



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



**June 1, 2021**

**Title V Construction Permit C-0036-21-0006-V  
 Statement of Basis**

**Source:** Clariant Corporation-West Plant  
 1227 South 12<sup>th</sup> Street  
 Louisville, KY 40232

**Owner:** Clariant Corporation  
 4000 Monroe Road  
 Charlotte, NC 28205

Application Documents: See Table I-7

Effective Date: June 01, 2021

Expiration Date: June 30, 2022

Permitting Engineer: Jessica Murray

Permit Number: C-0036-21-0006-V

Plant ID: 0036

SIC: 2819

NAICS: 325188

**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.

This permit allows the installation of a new Co-Product Line 2 (including a filter, dryer, and bag filling unit) and the replacement of the existing filter in Co-Product Line 1 with a new filter (that serves the same purpose, but with half the capacity of the existing filter).

Jefferson County is classified as an attainment area for lead (Pb), nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), particulate matter less than 10 microns (PM<sub>10</sub>), particulate matter less than 2.5 microns (PM<sub>2.5</sub>), and sulfur dioxide (SO<sub>2</sub>). Jefferson County is classified as a nonattainment area for ozone (O<sub>3</sub>).

**Permit Application Type:**

Initial issuance

Permit Revision

Permit renewal

Administrative

Minor

Significant

**Compliance Summary:**

Compliance certification signed

Compliance schedule included

Source is out of compliance

Source is operating in compliance

**I Source Information**

**1. Product Description:**

Clariant Corp. – Louisville West Plant manufactures customized precipitated catalysts and catalyst carriers.

**2. Process Description:**

Installation of a new Co-Product Line 2 and to replace the existing Co-Product Line 1 Decanter with a new filter.

**3. Site Determination:**

Clariant Corporation is the parent company and operates two facilities in Louisville, the South plant at 4900 Crittenden Drive and the West plant at South 12th Street. Based on information obtained from the company and the criteria used by EPA to make single source determinations, the District has determined that both locations are separate sources. Both locations would have to meet the following three criteria in order to be considered one single source for Title V and PSD/NSR applicability:

- Same industrial grouping,
- Common ownership or control, and,
- Contiguous or adjacent locations.

Both locations have the same first two digit SIC code (28).

Both are 100% owned and operated by their parent company.

Neither location is contiguous or adjacent. Each plant acts independently of the other, operating separate production lines, with minimal transfer of material between plants that is commercially available from other suppliers. Furthermore, there are no Clariant Corporation dedicated transportation links between the plants.

**4. Emission Unit Summary:**

<b>Emission Unit</b>	<b>Equipment Description</b>
W66	Co-Product Isolation

**5. Fugitive Sources**

There are no fugitive emissions for this project.

**6. Permit Revisions:**

Revision No.	Permit No.	Issue Date	Public Notice Date	Change Scope	Description
Initial	C-0036-21-0006-V	06/01/2021	04/25/2021	Initial	Installation of a new Co-Product Line 2 and to replace the existing Co-Product Line 1 Filter with a new filter.

**7. Application and Related Documents**

Document Number	Date	Description
182350	1/20/2020	Confidential version of the construction application
182351	1/20/2020	Public version of the construction application
199293	1/22/2021	Confidential PTE for Co-Product Line (in Excel)
199295	2/12/2021	Confidential additional PTE information for Co-Product Line (in Excel)

**8. Plantwide Emission Summary**

Pollutant	Actual Emissions (tpy) 2019 Data	Major Source Pollutants (based on PTE)
CO	17.32	No
NO <sub>x</sub>	51.24	*Yes
SO <sub>2</sub>	1.35	No
PM <sub>10</sub>	35.60	*Yes
VOC	5.35	*Yes
Total HAPs	3.48	*Yes
<b>Single HAP</b>		
Chromium Compounds	0.056	*Yes
Hexane	1.73	*Yes
Nickel Compounds	0.0011	*Yes

\* The source has accepted synthetic minor limits for these pollutants.

