



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



xx July 2016

Construction Statement of Basis

Owner: Rohm and Haas Chemicals, LLC

Source: Rohm and Haas – Louisville Plant

Plant Location: 4300 Camp Ground Road, Louisville, KY 40216

Date Application Received: 6/2/2016

Application Number: 77534

Public Comment Date: 00/00/2016

District Engineer: Chris Gerstle

Permit No: 378-06-C(R2)

Plant ID: 0189

SIC Code: 2821

NAICS: 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.

Jefferson County is classified as an attainment area for lead (Pb), nitrogen dioxide (NO₂), carbon monoxide (CO), 1 hr and 8 hr ozone (O₃), and particulate matter less than 10 microns (PM₁₀); and is a non-attainment area for the 1997 standard for particulate matter less than 2.5 microns (PM_{2.5}), unclassifiable for the 2012 standard for particulate matter less than 2.5 microns (PM_{2.5}) and partial non-attainment for sulfur dioxide (SO₂).

Application Type/Permit Activity:

- Initial Issuance
- Permit Revision
 - Administrative
 - Minor
 - Significant
- Permit Renewal
- Construction

Compliance Summary:

- Compliance certification signed
- Compliance schedule included
- Source is out of compliance
- Source is operating in compliance

I. Source Information

1. **Plant-wide Overall Process Description:** The source produces various coating and resins.
2. **Project Description:** The source requested to increase the permitted VOC limit from 8.77 tpy to 36.6 tpy. The source submitted a BACT analysis for the new limit for Regulation 7.25, which demonstrated that no control was economically feasible.
3. **Site Determination:** There are no other facilities that are contiguous or adjacent and under common control.
4. **Emission Unit Summary:**

Construction No.	Equipment Description
378-06-C(R2)	E-KVP2-(Bulk Dump Station (11-115), 50# Bag Dump Station (11-124), Pelletizer (11-154), Flow Aid System (11-184), Pellet Rework Hopper System (11-194), Pack-Out Hopper System (11-210), and Rework System (11-236)) all points controlled by Fabric Filter (11-250)

5. Permit Revisions

Revision No.	Permit No.	Issue Date	Public Notice Date	Change Type	Change Scope	Description
Initial	378-06-C	02/28/2007	NA	Initial	Entire Permit	Initial Issuance of permit 378-06-C, which revised permit 144-86
R1	378-06-C (R1)	08/23/2011	07/20/2011	Significant	Pelletizer KVP2-11-154	Increase VOC emission limit from 1.67 tpy to 8.77 tpy
R2	378-06-C (R2)	?/2016	?/2016	Significant	Pelletizer KVP2-11-154	Increase VOC emission limit from 8.77 tpy to 36.6 tpy. Added limits for formaldehyde and cumene.

6. **Fugitive Sources:** Fugitive emissions of dust from any part of the plant are subject to Regulation 1.14, *Control of Fugitive Particulate Emissions*.

7. Plant-wide Emission Summary:

Pollutant	District Calculated Actual Emissions (tpy) 2014 Data	Major Source Pollutants (based on PTE)
CO	21.17	Yes
NO_x	176.65	Yes
PM₁₀	4.41	Yes
SO₂	37.19	Yes
VOC	15.35	Yes
Single HAP > 1 tpy		
Methyl methacrylate	5.36	Yes*
Toluene	3.46	Yes*
Total HAPs	10.72	Yes*
Greenhouse Gas	257,246 CO ₂ e	Yes**

*Note: The source accepted limits on single and total HAP emissions in order to be a synthetic minor source on October 31, 2005; before this date the source was major.

**Note: The GHG are potential to emit (PTE) emissions not actual emissions.

8. Applicable Requirements:

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

9. Referenced MACT Federal Regulations:

N/A

10. Referenced non-MACT Federal Regulations:

N/A

II. Regulatory Analysis

1. Acid Rain Requirements: This equipment 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. This source 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):** The source does not 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 are not major for any criteria pollutants. 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. **Plant-wide**

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.

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. Rohm & Haas submitted their TAC Environmental Acceptability Demonstration to the District on June 6, 2016. Compliance with the STAR EA Goals for the project and plant-wide were demonstrated in the source’s EA Demonstrations. AERMOD air dispersion modeling was performed for each TAC that has non-de minimis emissions. The carcinogen risk and non-carcinogen risk values comply with the STAR EA goals required in Regulation 5.21.

Plant-wide Summary	All P/PE	
Industrial Total R _C	4.50	< 75
Non-Ind. Total R _C	3.59	< 7.5
Industrial Total R _{NC} (max)	1.11	< 3.0
Non-Ind. Total R _{NC} (max)	0.99	< 1.0

TAC	Industrial		Non-Ind.		EA Demo
	R _C	R _{NC}	R _C	R _{NC}	
Cumene	1.19	2.97E-04	0.86	2.16E-04	Meet
Formaldehyde	1.36	0.01	0.99	0.01	Meet
	< 10.0	< 3.0	< 1.0	< 1.0	

b. **Permit 378-06-C(R2): Pelletizer System**

i. **Equipment:**

Emission Point	Description	Applicable Regulation	Basis for Applicability
E-KVP2-11-154	One (1) Pelletizer	STAR 7.08 7.25	Regulation 7.08 applies to each process operation that commenced operation after September 1, 1976. The pelletizer is subject to Regulation 7.25 since it was installed after September 1, 1976 and emits VOCs not covered by another regulation in Part 7.

ii. **Standards/Operating Limits**

1) **VOC**

Per Regulation 7.25 and Construction Permit 378-06-C(R2), VOC emissions are limited to 18.1 lb/hr and 36.6 tons per 12 consecutive month period for Emission Point 11-154.

2) **PM**

(a) In accordance with Regulation 7.08, PM emission standards for each Emission Point (11-115, 11-124, 11-154, 11-210, and 11-236) are calculated by the following equation. (The District determined on March 13, 2013 that the potential uncontrolled PM emissions cannot exceed the PM emission standard.)

$$E = 3.59(2.50)^{0.62} = 6.34 \text{ lb/hr}$$

(b) In accordance with Regulation 7.08, Table 1, the PM emission standard for Emission Points 11-184 and 11-194 is 2.34 lb/hr each for process throughput of 1000 lb/hr or less. (The District determined on March 13, 2013 that the potential uncontrolled PM emissions cannot exceed the PM emission standard.)

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:** N/A
4. **Operational Flexibility:** The source did not request any operational flexibility for these emission points.
5. **Compliance History:**

Incident Date(s)	Regulations Violated	Result
9/9/92	1.07, 1.09, 1.13	Settled
11/2/92	6.24	Board Order
5/10/93	1.13	Settled
6/30/93	2.03	Settled
9/26/93	1.13	Settled
5/8/98	1.09	Settled
5/12/99	7.02	Settled
9/26/00	6.24	Board Order
12/15/06	1.13	Settled
4/11/07	1.07, 2.16	Settled
5/29/08	1.07, 2.16	Board Order
7/2/08	1.07, 2.16	Board Order
6/13/10	2.16	Board Order
8/30/12	1.07, 2.16	Board Order

6. **Calculation Methodology:** Material balances for process vents.
Rohm and Haas applies this method to the KVP2 pelletizer. Rohm and Haas measures the residual VOC in the powder product following the drying step and in the pellets following the pelletizer. Rohm and Haas assumes that the difference between the residual VOC in the powder entering and the pellets exiting the process vent equals the VOC emissions from this process.
7. **Insignificant Activities:** There are no insignificant activities contained in this construction permit.