Chemours Permit Application to Install Thermal Oxidizer/Scrubber System

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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

Department of Environmental Quality
Current Facility Configuration

• 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

- 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
- Confirm Performance
- 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
- Scrubber: pH and flowrate of scrubbing liquid

Record-keeping
- 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.

Department of Environmental Quality
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
Contact Information

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More Information Available Online: