

**COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Northern Regional Office**

STATEMENT OF LEGAL AND FACTUAL BASIS

Cellofoam North America, Inc.
Falmouth (Stafford County), Virginia
Permit Number: NRO40696

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, Cellofoam North America, Inc. has applied for a Title V Operating Permit for its expanded polystyrene insulation board manufacturing facility located in Falmouth, Virginia. The DEQ has reviewed the application and has prepared a draft Title V Operating Permit.

Permit Writer:



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Date: 10/29/2013

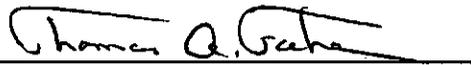
Regional Air Permit
Manager:



James B. LaFratta

Date: 10/29/13

Regional Director:



Thomas A. Faha

Date: 10-29-13

FACILITY INFORMATION

Permittee

Cellofoam North America, Inc.
P.O. Box 406
Conyers, Georgia 30012

Facility

Cellofoam North America, Inc.
Falmouth Facility
33 Baron Park Road
Falmouth, Virginia 22405

AIRS ID No. 51-179-0029

SOURCE DESCRIPTION

SIC Code: 3086 – Manufacture of expanded polystyrene insulation boards

Cellofoam's Falmouth, Virginia facility manufactures polystyrene insulation boards for the construction industry. Expandable polystyrene (EPS) beads, with pentane as the blowing agent, are received at the facility. The beads are first pre-expanded in a pressurized steam expander, using steam from a natural gas fired boiler. After pre expansion, the beads are dried, screened and transported to aging bags for cooling and stabilization for about 24 hours. The stabilized beads are then conveyed to block molding machines in which pressurized steam is injected and the expanded beads fuse together to form large (37 inches x 50 inches x 192 inches max) insulation blocks of expanded polystyrene. The molded product is then sent to storage for aging and stabilization for approximately 2 to 7 days, depending on the product specification. The aged blocks are then cut with hot wire to the desired sizes of the final product. Cellofoam has been permitted to laminate the final product, but does not currently run this process. The finished product is wrapped and shipped off site.

Pentane (a volatile organic compound) loss through the board manufacturing process constitutes the primary source of emissions from this facility. Additional small quantities of volatile organic compounds are emitted from the adhesives used in the lamination process.

The facility is a Title V major source of volatile organic compounds (VOCs) as it is located in Stafford County, part of the Ozone Transport Region (OTR) for which a facility having a potential to emit of 50 tons or more of VOCs is subject to Title V permitting. The facility is

currently subject to a mNSR Permit (issued June 9, 2006) which limits facility wide VOC emissions to no more than 99.7 tons per year. The facility is also subject to the Reasonably Achievable Control Technology (RACT) requirements for VOCs of 9 VAC 5 Chapter 40, Part II, Article 51 (formerly 9 VAC 5-40-300). The RACT requirements established in a Consent Agreement, effective August 10, 1998, were included as part of EPA's approval of a revision to the Commonwealth of Virginia's State Implementation Plan (SIP) in the January 2, 2001 Federal Register (Vol. 66, No. 1), making such requirements state and federally enforceable.

The facility's current Title V permit is dated April 26, 2001 with effective date also April 26, 2001. A Title V renewal application dated September 29, 2005 was received by DEQ on October 3, 2005. Additional information was received October 15, 2012.

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, has been conducted. 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. The most recent full compliance inspection was performed on October 11, 2012.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The significant emissions units at this facility consist of the following:

P1: This emission unit identification includes VOC emissions (i.e. pentane as a blowing agent in the EPS material) from EPS bead box opening, pre-expander / dryer (PE-1), pre-puff bead conditioning and storage (BCS-1), block molding (BM-1), and block molding machine (BMM1), block storage (BS-1), and board cutting (BC-1). The maximum rated capacity of EPS board production is 981 pounds per hour.

P2: Pre-puff expander second pass: This emission unit identification includes VOC emissions (i.e. pentane as a blowing agent in the EPS material) from EPS conditioning and storage.

L1: This emissions unit identification includes VOC and hazardous air pollutant emissions from the use of adhesive to laminate insulation boards. The maximum rated capacity of the laminator is measured as 10 gallons per hour of adhesive applied. This capacity is expressed as 8,750 square feet per hour of material laminated.

There is no pollution control equipment at the facility for these emission units.

EMISSIONS INVENTORY

A copy of the facility's 2012 calendar year annual emissions update is provided as Attachment A. The actual criteria and hazardous air pollutant emission data from this annual emission update are summarized in the following table.

Pollutant	CO	NO ₂	PM	PM-10	SO ₂	VOC
CY 2011	0.505	0.842	0.046	0.046	0.004	71.207
CY2012	0.463	0.772	0.042	0.042	0.003	69.477

EMISSION UNIT APPLICABLE REQUIREMENTS – Emission Units P1 and L1

Limitations

The following applicable VOC limitations are State BACT and/or RACT requirements from Conditions 3, 4, 5, 6, 7, and 8 of the minor new source review permit issued June 9, 2006, and subsumed (see streamlined requirements section of this permit) requirements from paragraphs E.2 and E.3 of the RACT Consent Agreement, dated August 10, 1998 (US EPA approved on January 2, 2001). A copy of the NSR permit is enclosed as Attachment B. A copy of the RACT Consent Agreement is enclosed as Attachment C.

