KEEP PERMIT AT SITE

CONTROL NO. B - 06295

State of Maryland

Lawrence J. Hogan, Jr.
Governor

Boyd K. Rutherford
Lieutenant Governor

Ben Grumbles
Secretary

DEPARTMENT OF THE ENVIRONMENT

Air and Radiation Administration
1800 Washington Boulevard, Suite 720
Baltimore, MD 21230

[ ] Construction Permit

[X] Part 70 Operating Permit

PERMIT NO. 24-025-0558

DATE ISSUED February 1, 2018

PERMIT FEE To be paid in accordance with COMAR 26.11.02.19B

EXPIRATION DATE January 31, 2022

LEGAL OWNER & ADDRESS
Lifoam Industries, LLC
121 Bata Blvd., Suite D
Belcamp, MD 21017
Attn: Mr. Lon Bartoli, MS
Senior Manager EHS

SITE
Lifoam Industries, LLC
121 Bata Blvd., Suite D
Belcamp, MD 21017
AI # 26688

SOURCE DESCRIPTION

One (1) expandable polystyrene shape-molding (EPS) facility.

This source is subject to the conditions described on the attached pages.

Program Manager

Director, Air & Radiation Administration

LIFOAM INDUSTRIES, LLC
121 BATA BOULEVARD
BELCAMP, MD 21017
PART 70 OPERATING PERMIT NO. 24-025-0558

SECTION I SOURCE IDENTIFICATION

1. DESCRIPTION OF FACILITY

Lifoam Company, Inc. (Lifoam) is an expandable polystyrene shape-molding (EPS) facility located at 121 Bata Boulevard, Belcamp in Harford County, Maryland 21017. The applicable SIC code is 3086. The major activity at the facility includes the expansion and shape-molding polystyrene operation which expands and molds expandable polystyrene beads into a variety of marketable products (e.g. picnic coolers, packing materials for fragile products). The expandable polystyrene shape-molding operation (EPO) including the raw bead storage, two (2) polystyrene bead pre-expanders, twenty-six (26) pre-puff bead aging bags, nineteen (19) shape-molding machines, and the finished product storage. The EPS process is equipped with a regenerative thermal oxidizer (RTO) to reduce VOC emissions (ARA Registration No. 025-0558-6-0424).

The expansion/molding process at Lifoam begins when pentane-impregnated polystyrene beads are transferred from storage totes to the facility's pre-expander where the beads are contacted with steam. The steam softens the polystyrene and expands the impregnated pentane, which initiates a partial expansion of the beads. The partially expanded beads are transferred to holding bags for aging, which may require anywhere from a few hours to a few days. After the partially expanded beads have been sufficiently aged, they are transferred from the holding bags to any of the shape-molding machines where the beads are fully expanded and molded under heat and pressure to form a final product. The pre-expanders and aging bags are housed inside the permanent total enclosure (PTE). The flue gases from pre-expanders, aging bags and shape-molding machines are vented through a regenerative thermal oxidizer (RTO) to reduce VOC emission before discharging into the atmosphere.

Other than the EPS operation, Lifoam also operates the following equipment:

(a) One screen printing process including nine (9) manually operated screen printing units installed in 2006 (ARA Registration No. 025-0558-6-0425) to add logos or other designs to some of the molded EPS products.

(b) One (1) Cleaver Brooks 20.9 million BTU per hour boiler installed in 2006 (ARA Registration No. 025-0558-5-0284) with natural gas as the primary fuel source and fuel oil as a back when natural gas service is interrupted;

(c) One (1) Hurst natural gas fired 10.35 million BTU per hour boiler which was converted from the previous steam-generating thermal oxidizer (SGTO) in 2017 (ARA Registration No. 025-0558-5-0368) with natural gas as only fuel source; and

(d) Rigid polyurethane foam container manufacturing operation installed in 2012 (ARA Registration No. 025-0558-6-0482).

