

**COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Blue Ridge Regional Office**

STATEMENT OF LEGAL AND FACTUAL BASIS

Arkema Inc.
Chatham, Pittsylvania County, Virginia
Permit No. BRRO-30954

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Arkema Inc. has applied for a Title V Operating Permit for its Chatham facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

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Date:

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Date:

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FACILITY INFORMATION

Permittee

Arkema Inc.
601 Tightsqueeze Industrial Road
Chatham, VA 24531

Facility

Arkema Inc.
601 Tightsqueeze Industrial Road
Chatham, VA 24531
County-Plant Identification Number: 51- 143-00138

SOURCE DESCRIPTION

NAICS Code: 325211 – Chemical resin manufacturing

Arkema Inc. manufactures products commonly known as "oligomers" and "monomers." Monomers, acrylic acid/methacrylic acid based esters, are produced for sale and/or use in the Oligomers units as monomers or diluents. Oligomers are acrylate-based oligomer and oligomer/monomer blend products for various end-uses.

The facility is not a Title V major source, but is subject to 40 CFR 63 Subpart VVVVVV- Chemical Manufacturing Process Units (CMPU), which requires facilities that utilize federally-enforceable control devices to maintain HAP emissions below major source thresholds (MSTs), but have uncontrolled hazardous air pollutant emissions greater than MSTs, to obtain a federal Title V permit. This source is located in an attainment area for all pollutants, and is a PSD minor source. The entire facility is currently permitted under Minor NSR Permits issued on July 16, 1999, April 30, 2001, and September 27, 2007. The CMPU manufacturing part of the facility is included in the July 16, 1999 and April 30, 2001 NSR Permits.

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, has been conducted on November 14, 2012. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

On December 21, 2012, EPA promulgated the final version of the Chemical Manufacturing Area Source rule under Title 40 of the Code of Federal Regulations Part 63 (40 CFR)63) Subpart VVVVVV. The final rule requires facilities that utilize federally enforceable control devices to maintain HAP emissions below major source thresholds, but have uncontrolled hazardous air pollutant emissions greater than major source thresholds to obtain federal Title V operating permits.

Only chemical manufacturing process units (CMPU) subject to this rule are included in this permit and the applicable state and federal requirements. “Virginia regulations (9 VAC 5-80-110.A.2) state that for any source other than a major source subject to this article [Federal Operating Permits for Stationary Sources], the board shall include in the permit all applicable requirements that apply to emissions units that cause the source to be subject to this article. The only feedstock that facility uses from Table 1 of 40 CFR 63 Subpart VVVVVV is a Metal HAPS that is used in some of the manufacturing processes.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following:

See Title V section Emission Units

EMISSIONS INVENTORY

A copy of the 2012 annual emission update is attached. Emissions are summarized in the following tables.

2012 Actual Emissions

Emission Unit	2012 Criteria Pollutant Emission in Tons/Year				
	VOC	CO	SO ₂	PM ₁₀	NO _x
Oligomer CMPU	1.9	-	-	-	-
Total	1.9		-	-	-

2012 Facility Hazardous Air Pollutant Emissions

Pollutant	2012 Hazardous Air Pollutant Emission in Tons/Yr
None	

EMISSION UNIT APPLICABLE REQUIREMENTS – Chemical Manufacturing Process Units

Limitations

Condition 1 requires the VOC emissions from the reactor systems (R-0301, R-0501, and R-2001) acrylic acid storage, toluene storage, acrylate storage, heavy waste storage, light waste storage, blender/reactor system (BL-2015), and feed tanks (V-0320, V-0532, V-2030, V-2032, and V-2034) shall be controlled by thermal oxidation. This condition is taken from the NSR permits issued July 16, 1999 April 30, 2001.

Condition 2 states the approved fuels for the thermal oxidizers. These conditions were taken from NSR permits issued July 16, 1999 and April 30, 2001.

Conditions 3 limits the emissions from the urethane and epoxy based acrylate manufacturing. This condition is taken from the NSR permit issued July 16, 1999.

Conditions4 limits the emissions from acrylic based oligomer/monomer manufacturing and blending. This condition is taken from the NSR permit issued April 30, 2001.

Condition 5 limits the opacity from the thermal oxidizers TO-2540a and TO-2540b. The statement “except during one six-minute period in any one hour in which visible emissions shall not exceed 10 percent opacity” was removed since the thermal oxidizers are identical and operate the same. This condition is taken from the NSR permits issued July 16, 1999 and April 30, 2001.

Monitoring and Recordkeeping

Condition 6 states the thermal oxidizer (TO-2540a and TO-2540b) monitoring requirement from Condition 4 of the NSR permit issued July 16, 1999 and Condition 5 of the NSR permit issued April 30, 2001.

Condition 7 states the opacity periodic monitoring. Monitoring of visible emissions will be required of the source to make an observation of each of the thermal oxidizer (TO-2540a and TO-2450b) stacks at least one time per week, when the units are operating. They are to observe for the presence of visible emissions from the stacks. If visible emissions are observed, the permittee will have to take timely corrective action to resume operations without visible emissions or perform a VEE in accordance with 40 CFR 60, Appendix A, Method 9 to assure visible emissions compliance. The permittee will keep a log of observations, any VEE recordings, and any corrective action. If the unit has not operated during the week, this fact shall be noted in the log, and that the visible emission observation was not required.

Condition 6 with the requirement to continuously measure and record temperature provide sufficient monitoring for compliance with the VOC emissions limit. Condition 7 with the weekly VEE provides sufficient monitoring for compliance with the opacity limit (PM emissions).

