



Louisville Metro Air Pollution Control District
 701 West Ormsby Avenue, Suite 303
 Louisville, Kentucky 40203-3137



February 13, 2020

**Title V Construction
 Statement of Basis**

Source: Hexion Inc.
 6200 Camp Ground Road
 Louisville, KY 40216

Owner: Hexion Inc.
 180 East Broad Street
 Columbus, OH 43215

Application Documents: See Table I-7

Draft Permit: xx xx, 2020

Permitting Engineer: Ulalo Chirwa

Permit Number: C-0028-19-0035-V

Plant ID: 0028

SIC: 2821 and 2869

NAICS: 325199 and 325211

Introduction:

This permit will be issued pursuant to District Regulation 2.03, Authorization to Construct or Operate; Demolition/Renovation Notices and Permit Requirements. Its purpose is to provide methods of determining continued compliance with all applicable requirements.

The source plans to remove the Recuperative Thermal Oxidizer (RTO) as a permitted control device from the Wastewater Treatment Plant's V-717R (Digester), V-750 (East Equalization Tank), and V-751 (West Equalization Tank) based on inlet stack testing performed on August 28, 2019 that indicated *de minimis* levels of TAC pollutants.

Jefferson County is classified as an attainment area for lead (Pb), nitrogen dioxide (NO₂), carbon monoxide (CO), particulate matter less than 10 microns (PM₁₀), and particulate matter less than 2.5 microns (PM_{2.5}). Jefferson County is classified as a nonattainment area for ozone (O₃). This facility is located in the portion of Jefferson County that is an attainment area for sulfur dioxide (SO₂).

Permit Application Type:

- | | | |
|--|--|---|
| <input checked="" type="checkbox"/> Initial construction | <input type="checkbox"/> Construction Revision | <input type="checkbox"/> Construction renewal |
| | <input checked="" type="checkbox"/> Administrative | |
| | <input type="checkbox"/> Minor | |
| | <input type="checkbox"/> Significant | |

Compliance Summary:

- | | |
|--|---|
| <input type="checkbox"/> Compliance certification signed | <input type="checkbox"/> Compliance schedule included |
| <input type="checkbox"/> Source is out of compliance | <input checked="" type="checkbox"/> Source is operating in compliance |

I Source Information

1. Plantwide Overall Process Description:

The source produces Formaldehyde and phenolic resins.

2. Project Description:

The source will remove the Recuperative Thermal Oxidizer (RTO) as a permitted control device from the Wastewater Treatment Plant’s V-717R (Digester), V-750 (East Equalization Tank), and V-751 (West Equalization Tank).

3. Site Determination:

There are no other facilities that are contiguous or adjacent to this facility.

4. Emission Unit Summary:

Emission Unit	Equipment Description
U9	Treatment of Wastewater

5. Fugitive Sources:

The source identified no fugitive sources of emissions.

6. Permit Revisions:

Permit No.	Public Notice Date	Issue Date	Change Type	Description/Scope
C-0028-19-0035-V	02/13/2020	xx/xx/2020	Initial	Removal of the Recuperative Thermal Oxidizer (RTO) as a permitted control device from the Wastewater Treatment Plant’s V-717R (Digester), V-750 (East Equalization Tank), and V-751 (West Equalization Tank) based on stack testing performed on August 28, 2019.

7. Application and Related Documents

Document Number	Date	Description
70803	08/14/2019	Source submitted an intent to test notification of U7 MO Catox and U9 WWT RTO
123082	10/15/2019	Source submitted stack test results from the U9 WWT RTO and requested the removal of the RTO control device
122280	10/15/2019	Construction Application

8. Emission Summary

Pollutant	District Calculated Actual Emissions (tpy) 2017 Data	Pollutant that triggered Major Source Status (based on PTE)
CO	40.39	Yes
NO _x	19.34	No
SO ₂	0.13	No
PM ₁₀	26.48	Yes
VOC	21.05	Yes
Total HAPs	12.05	Yes
Single HAP > 1 tpy		
Phenol	4.59	Yes
Formaldehyde	1.18	Yes
Methanol	5.25	Yes

9. Applicable Requirements

- 40 CFR 60 40 CFR 63 District Origin
 40 CFR 61 SIP Other

10. Referenced Federal Regulations:

40 CFR 63, Subpart A – *General Provisions*

40 CFR 63, Subpart F – *National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry*

11. Non-Applicable Regulations:

N/A

II Regulatory Analysis

1. Acid Rain Requirements:

Hexion Inc. is not subject to the Acid Rain Program.

2. Stratospheric Ozone Protection Requirements:

Title VI of the CAAA regulates ozone depleting substances and requires a phase-out of their use. This rule applies to any facility that manufactures, sells, distributes, or otherwise uses any of the listed chemicals. Hexion Inc. does not manufacture, sell, or distribute any of the listed chemicals. The source’s use of listed chemicals is that in fire extinguishers, chillers, air conditioners and other HVAC equipment.

3. Prevention of Accidental Releases 112(r):

Hexion Inc. shall comply with the Risk Management Program and Regulation 5.15. The required Risk Management Plan was submitted on October 27, 2009.

4. 40 CFR Part 64 Applicability Determination:

Hexion Inc. is not subject to 40 CFR Part 64 - *Compliance Assurance Monitoring*.