2. FACILITY INVENTORY LIST

Emissions Unit Number	ARA Registration Number	Emissions Unit Name and Description	Date of Installation
EU-1	025-0558-5-0284	One (1) Cleaver Brooks 20.9 million BTU per hour boiler fired with natural gas and No. 2 fuel when gas service is interrupted.	2006
EU-2	025-0558-6-0424	One (1) expandable polystyrene shape-molding (EPS) process with maximum raw bead throughput of 6,300,000 pounds per year (lb/yr), including the raw bead storage, two (2) pre-expanders, twenty-six (26) pre-puff bead aging bags, nineteen (19) molding presses, and the finish product storage. The EPS process, excluding product storage, is equipped with a regenerative thermal oxidizer (RTO) for VOC emission	2006, 2008, 2009, 2016, and 2017
EU-3	025-0558-6-0425	One (1) silk screen printing operation including up to nine (9) manually operated screen printing units.	2006, 2009
EU-5	025-0558-6-0482	One (1) rigid polyurethane foam container manufacturing process (PUR) consisting of sixteen (16) molding stations.	2012
EU-6	025-0558-5-0368	One (1) Hurst 10.35 million BTU per hour boiler fired by natural gas only. It previously served as a steam-generating thermal oxidizer (SGTO) from 2009 to 2016.	2006, converted back to a steam boiler in 2017

SECTION II GENERAL CONDITIONS

1. DEFINITIONS

[COMAR 26.11.01.01] and [COMAR 26.11.02.01]

The words or terms in this Part 70 permit shall have the meanings established under COMAR 26.11.01 and .02 unless otherwise stated in this permit.

2. ACRONYMS

ARA	Air and Radiation Administration
BACT	Best Available Control Technology
Btu	British thermal unit
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEM	Continuous Emissions Monitor
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COMAR	Code of Maryland Regulations
EPA	United States Environmental Protection Agency
FR	Federal Register
gr	grains
HAP	Hazardous Air Pollutant
MACT	Maximum Achievable Control Technology
MDE	Maryland Department of the Environment
MVAC	Motor Vehicle Air Conditioner
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NO_x	Nitrogen Oxides
NSPS	New Source Performance Standards
NSR	New Source Review
OTR	Ozone Transport Region
PM	Particulate Matter
PM10	Particulate Matter with Nominal Aerodynamic Diameter of 10 micrometers or less
ppm	parts per million
ppb	parts per billion
PSD	Prevention of Significant Deterioration
PTC	Permit to construct
PTO	Permit to operate (State)
SIC	Standard Industrial Classification
SO_2	Sulfur Dioxide
TAP	Toxic Air Pollutant
tpy	tons per year
VE	Visible Emissions
VOC	Volatile Organic Compounds

3. EFFECTIVE DATE

The effective date of the conditions in this Part 70 permit is the date of permit issuance, unless otherwise stated in the permit.

4. PERMIT EXPIRATION

[COMAR 26.11.03.13B(2)]

Upon expiration of this permit, the terms of the permit will automatically continue to remain in effect until a new Part 70 permit is issued for this facility provided that the Permittee has submitted a timely and complete application and has paid applicable fees under COMAR 26.11.02.16.

Otherwise, upon expiration of this permit the right of the Permittee to operate this facility is terminated.

5. PERMIT RENEWAL

[COMAR 26.11.03.02B(3)] and [COMAR 26.11.03.02E]

The Permittee shall submit to the Department a completed application for renewal of this Part 70 permit at least 12 months before the expiration of the permit. Upon submitting a completed application, the Permittee may continue to operate this facility pending final action by the Department on the renewal.

The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall submit such supplementary facts or corrected information no later than 10 days after becoming aware that this occurred. The Permittee shall also provide additional information as necessary to address any requirements that become applicable to the facility after the date a completed application was submitted, but prior to the release of a draft permit. This information shall be submitted to the Department no later than 20 days after a new requirement has been adopted.

6. CONFIDENTIAL INFORMATION

[COMAR 26.11.02.02G]

In accordance with the provisions of the State Government Article, Sec. 10-611 et seq., Annotated Code of Maryland, all information submitted in an application shall be considered part of the public record and available for inspection and copying, unless the Permittee claims that the information is confidential when it is submitted to the Department. At the time of the request for inspection or copying, the Department will make a determination with regard to the confidentiality of the information. The

Permittee, when requesting confidentiality, shall identify the information in a manner specified by the Department and, when requested by the Department, promptly provide specific reasons supporting the claim of confidentiality. Information submitted to the Department without a request that the information be deemed confidential may be made available to the public. Subject to approval of the Department, the Permittee may provide a summary of confidential information that is suitable for public review. The content of this Part 70 permit is not subject to confidential treatment.

7. PERMIT ACTIONS

[COMAR 26.11.03.06E(3)] and [COMAR 26.11.03.20(A)]

This Part 70 permit may be revoked or reopened and revised for cause. The filing of an application by the Permittee for a permit revision or renewal; or a notification of termination, planned changes or anticipated noncompliance by the facility, does not stay a term or condition of this permit.

The Department shall reopen and revise, or revoke the Permittee's Part 70 permit under the following circumstances:

a. Additional requirements of the Clean Air Act become applicable to this facility and the remaining permit term is 3 years or more;

b. The Department or the EPA determines that this Part 70 permit contains a material mistake, or is based on false or inaccurate information supplied by or on behalf of the Permittee;

c. The Department or the EPA determines that this Part 70 permit must be revised or revoked to assure compliance with applicable requirements of the Clean Air Act; or

d. Additional requirements become applicable to an affected source under the Federal Acid Rain Program.

8. PERMIT AVAILABILITY

[COMAR 26.11.02.13G]

The Permittee shall maintain this Part 70 permit in the vicinity of the facility for which it was issued, unless it is not practical to do so, and make this permit immediately available to officials of the Department upon request.

9. REOPENING THE PART 70 PERMIT FOR CAUSE BY THE EPA

[COMAR 26.11.03.20B]

The EPA may terminate, modify, or revoke and reissue a permit for cause as prescribed in 40 CFR §70.7(g)

10. TRANSFER OF PERMIT

[COMAR 26.11.02.02E]

The Permittee shall not transfer this Part 70 permit except as provided in COMAR 26.11.03.15.

11. REVISION OF PART 70 PERMITS – GENERAL CONDITIONS

[COMAR 26.11.03.14] and [COMAR 26.11.03.06A(8)]

a. The Permittee shall submit an application to the Department to revise this Part 70 permit when required under COMAR 26.11.03.15 -.17.

b. When applying for a revision to a Part 70 permit, the Permittee shall comply with the requirements of COMAR 26.11.03.02 and .03 except that the application for a revision need include only information listed that is related to the proposed change to the source and revision to the permit. This information shall be sufficient to evaluate the proposed change and to determine whether it will comply with all applicable requirements of the Clean Air Act.

c. The Permittee may not change any provision of a compliance plan or schedule in a Part 70 permit as an administrative permit amendment or as a minor permit modification unless the change has been approved by the Department in writing.

d. A permit revision is not required for a change that is provided for in this permit relating to approved economic incentives, marketable permits, emissions trading, and other similar programs.

12. SIGNIFICANT PART 70 OPERATING PERMIT MODIFICATIONS

[COMAR 26.11.03.17]

The Permittee may apply to the Department to make a significant modification to its Part 70 Permit as provided in COMAR 26.11.03.17 and in accordance with the following conditions:

a. A significant modification is a revision to the federally enforceable provisions in the permit that does not qualify as an administrative permit amendment under COMAR 26.11.03.15 or a minor permit modification as defined under COMAR 26.11.03.16.

b. This permit does not preclude the Permittee from making changes, consistent with the provisions of COMAR 26.11.03, that would make the permit or particular terms and conditions of the permit irrelevant, such as by shutting down or reducing the level of operation of a source or of an emissions unit within the source. Air pollution control equipment shall not be shut down or its level of operation reduced if doing so would violate any term of this permit.

c. Significant permit modifications are subject to all requirements of COMAR 26.11.03 as they apply to permit issuance and renewal, including the requirements for applications, public participation, and review by affected states and EPA, except:

(1) An application need include only information pertaining to the proposed change to the source and modification of this permit, including a description of the change and modification, and any new applicable requirements of the Clean Air Act that will apply if the change occurs;

(2) Public participation, and review by affected states and EPA, is limited to only the application and those federally enforceable terms and conditions of the Part 70 permit that are affected by the significant permit modification.

d. As provided in COMAR 26.11.03.15B(5), an administrative permit amendment may be used to make a change that would otherwise require a significant permit modification if procedures for enhanced preconstruction review of the change are followed that satisfy the requirements of 40 CFR 70.7(d)(1)(v).

e. Before making a change that qualifies as a significant permit modification, the Permittee shall obtain all permits-to-construct and approvals required by COMAR 26.11.02.

f. The Permittee shall not make a significant permit modification that results in a violation of any applicable requirement of the Clean Air Act.

g. The permit shield in COMAR 26.11.03.23 applies to a final significant permit modification that has been issued by the Department, to the extent applicable under COMAR 26.11.03.23.

13. MINOR PERMIT MODIFICATIONS

[COMAR 26.11.03.16]

The Permittee may apply to the Department to make a minor modification to the federally enforceable provisions of this Part 70 permit as provided in COMAR 26.11.03.16 and in accordance with the following conditions:

a. A minor permit modification is a Part 70 permit revision that:

(1) Does not result in a violation of any applicable requirement of the Clean Air Act;

(2) Does not significantly revise existing federally enforceable monitoring, including test methods, reporting, record keeping, or compliance certification requirements except by:

(a) Adding new requirements,

(b) Eliminating the requirements if they are rendered meaningless because the emissions to which the requirements apply will no longer occur, or

(c) Changing from one approved test method for a pollutant and source category to another;

(3) Does not require or modify a:

(a) Case-by-case determination of a federally enforceable emissions standard,

(b) Source specific determination for temporary sources of ambient impacts, or

(c) Visibility or increment analysis;

(4) Does not seek to establish or modify a federally enforceable permit term or condition for which there is no corresponding underlying applicable requirement of the Clean Air Act, but that the Permittee has assumed to avoid an applicable requirement to which the source would otherwise be subject, including:

(a) A federally enforceable emissions standard applied to the source pursuant to COMAR 26.11.02.03 to avoid classification as a Title I modification; and

(b) An alternative emissions standard applied to an emissions unit pursuant to regulations promulgated under Section 112(i)(5) of the Clean Air Act

(5) Is not a Title I modification; and

(6) Is not required under COMAR 26.11.03.17 to be processed as a significant modification to this Part 70 permit.

b. Application for a Minor Permit Modification

The Permittee shall submit to the Department an application for a minor permit modification that satisfies the requirements of COMAR 26.11.03.03 which includes the following:

(1) A description of the proposed change, the emissions resulting from the change, and any new applicable requirements that will apply if the change is made;

(2) The proposed minor permit modification;

(3) Certification by a responsible official, in accordance with COMAR 26.11.02.02F, that:

(a) The proposed change meets the criteria for a minor permit modification, and

(b) The Permittee has obtained or applied for all required permits-to-construct required by COMAR 26.11.03.16 with respect to the proposed change;

(4) Completed forms for the Department to use to notify the EPA and affected states, as required by COMAR 26.11.03.07-.12.

c. Permittee's Ability to Make Change

(1) For changes proposed as minor permit modifications to this permit that will require the applicant to obtain a permit to construct, the permit to construct must be issued prior to the new change.

(2) During the period of time after the Permittee applies for a minor modification but before the Department acts in accordance with COMAR 26.11.03.16F(2):

(a) The Permittee shall comply with applicable requirements of the Clean Air Act related to the change and the permit terms and conditions described in the application for the minor modification.

(b) The Permittee is not required to comply with the terms and conditions in the permit it seeks to modify. If the Permittee fails to comply with the terms and conditions in the application during this time, the terms and conditions of both this permit and the application for modification may be enforced against it.

d. The Permittee is subject to enforcement action if it is determined at any time that a change made under COMAR 26.11.03.16 is not within the scope of this regulation.

e. Minor permit modification procedures may be used for Part 70 permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, but only to the extent that the minor permit

modification procedures are explicitly provided for in regulations approved by the EPA as part of the Maryland SIP or in other applicable requirements of the Clean Air Act.

14. ADMINISTRATIVE PART 70 OPERATING PERMIT AMENDMENTS

[COMAR 26.11.03.15]

The Permittee may apply to the department to make an administrative permit amendment as provided in COMAR 26.11.03.15 and in accordance with the following conditions:

a. An application for an administrative permit amendment shall:

(1) Be in writing;

(2) Include a statement certified by a responsible official that the proposed amendment meets the criteria in COMAR 26.11.03.15 for an administrative permit amendment, and

(3) Identify those provisions of this part 70 permit for which the amendment is requested, including the basis for the request.

b. An administrative permit amendment:

(1) Is a correction of a typographical error;

(2) Identifies a change in the name, address, or phone number of a person identified in this permit, or a similar administrative change involving the Permittee or other matters which are not directly related to the control of air pollution;

(3) requires more frequent monitoring or reporting by the Permittee;

