

**Louisville Metro Air Pollution Control District**  
**850 Barret Ave., Louisville, Kentucky 40204**  
**13 December 2015**

**Construction Statement of Basis**

**Company:** American Synthetic Rubber Company, LLC

**Plant Location:** 4500 Camp Group Road, Louisville, Kentucky 40216

**Date Application Received:** 9/21/2015

**Application Number:** 73523

**Public Comment Date:** 12/13/2015

**Proposed Permit Date:** 12/13/2015

**District Engineer:** Randy Schoenbaechler

**Permit No:** C-0011-1014-15-V

**Plant ID:** 0011

**SIC Code:** 2822

**NAICS:** 325212

**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 (NO<sub>2</sub>), carbon monoxide (CO), 1 hr and 8 hr ozone (O<sub>3</sub>), and particulate matter less than 10 microns (PM<sub>10</sub>); and is a non-attainment area for the 1997 standard for particulate matter less than 2.5 microns (PM<sub>2.5</sub>), unclassifiable for the 2012 standard for particulate matter less than 2.5 microns (PM<sub>2.5</sub>) and partial non-attainment for sulfur dioxide (SO<sub>2</sub>).

**Application Type/Permit Activity:**

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

**Compliance Summary:**

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

**I. Source Information**

1. **Plantwide Overall Process Description:** The source produces polybutadiene rubber (PBR) and styrene butadiene rubber (SSBR) by solution, and liquid polymer (LP).
2. **Project Description:** The Source requested a construction permit for the installation and operation of a new “in kind” replacement No. 5 Crumb Tank T-9E/T.
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
C-0011-1014-15-V	One (1) New “In Kind” Replacement No. 5 Crumb Tank T-9E/T (Title V Emission Point E-U1/U2-T-9E/T); Closed System; Make Custom; Model Custom; and 47,000 Gallons Capacity

**5. Permit Revisions**

Revision No.	Permit No.	Issue Date	Public Notice Date	Change Type	Change Scope	Description
Initial	C-0011-1014-15-V	TBD	12/13/2015	Initial	Entire Permit	Initial Permit Issuance

6. **Fugitive Sources:** There are no fugitive emissions for this project.
7. **Plantwide Emission Summary:**

Pollutant	Actual Emissions (tpy) 2014 Data	Pollutant that triggered Major Source Status (based on PTE)
VOC	331.04	Yes
CO	242.24	Yes
NO <sub>x</sub>	395.88	Yes
SO <sub>2</sub>	101.89	Yes
PM	44.12	Yes
PM <sub>10</sub>	8.45	Yes
PM <sub>2.5</sub>	7.08	Yes
<b>Total HAPs</b>	233.10	Yes
1, 3-Butadiene	7.40	Yes
Toluene	210.57	Yes
Styrene	9.85	Yes

Pollutant	Actual Emissions (tpy) 2014 Data	Pollutant that triggered Major Source Status (based on PTE)
Hydrogen Chloride	3.58	Yes
CO <sub>2</sub> e	*249,369	Yes

\*Source: ghgdata.epa.gov

**8. Applicable Requirements:**

PSD       40CFR60       SIP       40CFR63  
 NSR       40CFR61       District-Origin       Other

**9. Referenced MACT Federal Regulations:**

40 CFR 63, Subpart U      National Emission Standards for Hazardous Air Pollutant Emissions: Group I Polymers and Resins

**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 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. The required Risk Management Plan was submitted on June 18, 2004.
- 4. 40 CFR Part 64 Applicability Determination:** The source is subject to 40 CFR Part 64 - Compliance Assurance Monitoring for Major Stationary Sources per CAM plan dated August 8, 2014.

