAS emissions from process vents by 99.99%
 - ➤ Scrubber: required to reduce SO₂ and HF emissions generated in TO by 99.95%



Compliance Methods

Initial Emissions Testing

- ConfirmPerformance
- Establish
 Operating
 Parameters
- Establish Testing Conditions

Annual Emissions Testing

- Ensure proper operation of TO and scrubber
- Establish/ confirm operating parameters

Continuous Compliance Monitoring

- Continuous parameter monitoring systems
- Oxidizer: Firebox temperature and volumetric flowrate at the oxidizer inlet
- <u>Scrubber</u>: pH and flowrate of scrubbing liquid

Recordkeeping

- Monitoring
- Process Downtime
- Inspections
- Emissions Calcs

Reporting

- Semiannual Reports
- Notification of TO malfunctions

Permit requires thermal oxidizer and scrubber to be operating at all times that the process is operational.



Estimated Timeline

- Draft Permit Early/Mid October
- 30-Day Public Notice Period when Draft Permit is available
- Public Meeting/Hearing TBD
- Final Permitting Action End of November 2018



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More Information Available Online:

https://deq.nc.gov/news/hot-topics/genx-investigation