(4) Allows for a change in ownership or operational control of a source for which the Department determines that no other revision to the permit is necessary and is documented as per COMAR 26.11.03.15B(4);

(5) Incorporates into this permit the requirements from preconstruction review permits or approvals issued by the Department in accordance with COMAR 26.11.03.15B(5), but only if it satisfies 40 CFR 70.7(d)(1)(v);

(6) Incorporates any other type of change, as approved by the EPA, which is similar to those in COMAR 26.11.03.15B(1)—(4);

(7) Notwithstanding COMAR 26.11.03.15B(1)—(6), all modifications to acid rain control provisions included in this Part 70 permit are governed by applicable requirements promulgated under Title IV of the Clean Air Act; or

(8) Incorporates any change to a term or condition specified as State-only enforceable, if the Permittee has obtained all necessary permits-to-construct and approvals that apply to the change.

c. The Permittee may make the change addressed in the application for an administrative amendment upon receipt by the Department of the application, if all permits-to-construct or approvals otherwise required by COMAR 26.11.02 prior to making the change have first been obtained from the Department.

d. The permit shield in COMAR 26.11.03.23 applies to administrative permit amendments made under Section B(5) of COMAR 26.11.03.15 , but only after the Department takes final action to revise the permit.

e. The Permittee is subject to enforcement action if it is determined at any time that a change made under COMAR 26.11.03.15 is not within the scope of this regulation.

15. OFF-PERMIT CHANGES TO THIS SOURCE

[COMAR 26.11.03.19]

The Permittee may make off-permit changes to this facility as provided in COMAR 26.11.03.19 and in accordance with the following conditions:

a. The Permittee may make a change to this permitted facility that is not addressed or prohibited by the federally enforceable conditions of this Part 70 permit without obtaining a Part 70 permit revision if:

(1) The Permittee has obtained all permits and approvals required by COMAR 26.11.02 and .03;

(2) The change is not subject to any requirements under Title IV of the Clean Air Act;

(3) The change is not a Title I modification; and

(4) The change does not violate an applicable requirement of the Clean Air Act or a federally enforceable term or condition of the permit.

b. For a change that qualifies under COMAR 26.11.03.19, the Permittee shall provide contemporaneous written notice to the Department and the EPA, except for a change to an emissions unit or activity that is exempt from the Part 70 permit application, as provided in COMAR 26.11.03.04. This written notice shall describe the change, including the date it was made, any change in emissions, including the

pollutants emitted, and any new applicable requirements of the Clean Air Act that apply as a result of the change.

c. Upon satisfying the requirements of COMAR 26.11.03.19, the Permittee may make the proposed change.

d. The Permittee shall keep a record describing:

(1) Changes made at the facility that result in emissions of a regulated air pollutant subject to an applicable requirement of the Clean Air Act , but not otherwise regulated under this permit; and

(2) The emissions resulting from those changes.

e. Changes that qualify under COMAR 26.11.03.19 are not subject to the requirements for Part 70 revisions.

f. The Permittee shall include each off-permit change under COMAR 26.11.03.19 in the application for renewal of the part 70 permit.

g. The permit shield in COMAR 26.11.03.23 does not apply to off-permit changes made under COMAR 26.11.03.19.

h. The Permittee is subject to enforcement action if it is determined that an off-permit change made under COMAR 26.11.03.19 is not within the scope of this regulation.

16. ON-PERMIT CHANGES TO SOURCES

[COMAR 26.11.03.18]

The Permittee may make on-permit changes that are allowed under Section 502(b)(10) of the Clean Air Act as provided in COMAR 26.11.03.18 and in accordance with the following conditions:

a. The Permittee may make a change to this facility without obtaining a revision to this Part 70 permit if:

(1) The change is not a Title I modification;

(2) The change does not result in emissions in excess of those expressly allowed under the federally enforceable provisions of the Part 70 permit for the permitted facility or for an emissions unit within the facility, whether expressed as a rate of emissions or in terms of total emissions;

(3) The Permittee has obtained all permits and approvals required by COMAR 26.11.02 and .03;

(4) The change does not violate an applicable requirement of the Clean Air Act;

(5) The change does not violate a federally enforceable permit term or condition related to monitoring, including test methods, record keeping, reporting, or compliance certification requirements;