**9. Applicable Requirements**

40 CFR 60                       SIP                       40 CFR 63

- 40 CFR 61                       District Origin                       Other

**II Regulatory Analysis**

**1. Acid Rain Requirements:**

This equipment is 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. Clariant Corp. – Louisville West Plant 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):**

Clariant Corp. – Louisville West Plant does manufacture, process, use, store, or otherwise handle one or more of the regulated substances listed in 40 CFR Part 68, Subpart F, and District Regulation 5.15, Chemical Accident Prevention Provisions, in a quantity in excess of the corresponding specified threshold amount.

**4. 40 CFR Part 64 Applicability Determination:**

This project and affected equipment is not major for any criteria pollutant because the source is subject to a plantwide limit of less than 100 tons during any consecutive 12-month period for PM/PM<sub>10</sub>/PM<sub>2.5</sub>. In accordance with 40 CFR 64, Compliance Assurance Monitoring for Major Stationary Sources, the source is not required to propose a CAM plan based on current process and control device requirements and practices.

**5. Basis of Regulation Applicability**

**a. Applicable Regulations**

<b>Regulation</b>	<b>Title</b>	<b>Basis</b>
2.04	Construction or Modification of Major Sources In or Impacting Upon Non-Attainment Areas (Emission Offset Requirements)	Establishes requirements for the construction of stationary sources within areas currently not meeting the NAAQS
2.05	Prevention of Signification Deterioration of Air Quality	Provides for the prevention of significant deterioration of air quality where the national

Regulation	Title	Basis
		ambient air quality standards have been achieved
2.16	Title V Operating Permits	Establishes procedures for the District to issue Title V operating permits.
7.08	Standards of Performance for New Process Operations	Establishes standards for process operations constructed, modified, or reconstructed after September 1, 1976.
7.25	Standard of Performance for New Sources Using Volatile Organic Compounds	Establishes standards for sources constructed, modified, or reconstructed after September 1, 1976 using volatile organic compounds.

**b. Plantwide**

- (a) Clariant Corp. – Louisville West Plant is a major source for PM/PM<sub>10</sub>/PM<sub>2.5</sub>, VOC, single HAP, and total HAPs. To preclude the requirements of Regulation 2.04, Construction or Modification of Major Sources In or Impacting Upon Non-Attainment Areas, and Regulation 2.05, Prevention of Significant Deterioration of Air Quality, the source is subject to a plant-wide limit of less than 100 tons during any consecutive 12-month period for PM/PM<sub>10</sub>/PM<sub>2.5</sub> and VOC. This project is not major for PSD or NSR since the facility has already accepted synthetic minor limits.
- ii. Pursuant to Regulation 2.16, section 4.1, Clariant Corp – Louisville West Plant is required to limit the plantwide emissions of any individual HAP to less than 10 tons during any consecutive 12-month period. For all HAPs combined, the source is required to limit the plantwide emissions of all HAPs to less than 25 tons during any consecutive 12-month period.
- iii. Regulations 5.00 5.20, 5.21, and 5.23 (STAR Program) establish requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards.
- iv. Clariant Corp. – Louisville West Plant submitted a TAC Environmental Acceptability Demonstration to the District on January 20, 2021 showing that the potential TAC emissions of Hexane are de minimis uncontrolled for F604.1, F605.1, and PU611, and are de minimis after the first control for D609.1. The potential TAC emissions of Toluene are de minimis uncontrolled for F604.1 and F605.1. The potential TAC emissions of Hydrogen Chloride are de minimis after the first control for F604.1 and F605.1 and are de

minimis uncontrolled for D609.1 and PU611. The potential TAC emissions are below de minimis in Regulations 5.00 and 5.21.