**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.

**b. Permit C-0011-1014-15-V: No. 5 crumb tank**

**i. Equipment:**

Emission Point	Description	Applicable Regulation	Basis for Applicability
E-U1/U2-T-9E/T	One (1) New "In Kind" Replacement No. 5 Crumb Tank T-9E/T (Title V Emission Point E-U1/U2-T-9E/T); Closed System; Make Custom; Model Custom; and 47,000 Gallons Capacity	1.05, 2.03, 2.16, 5.00, 5.01, 5.02 (40 CFR Part 63 Subpart U), 5.20, 5.21, 5.22, 5.23 and 7.25	1.05 establishes requirements for monitoring and record keeping for sources with emissions above 100 tons of VOC
			2.03 establishes requirements for Permits to Construct and Operate
			2.16 Title V source
			5.00, 5.01, 5.20, 5.21, 5.22, 5.23 establishes the requirements for Environmental Acceptability for TACs.
			7.25 Affected facility constructed after June 13, 1979 for VOC.
5.02 and 40 CFR Part 63 Subpart U establishes requirements for elastomer product process units (EPPU) and associated equipment			

**ii. Standards/Operating Limits**

**1) VOC**

- (a) New replacement Emission Point T-9E/T is a closed system that does not have a process vent that vents directly to either the atmosphere or to a control

device. This closed system has been determined by the District to be VOC BACT for Regulation 7.25.

- (b) Regulation 7.25 establishes a VOC limit for periods of time when there may be emissions that are not covered by BACT. The following emission points combined shall meet this limit: U1/U2 Emission Points: General Tank Farm Truck Unloading, C-2, C-2M, C-2T, C-604A, C-615, C-623, X-2M, X-2T, C-1A, C-1T, D-10A, D-8A, D-44, D-44M, D-45M, R-651, R-652, R-653, R-654, Reactor 14, D-24M, D-24T, D-25M, D-25T, D-26M, D-26T, No. 3 Stripper Vessels, D-645, D-657, D-658, D-6A, T-9A, T-9B, T-9C, T-9D, and T-9E/T; U3 Emission Points: General Tank Farm Truck Unloading, Rail Car Unloading, D-49LB, DR-2, and DR-3; and U4 Emission Point: Truck Fuel Oil Loading/Unloading (when unloading).

2) **40 CFR Part 63 Subpart U HAP (Non-LDAR)**

- (a) Per Regulation 5.02, section 4.19, the source is subject to 40 CFR Part 63 Subpart U.
- 1) (New replacement Emission Point T-9E/T does not meet the LDAR applicability requirements of 40 CFR 63.160 of 40 CFR Part 63 Subpart H, and it is therefore not subject to the equipment leak (LDAR) provisions of 40 CFR 63.502(a) of 40 CFR Part 63 Subpart U, which references 40 CFR Part 63 Subpart H, with the exceptions as noted in 40 CFR 63.502(b) through (m). Specifically, this equipment item does not meet the definition of “in organic HAP service” in 40 CFR 63.161 of 40 CFR Part 63 Subpart H. That is, this piece of equipment does not either contain or contact a fluid (liquid or gas) that is at least 5 percent by weight total organic HAPs as determined according to the provisions of 40 CFR 63.180(d) of 40 CFR Part 63 Subpart H. New replacement No. 5 Crumb Tank T-9E/T will not be “in organic HAP service”. Consequently, there are no LDAR standards, and no LDAR monitoring and recordkeeping, and no LDAR reporting

requirements, applicable to new replacement Emission Point T-9E/T.)

- 2) New replacement Emission Point T-9E/T is, for the purposes of the 40 CFR Part 63 Subpart U MACT, part of the Back-End Process Operations. It is not, however, a Back-End Process Vent due to it being a closed system. ASRC's Back-End Process Operations consist of all U1/U2 Crumb Tanks and all U1/U2 Finishing Lines. (Refer to the definition of "Back-End" found in 40 CFR 63.482, *Definitions*, which specifically includes crumb storage.) ASRC's Back-End Process Operations comply with the 40 CFR Part 63 Subpart U residual organic HAP limitation of 40 CFR 63.494(a)(2)(i) through the use of stripping technology, and compliance is demonstrated through sampling. When stripping technology alone does not result in meeting this applicable residual organic HAP limitation, the combination of stripping technology and a control (the existing Regenerative Thermal Oxidizer RTO-1 and/or one or both of the existing coal-fired boilers) is used, as needed, to demonstrate compliance with this limitation.
- 3) All Back-End Process Operations are not subject to the 40 CFR Part 63 Subpart U MACT maintenance wastewater provisions of 40 CFR 63.501(b), which references 40 CFR 63.105. 40 CFR 63.501(c)(2) exempts back-end streams at affected sources that are subject to a residual organic HAP limitation in 40 CFR 63.494(a)(1) through (3), and that are complying with these limitations through the use of stripping technology, from these provisions. (ASRC has no Subpart U MACT process wastewater as defined in 40 CFR 63.482.)
- 4) For Polybutadiene Rubber and Styrene Butadiene Rubber produced by the solution process at 40 CFR Part 63 Subpart U MACT