(6) The change does not violate a federally enforceable permit term or condition limiting hours of operation, work practices, fuel usage, raw material usage, or production levels if the term or condition has been established to limit emissions allowable under this permit;

(7) If applicable, the change does not modify a federally enforceable provision of a compliance plan or schedule in this Part 70 permit unless the Department has approved the change in writing; and

(8) This permit does not expressly prohibit the change under COMAR 26.11.03.18.

b. The Permittee shall notify the Department and the EPA in writing of a proposed on-permit change under COMAR 26.11.03.18 not later than 7 days before the change is made. The written information shall include the following information:

(1) A description of the proposed change;

(2) The date on which the change is proposed to be made;

(3) Any change in emissions resulting from the change, including the pollutants emitted;

(4) Any new applicable requirement of the Clean Air Act; and

(5) Any permit term or condition that would no longer apply.

c. The responsible official of this facility shall certify in accordance with COMAR 26.11.02.02F that the proposed change meets the criteria for the use of on-permit changes under COMAR 26.11.03.18.

d. The Permittee shall attach a copy of each notice required by condition b. above to this Part 70 permit.

e. On-permit changes that qualify under COMAR 26.11.03.18 are not subject to the requirements for part 70 permit revisions.

f. Upon satisfying the requirements under COMAR 26.11.03.18, the Permittee may make the proposed change.

g. The permit shield in COMAR 26.11.03.23 does not apply to on-permit changes under COMAR 26.11.03.18.

h. The Permittee is subject to enforcement action if it is determined that an on-permit change made under COMAR 26.11.03.18 is not within the scope of the regulation or violates any requirement of the State air pollution control law.

17. FEE PAYMENT

[COMAR 26.11.02.16A(2) & (5)(b)]

a. The fee for this Part 70 permit is as prescribed in Regulation .19 of COMAR 26.11.02.

b. The fee is due on and shall be paid on or before each 12-month anniversary date of the permit.

c. Failure to pay the annual permit fee constitutes cause for revocation of the permit by the Department.

18. REQUIREMENTS FOR PERMITS-TO-CONSTRUCT AND APPROVALS

[COMAR 26.11.02.09.]

The Permittee may not construct or modify or cause to be constructed or modified any of the following sources without first obtaining, and having in current effect, the specified permits-to-construct and approvals:

a. New Source Review source, as defined in COMAR 26.11.01.01, approval required, except for generating stations constructed by electric companies;

b. Prevention of Significant Deterioration source, as defined in COMAR 26.11.01.01, approval required, except for generating stations constructed by electric companies;

c. New Source Performance Standard source, as defined in COMAR 26.11.01.01, permit to construct required, except for generating stations constructed by electric companies;

d. National Emission Standards for Hazardous Air Pollutants source, as defined in COMAR 26.11.01.01, permit to construct required, except for generating stations constructed by electric companies;

e. A stationary source of lead that discharges one ton per year or more of lead or lead compounds measured as elemental lead, permit to construct required, except for generating stations constructed by electric companies;

f. All stationary sources of air pollution, including installations and air pollution control equipment, except as listed in COMAR 26.11.02.10, permit to construct required;

g. In the event of a conflict between the applicability of (a.— e.) above and an exemption listed in COMAR 26.11.02.10, the provision that requires a permit applies.

h. Approval of a PSD or NSR source by the Department does not relieve the Permittee obtaining an approval from also obtaining all permits-to-construct required by (c.— g.) above.

19. CONSOLIDATION OF PROCEDURES FOR PUBLIC PARTICIPATION

[COMAR 26.11.02.11C] and [COMAR 26.11.03.01K]

The Permittee may request the Department to authorize special procedures for the Permittee to apply simultaneously, to the extent possible, for a permit to construct and a revision to this permit.

These procedures may provide for combined public notices, informational meetings, and public hearings for both permits but shall not adversely affect the rights of a person, including EPA and affected states, to obtain information about the application for a permit, to comment on an application, or to challenge a permit that is issued.

These procedures shall not alter any existing permit procedures or time frames.

20. PROPERTY RIGHTS

[COMAR 26.11.03.06E(4)]

This Part 70 permit does not convey any property rights of any sort, or any exclusive privileges.

21. SEVERABILITY

[COMAR 26.11.03.06A(5)]

If any portion of this Part 70 permit is challenged, or any term or condition deemed unenforceable, the remainder of the requirements of the permit continues to be valid.