Condition 5 limits the annual consumption of adhesive in the laminator, L1 to no more than 8,300 gallons per year, calculated monthly as the sum of each consecutive twelve month period.

Condition 5 limits the adhesive VOC content to 0.47 lb VOC per gallon of adhesive, as applied.

Condition 3 limits annual processing of expandable polystyrene (EPS) beads to 2,890 tons per year, calculated monthly as the sum of each consecutive twelve month period.

Condition 4 limits the EPS beads processed at the facility to have an initial VOC weighted average (initial pentane content) of no more than five percent by weight, calculated weekly (i.e. calendar week) basis. For the purposes of this limitation as well as references throughout this document and the Title V permit, a calendar week is seven days beginning at 00:00:00 on Sunday, and ends on 23:59:59 on the following Saturday.

Condition 6 limits VOC emissions from the operation of the laminator to 2.0 tons per year, calculated monthly as the sum of each consecutive twelve month period.

Condition 7 limits VOC emissions from the combined operation of P1 and L1 to 99.7 tons per year calculated monthly as the sum of each consecutive twelve month period.

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable, but have not been included in the permit because the nature of the EPS expansion, molding, storage and lamination process does not have the potential for visible emissions.

9 VAC 5-50-80 and 9 VAC 5-50-290, New Source Standard for visible emissions.

MONITORING AND RECORDKEEPING

The monitoring and recordkeeping requirements in Condition 9 of the June 9, 2006, minor NSR permit as well as paragraph E.5 of the August 10, 1998 RACT Consent Agreement are consistent with Part 70 requirements. The permittee will monitor and record the following:

- The monthly and annual (each consecutive twelve month period) consumption of each adhesive used in the lamination process, and the VOC content of each adhesive applied.
- The Material Safety Data Sheets or Certified Product Data Sheets (CPDS) showing VOC content (i.e. percentage by weight and measured by an EPA approved test method (e.g. 40 CFR Part 60, Appendix A) for each adhesive applied.
- The monthly and annual (each consecutive twelve month period) VOC emissions from the operation of the laminator to demonstrate compliance with the annual VOC emission limitation placed on the laminator as well as the facility wide VOC emission limitations.
- The daily quantity of each lot (shipment) of expanded polystyrene (EPS) beads processed and the percentage of initial VOC contained in each lot (shipment) of EPS beads processed to determine compliance with the five percent weekly average limit. This is to be accomplished by the permittee maintaining a detailed daily material log which includes daily entries including bead lot numbers processed, the corresponding manufacturer's certified initial VOC content of the EPS beads processed and the quantity (in pounds) of each lot processed that day.
- The weekly (i.e. calendar week) calculated weighted average VOC content of the EPS beads and the quantity of the EPS beads processed that week.
- The monthly and annual (each consecutive twelve month period) quantity of EPS beads processed.
- The DEQ approved retention factor and the retention factor results of the residual pentane in the finished expanded polystyrene product. (The permit includes a requirement to perform testing to determine VOC retention in the finished product.

Retention is used in the VOC emission calculation from the EPS board manufacturing process.

- The monthly and annual (each consecutive twelve month period) total facility wide VOC emissions from the laminator (L1) and from the EPS bead processing (P1).

TESTING

The permit does not require source emission tests. A table of test methods has been included in the permit if testing is performed. 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.

REPORTING

Consistent with Condition 10 of the June 9, 2006, minor NSR permit as well as paragraph E.6 of the August 10, 1998 RACT Consent Agreement, the Title V permit includes calendar quarterly VOC emission data reporting requirements. The quarterly reports shall be submitted within thirty days following the end of each calendar quarter. The quarterly reports are to provide the following information:

- 1) For each calendar week in the reporting quarter, the weekly calculated weighted average initial VOC content (in percent %) of the EPS beads and the quantity (in pounds) of the EPS beads processed that week. For the purposes of this reporting requirement, and elsewhere, as applicable, a calendar week is in a reporting quarter, if four (4) or more days of the calendar week are in a calendar month of the reporting quarter.
- 2) For each calendar month in the reporting quarter, the monthly and rolling twelve month amount (in pounds) of EPS beads processed.
- 3) For each calendar month in the reporting quarter, the monthly and rolling twelve month amount (in gallons) of adhesive consumed by the laminator.
- 4) For each calendar month in the reporting quarter, the monthly and rolling 12 month VOC emissions (in tons) from the quantity of EPS beads processed, and adhesive consumption.