5. Basis of Regulation Applicability

a. Applicable Regulations

Regulation	Title	Basis
7.25	Standard of Performance for New Sources Using Volatile Organic Materials	Establishes requirements for VOC emissions from processes not elsewhere regulated in District Regulation 7, commenced after June 13, 1979.
40 CFR 63 Subpart A	General Provisions	Applies to stationary source that emits or has the potential to emit to any hazardous air pollutant listed in or pursuant to section 112(b) of the Clean Air Act.
40 CFR 63 Subpart F	National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry	Applies to chemical manufacturing process units in the synthetic organic chemicals manufacturing industry.

b. Plantwide

The company is a major source for VOC, total HAPs, single HAPs, SO₂, CO, and PM₁₀. Regulation 2.16-*Title V Operating Permits* establishes requirements

for major sources. Limits are given to preclude PSD/NA-NSR for VOC, SO₂, CO, PM, and PM₁₀¹.

The source is limited to synthetic minor emission levels of all criteria pollutants per agreed to Board Order 2142. In addition, the Board Order also required that the following HAP emission limits be taken to assure that the source remains a synthetic minor source for HAPs.

- The owner or operator shall limit each single plantwide HAP emissions to less than 10 tons per 12 consecutive month period.
- The owner or operator shall limit the total plantwide HAP emissions to less than 25 tons per 12 consecutive month period.

Regulations 5.00 5.20, 5.21, and 5.23 (STAR Program) establishes requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards. The source submitted their updated EA Demonstration on 07/31/2018, and revised on 08/31/2019, demonstrating that potential TAC emissions were either *de minimis* or compliant with STAR EA goals.

Regulation 2.03, section 6.1 requires sufficient monitoring, record keeping, and reporting to assure ongoing compliance with the terms and conditions of the permit. The owner or operator shall maintain all the required records for a minimum of 5 years and make the records readily available to the District upon request.

c. Emission Unit U9 – Treatment of Wastewater

EP	Description	Applicable Regulations
T-101A	West EQ Tank (96V-751)	STAR, 7.25 40 CFR 63 Subpart F
T-101B	East EQ Tank (96V-750)	
E434	Digester, 100,000 gal (V-717)	

Control ID	Description	Control Efficiency
E475	WWTP Recuperative Thermal Oxidizer, Capacity 2 MMBtu/hr, natural gas combustion	99%

*This construction permits the removal of the Recuperative Thermal Oxidizer as a permitted control device from the Wastewater Treatment Plant. The construction will affect emissions routed to the control device from V-717R (Digester), V-750 (East Equalization Tank), and V-751 (West Equalization Tank).

¹ Requirements for SO₂, CO, PM, and PM₁₀ are not listed in this permit.

i. Standards/Operating Limits

(1) HAP

40 CFR 63 Subparts A and F regulate emissions of HAP from the synthetic organic manufacturing industry. Although a synthetic minor source for HAP emissions, the source agreed to regulation of the two Formaldehyde production processes as part of Board Order Agreement 2142.

(2) TAC

Per Regulations 5.00 and 5.21, TAC emissions must not exceed environmentally acceptable levels.

(3) VOC

(a) Regulation 7.25, section 3.1 requires that best available control technology (BACT) be utilized and the owner or operator shall limit the plant-wide VOC emission for all emission points to 70 tons or less per 12 consecutive month period. The plant-wide limit includes all process equipment, storage tanks, loading racks, etc. that emit VOC.

(b) Regulation 7.25 applies to all affected facilities, as defined in Regulation 6.24, that were constructed before June 13, 1979 in addition to all affected facilities constructed after this date.

III Other Requirements

1. Temporary Sources:

The source did not request to operate any temporary facilities.

2. Short Term Activities:

The source did not report any short term activities.

3. Emissions Trading:

The source is not subject to emission trading.

4. Alternative Operating Scenarios:

The source did not request any alternative operating scenarios.

5. Compliance History:

Date	Regulation Violated	Settlement
09/12/2014	Reg. 2.03, section 5, subsection 2:	Board Order \$15,000
02/09/2015	Reg. 1.07, section 4: Failure to Report Excess Emissions	Board Order \$222,000
01/01/2016	Reg. 2.16, sections 3.5.11 and 4.3.5: Requirements for compliance certification, semi-annual compliance	
04/07/2016	Reg. 1.05, section 5: Compliance with Emission Standards and Maintenance Requirements	
04/15/2016	Reg. 2.16, sections 3.5.11 and 4.3.5: Requirements for compliance certification, semi-annual compliance	
08/23/2016	Reg. 2.16: Permit Requirement: Title V Operating Permits Reg. 1.05 Section 5: Compliance with Emission Standards and Maintenance Requirements	
03/01/2017 - 04/30/2017	Reg. 2.16: Permit Requirement: Title V Operating Permits Reg. 1.05 section 5: Compliance with Emission Standards and Maintenance Requirements	Board Order \$36,750
04/27/2017	Reg. 1.05, section 5: Compliance with Emission Standard-Failure to Use Good Air Pollution Control Practice	
01/27/2018 - 01/21/2019	Reg. 1.05, section 5: Compliance with Emission Standards and Maintenance Requirements	Board Order \$102,750
07/03/2018	Reg. 5.15, section 68.67, subsection C: Chemical Accident Prevention Provisions	
01/30/2019	Reg. 1.05, section 5: Compliance with Emission Standards and Maintenance Requirements	

6. Calculation Methodology or Other Approved Method:

The Company uses a variety of methods to estimate air emissions. The calculation methods include:

- a. EPA emission factor based on Water9 modeling
- b. Stack tests were performed to determine uncontrolled emissions of V-717R (Digester), V-750 (East Equalization Tank), and V-751 (West Equalization Tank)

7. Insignificant Activities

NA