existing affected sources, which ASRC is for the purposes of this MACT Standard.

iii. **Monitoring and Record Keeping**

1) **HAP**

(a) 40 CFR Part 63 Subpart U HAP (Non-LDAR)

The source is required to comply with applicable monitoring and record keeping requirements of 40 CFR Part 63 Subpart U.

(b) 40 CFR Part 63 Subpart H HAP (LDAR)

The source is required to comply with applicable monitoring and record keeping requirements of 40 CFR Part 63 Subpart U.

iv. **Reporting**

1) **40 CFR Part 63 Subpart U HAP (Non-LDAR)**

The source is required to comply with applicable reporting requirements of 40 CFR Part 63 Subpart U.

**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 does participate in emissions trading, and has an existing Emissions Bank credit of 654.82 tpy for VOC.
4. **Operational Flexibility:** The source did not request any operational flexibility for these emission points.

**5. Compliance History:**

<b>Incident Date(s)</b>	<b>Regulation Violated</b>	<b>Result</b>
10/01/1992	7.02	Board Order
12/20/1993	7.02	Board Order
7/6/1996	7.02	Settled
5/8/1998	1.09	Settled
3/3/1999	1.09	Settled
7/26/2003	5.02	Settled
4/11/2007, 4/3/2007	2.03, 2.16	Board Order
1/15/2009	5.15	Settled
1/6/2009, 3/25/2009, 9/29/2009	2.16, 1.09, 1.13	Board Order
5/27/2010	2.16	Board Order
3/27/2013	2.16	Settled
1/29/2010, 9/3/2010, 7/15/2011, 1/21/2013, 3/4/2013, 1/8/2014, 3/22/2014	2.16, 1.07	Board Order
1/29/2015	2.16	Pending
4/15/2015	5.21	Pending

**6. Calculation Methodology:**

- a. The owner or operator shall calculate emissions from production lines by using the following formulas, unless another method is approved in writing by the District:

*U1/U2 VOC Daily Emissions = Front-End VOC Emissions + Production VOC Emissions + Back-End VOC Emissions + Fugitive/Other VOC Emissions*

Where:

*Front-End VOC Emissions = (Average Inlet to Control Device) x (1 - Control Efficiency)*

*Production VOC Emissions = ((Production x Adjusted Residual VOC) - (Production x Average Bale Residual VOC)) x (1 - Capture Efficiency (90%))*

*Back-End VOC Emissions = ((Production x Adjusted Residual VOC) - (Production x Average Bale Residual VOC)) x (Capture Efficiency (90%)) x (1 - Control Efficiency)*

*Fugitive/Other VOC Emissions = Average Solvent Consumption - (Solvent to Inlet to Front-End Control Device + Production Solvent Emissions + Solvent to Inlet to Back-End Control Device + Solvent Remaining in Product + Solvent in Waste Rubber)*

7. **Insignificant Activities:** There are no insignificant activities contained in this construction permit.
  
8. **Permit Fee:** The construction permit fee of \$3,615.61 is based on a significant permit revision (includes new construction and initial issuance) fee of \$2,582.58; and a per Major Source MACT fee of \$1,033.03 each for one (1) applicable MACT (40 CFR Part 63 Subpart U). Because new replacement Emission Point T-9E/T is a closed system that does not have a process vent that vents directly to either the atmosphere or to a control device, no STAR Program de minimis determination fee is required. All fees are according to the District's Schedule of Fees Table for Fiscal Year 2016 pursuant to Regulation 2.08.