STREAMLINED REQUIREMENTS

The following terms in the August 10, 1998 RACT Consent Agreement have not been included in the proposed Title V permit for the reasons provided:

Paragraph E.1 requiring VOC emissions from the affected facility to be controlled and reduced as outlined in this Agreement. There are no specific requirements cited.

Paragraph E.2 and E.3 requiring VOC emissions from the expanded polystyrene production plant to be controlled by the use of low and reduced VOC polystyrene beads. Condition 4 of the June 9, 2006 minor NSR permit contains more clear and stringent requirements as to the type of beads that may be processed at this facility. Condition III.A.4 of the Title V permit contains the requirements of Condition 4 of the June 9, 2006 minor NSR permit and the subsumed requirements of Paragraphs E.2 and E.3 of the August 10, 1998 RACT Consent Agreement.

Paragraph E.7 requiring Cellofoam to comply with all applicable provisions of the SAPCB Regulations including the requirements for monitoring, notification, recordkeeping, reporting, maintenance and malfunction. This requirement is very generic in nature and is required by Cellofoam regardless of its inclusion in this document. The proposed Title V permit for this facility clearly identifies the specific monitoring, recordkeeping and reporting requirements necessary to Cellofoam to demonstrate its compliance status with all federally applicable requirements.

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 permit sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations (including those caused by upsets) from permit requirements that may cause excess emissions for more than one hour, within four daytime business hours.

STATE ONLY APPLICABLE REQUIREMENTS

The permittee did not identify any state only enforceable requirements in their application; therefore, no state only applicable requirements have been included in the Title V permit.

FUTURE APPLICABLE REQUIREMENTS

The permittee did not identify any specific future applicable requirements in their application, and the DEQ is not presently aware of any requirements that may apply to the facility during this Title V permit term. Therefore, no specific future applicable requirements have been included in the Title V permit.

INAPPLICABLE REQUIREMENTS

The permittee did identify the following federally enforceable requirement as inapplicable to their facility:

The general process weight rate emission standards in 9 VAC Chapter 40.

While not specifically stated by the permittee, the permittee is most probably referring to 9 VAC 5-40-260, Standard for particulate matter (AQCR 1-6). The permittee has reasoned that due to the nature of the manufacturing operation at their facility, process emissions are gaseous emissions and not particulate emissions.

The DEQ concurs with the permittee's logic, but this requirement has not been included in the Title V permit as an inapplicable requirement, since 9 VAC 5-40-260 applies to existing sources and not to the following:

- 1) Any stationary source (or portion of it), the construction, modification, or relocation of which commenced on or after March 17, 1972.
- 2) Any stationary source (or portion of it), the reconstruction of which commenced on or after December 10, 1976.

Construction of Cellofoam's facility began circa October 1980, and is permitted under the new and modified source regulations.

There are no applicable Green House Gas (GHG) permitting requirements.

COMPLIANCE PLAN

Cellofoam's Falmouth, Virginia facility is currently in compliance with all applicable requirements, and no compliance plan was included in the permit application; therefore, no compliance plan appears in the Title V permit.

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant units include the following:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
B1	Natural gas-fired boiler	9 VAC 5-80-720 C.2.a	--	9.0 MMBtu/hr

B2	Natural gas-fired boiler	9 VAC 5-80-720 C.2.a		6.0 MMBtu/hr
S1	Four (4) space heaters	9 VAC 5-80-720 A..4	--	--

These emissions units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping, or reporting shall be required on these emission units in accordance with 9 VAC 5-80-110.

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality with their application; therefore, all portions of the Title V application are suitable for public review.

PUBLIC PARTICIPATION

A public notice regarding the draft permit was placed in the August 28, 2013 of the Free Lance Star newspaper, and is the local newspaper of general circulation where Cellofoam is located. By this notice, public comments were accepted from August 29, 2013 through September 27, 2013. Additionally, the information contained in the official public notice was sent to the following persons for the stated purpose:

- 1) DEQ's Susan Tripp for posting on the DEQ's website,
- 2) DEQ's Cindy Burnt for publishing in the Virginia Register,
- 3) Shannon L. Heafey contact for the affected State of Maryland in accordance with 9 VAC 5-80-290B,
- 4) Cecily Beall contact for the affected District of Columbia, in accordance with 9 VAC 5-80-290B,
- 5) All persons on the DEQ's current (August 29, 2013) mailing list, in accordance with 9 VAC 5-80-290B,
- 6) U.S. EPA Region III's (EPA) Cathleen Van Osten for review and comment.

Additionally, the information as contained in the official public notice was made available to anyone who requested it.

The EPA is offered a 45 day review period that began on the public notice date and is concurrent with the public comment period. The EPA's comment period ended on October 11, 2013, however, due to the federal government shutdown from October 1, 2013 until

October 16, 2013, the DEQ gave the EPA additional time to comment. On October 24, the DEQ received a phone call from Ms. Van Osten stating that they would not be making any comments on the draft Title V permit.

During the public comment period, there were no requests received for a public hearing. There were no comments received on the Draft Title V, and the Statement of Legal and Factual Basis.