Condition 8 specifies the recordkeeping requirements for the urethane and epoxy based acrylate production. This condition is taken from the NSR permit issued July 16, 1999.

Condition 9 specifies the recordkeeping requirements for acrylic based oligomer/monomer manufacturing and blending processes. This condition is taken from the NSR permit issued April 30, 2001.

Compliance Assurance Monitoring (CAM) analysis of emission units with control devices:

Since the CMPU units are subject a MACT (40 CFR 63 Subpart VVVVVV), additional CAM is not required per Part 64 Section 64.2(b)(1)(i).

Testing

Condition 10 does not require source tests, but does require the facility to be constructed to allow emissions testing. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

EMISSION UNIT APPLICABLE REQUIREMENTS – Chemical Manufacturing Process Units (CMPU) – 40 CFR 63 MACT VVVVVV Requirements

Conditions 11 through 22 state the management practices, inspection, repair, recordkeeping operation and maintenance, limits, notifications, and reports that are MACT Requirements.

Condition 11 states the CMPU unit management practices for organic HAP and metal HAP service. This condition does not apply to process vessels containing metal HAP that that are in liquid solution or other form that will not result in particulate emissions. Section 63.11495(a)(2) currently does not apply, since Arkema does not use any of the organic HAPs listed in the Table 1 of 40 CFR 63 MACT VVVVVV.

Condition 12 requires inspection of process vessels and equipment for each CMPU in organic HAP or metal HAP service.

Condition 13 specifies that any leak shall be repaired within 15 calendar days after detection or document the reason for delay of repair.

Condition 14 requires keeping records of dates and results of each inspection event, dates of equipment repairs, and if applicable, the reasons for any delay in repair.

For CMPU subject to 40 CFR 63 MACT VVVVVV solely because of the use of Table 1 metal HAP , the requirements for heat exchange (40 CFR 63.11499) and waste water (40 CFR 63.11498) systems do not apply (From Frequently Asked Questions dated February 26, 2013 on EPA Area Source Standards - http://www.epa.gov/ttn/atw/area/metal_fabrication_q_a_nov-2011-rev3.pdf)

40 CFR 63.11496 (a), (b), (c), (d), and (e) only apply to organic HAP in Table 1. The CMPU currently does not use any organic HAP in Table 1.

Condition 15 states the requirements for metal HAP emissions from process vents. The facility has less than 400 lb/yr uncontrolled metal HAP emissions.

The facility is not subject to the requirements in 40 CFR 63.11497 (What are the standards and compliance requirements for storage tanks?), they only use metal HAPs from Table 1.

Condition 16 states the requirements for metal HAP emissions from each CMPU. This condition requires the facility to determine the sum of the metal HAP emissions.

Condition 17 states that the facility is required to meet the 40 CFR Part 63 Subpart A requirements as shown in Table 9 to Subpart VVVVVV.

Condition 18 requires notification of compliance status as required by 40 CFR 63.9(h).

Condition 19 states the records that are required to be maintained.

Condition 20 requires the facility to submit Semiannual Compliance Reports and specifies the contents of the reports. This does not apply to heat exchange and wastewater systems, based on an EPA FAQ released 2826/2013 which states “For a CMPU subject to the CMAS rule solely because of the use of Table I metal HAP, the requirements for heat exchange and wastewaters system do not apply.”

Condition 21 states the defense for violation of emissions standards during a malfunction and Condition 22 states the written report requirements.

Streamlined Requirements

None

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110 that

apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

Comments on General Conditions

26. – 31. Permit Expiration

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §2.2-604 and §10.1-1185 of the *Code of Virginia*, and the “Department of Environmental Quality Agency Policy Statement No. 2-09”.

37. Failure/Malfunction Reporting

Section 9 VAC 5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9 VAC 5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to section 9 VAC 5-20-180 including Title V facilities. Section 9 VAC 5-80-250 is from the Title V regulations. Title V facilities are subject to both sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within four daytime business hours of discovery of the malfunction.

55. – 58. Malfunction as an Affirmative Defense

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Condition 37 **Failure/Malfunction Reporting**, 55 **Malfunction as an Affirmative Defense**, 56 **Malfunction as an Affirmative Defense**, and 57 **Malfunction as an Affirmative Defense**. For further explanation see the comments on General Condition 37 **Failure/Malfunction Reporting**.

62.-Asbestos Requirements

The Virginia Department of Labor and Industry under Section 40.1-51.20 of the Code of Virginia also holds authority to enforce 40 CFR 61 Subpart M, National Emission Standards for Asbestos.

STATE ONLY APPLICABLE REQUIREMENTS

There are no state only requirements.

FUTURE APPLICABLE REQUIREMENTS

None at this time

Green House Gas

Arkema emits less than 75,000 tons of GHG per year and reporting requirements do not apply. There are no applicable GHG permitting requirements. The facility has two 14.65 MMBtu/hr boilers and four RTOs (2 MMBtu/hr total).

INAPPLICABLE REQUIREMENTS

This Title V permit only includes equipment that is subject to the requirements of 40 CFR 63 Subpart VVVVVV - National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources.

COMPLIANCE PLAN

None

INSIGNIFICANT EMISSION UNITS

There are no insignificant emissions identified in this Title V permit, since the permit is being issued for only the portion of the facility subject to 40 CFR 63 MACT Subpart VVVVVV - National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources. Only CMPU equipment subject to this MACT is included in this permit.

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

PUBLIC PARTICIPATION

The proposed permit will be placed on public notice in the *Danville Register & Bee* from July 25, 2014 to August 24, 2014.