- v. 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. EU W66 Emission Points**

EU	Emission Point	Description	Install Date	Applicable Regulations	Control ID	Stack ID
W66	F604.1	Funda Filter	New	7.25, STAR	C627.3, C627.4, C627.5, F628.50 & PU628	ST628.190
	F605.1	Funda Filter	New			
	D609.1	Dryer	New	7.08, 7.25, STAR		
	PU611	Bag Filling Unit	New		V332.30, PU628.50, PU628	

Control ID	Description	Performance Indicator	Control Efficiency	Stack ID
F628.50	HEPA Filter	Differential pressure: 0.01" w.c. – 5" w.c.	99.97% PM	ST628.190
C627.3	VUM – Eductor, using SodiumHydroxide solution as the scrubbing liquid	pH Range: 9 – 14 Liquid Flow Pressure Range: 40 – 75 psi	99.5% HCl	ST628.190
C627.4	VUM – Recirculated Packed Bed Scrubber (Stage 1), using SodiumHydroxide solution as the scrubbing liquid	pH Range: 9 – 14 Liquid Flow Pressure Range: 20 – 55 psi		ST628.190
C627.5	VUM – Recirculated Packed Bed Scrubber (Stage 2), using SodiumHydroxide solution as the scrubbing liquid			ST628.190
V332.30	Normag - Absorber	Visual inspection for presence of white oil absorption medium	95% PM	ST628.190
PU628	Zeeco – Natural Gas Non-assisted Flare	Visual inspection for presence of flame or flame detector	99.9% VOC	ST628.190

**i. Standards**

**(1) Opacity**

The owner or operator shall not allow or cause visible emissions to equal or exceed twenty percent (20%) opacity. [Regulation 7.08, section 3.1.1]

(2) PM/PM<sub>10</sub>/PM<sub>2.5</sub>

In accordance with Regulation 7.08, Table 1, PM standards are determined by the following equations, respectively:

$$E = 3.59(P)^{0.62} \quad \text{if } P \leq 30 \text{ tons/hr}$$

(3) TAC

(a) The owner or operator shall not allow hexane, toluene, or HCl emissions to exceed de minimis levels from F604.1, F605.1, D609.1, and PU611. [Regulations 5.00 and 5.21]

(b) Regulations 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23 (STAR Program) establish requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards. Clariant submitted potential emissions calculations with their application for all TACs associated with this project. The following TACs were identified in the application for this project:

TAC	TAC Category	Environmentally Acceptability Demonstration
Hexane	4	De minimis uncontrolled for F604.1, F605.1, and PU611. De minimis after the first control, PU628, for D609.1
Toluene	2	De minimis uncontrolled for F604.1 and F605.1
Hydrogen Chloride (HCl)	2	De minimis after the first control, C627.3, .4, and .5, for F604.1 and F605.1. De minimis uncontrolled for D609.1 and PU611

(4) VOC

The owner or operator shall not allow or cause the plantwide VOC emissions to equal or exceed 100 tons during any consecutive 12-month period. [Regulation 2.05]

**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:**

Incident Date	Description	Penalty	Status
06/11/2015	Visible NOx plume	\$14,250	In compliance
08/31/2015	Visible NOx plume		In compliance
10/27/2015	Visible NOx plume		In compliance
08/22/2017 11/09/2017	Visible NOx plume	\$3000	In compliance
04/13/2017	TAC emissions exceed environmentally acceptable (EA) levels	\$7500	In compliance
04/13/2017	TAC emissions exceed environmentally acceptable (EA) levels		In compliance
01/09/2018 06/10/2018	Visible NOx plume		In compliance
12/04/2018 12/25/2018	Visible NOx plume	\$3750	In compliance
07/31/2019	Failure to perform a stack test	\$40,500	In compliance
01/01/2019 - 12/31/2019	Compliance with Title V Permit	\$326,000	Penalty assessed

**6. Calculation Methodology or Other Approved Method:**

Generally, emissions are calculated by multiplying the throughput (ton, MMCF, gallons, etc) or hours of operation of the equipment by the appropriate emission factor and accounting for any control devices unless otherwise approved in writing by the District.