22. INSPECTION AND ENTRY

[COMAR 26.11.03.06G(3)]

The Permittee shall allow employees and authorized representatives of the Department, the EPA, and local environmental health agencies, upon presentation of credentials or other documents as may be required by law, to:

a. Enter at a reasonable time without delay and without prior notification the Permittee's property where a Part 70 source is located, emissions-related activity is conducted, or records required by this permit are kept;

b. Have access to and make copies of records required by the permit;

c. Inspect all emissions units within the facility subject to the permit and all related monitoring systems, air pollution control equipment, and practices or operations regulated or required by the permit; and

d. Sample or monitor any substances or parameters at or related to the emissions units at the facility for the purpose of determining compliance with the permit.

23. DUTY TO PROVIDE INFORMATION

[COMAR 26.11.03.06E(5)]

The Permittee shall furnish to the Department, within a reasonable time specified by the Department, information requested in writing by the Department in order to determine whether the Permittee is in compliance with the federally enforceable conditions of this Part 70 permit, or whether cause exists for revising or revoking the permit. Upon request, the Permittee shall also furnish to the Department records required to be kept under the permit.

For information claimed by the Permittee to be confidential and therefore potentially not discloseable to the public, the Department may require the Permittee to provide a copy of the records directly to the EPA along with a claim of confidentiality.

The Permittee shall also furnish to the Department, within a reasonable time specified by the Department, information or records requested in writing by the Department in order to determine if the Permittee is in compliance with the State-only enforceable conditions of this permit.

24. COMPLIANCE REQUIREMENTS

[COMAR 26.11.03.06E(1)] and [COMAR 26.11.03.06A(11)] and [COMAR 26.11.02.05]

The Permittee shall comply with the conditions of this Part 70 permit. Noncompliance with the permit constitutes a violation of the Clean Air Act, and/or the Environment Article Title 2 of the Annotated Code of Maryland and may subject the Permittee to:

a. Enforcement action,

b. Permit revocation or revision,

c. Denial of the renewal of a Part 70 permit, or

d. Any combination of these actions.

The conditions in this Part 70 permit are enforceable by EPA and citizens under the Clean Air Act except for the State-only enforceable conditions.

Under Environment Article Section 2-609, Annotated Code of Maryland, the Department may seek immediate injunctive relief against a person who violates this permit in such a manner as to cause a threat to human health or the environment.

25. CREDIBLE EVIDENCE

Nothing in this permit shall be interpreted to preclude the use of credible evidence to demonstrate noncompliance with any term of this permit.

26. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE

[COMAR 26.11.03.06E(2)]

The need to halt or reduce activity in order to comply with the conditions of this permit may not be used as a defense in an enforcement action.

27. CIRCUMVENTION

[COMAR 26.11.01.06]

The Permittee may not install or use any article, machine, equipment or other contrivance, the use of which, without resulting in a reduction in the total weight of emissions, conceals or dilutes emissions which would otherwise constitute a violation of any applicable air pollution control regulation.

28. PERMIT SHIELD

[COMAR 26.11.03.23]

A permit shield as described in COMAR 26.11.03.23 shall apply only to terms and conditions in this Part 70 permit that have been specifically identified as covered by the permit shield. Neither this permit nor COMAR 26.11.03.23 alters the following:

a. The emergency order provisions in Section 303 of the Clean Air Act, including the authority of EPA under that section;

b. The liability of the Permittee for a violation of an applicable requirement of the Clean Air Act before or when this permit is issued or for a violation that continues after issuance;

c. The requirements of the Acid Rain Program, consistent with Section 408(a) of the Clean Air Act;

d. The ability of the Department or EPA to obtain information from a source pursuant to Maryland law and Section 114 of the Clean Air Act; or

e. The authority of the Department to enforce an applicable requirement of the State air pollution control law that is not an applicable requirement of the Clean Air Act.

29. ALTERNATE OPERATING SCENARIOS

[COMAR 26.11.03.06A(9)]

For all alternate operating scenarios approved by the Department and contained within this permit, the Permittee, while changing from one approved scenario to another, shall contemporaneously record in a log maintained at the facility each scenario under which the emissions unit is operating and the date and time the scenario started and ended.

SECTION III PLANT WIDE CONDITIONS

1. PARTICULATE MATTER FROM CONSTRUCTION AND DEMOLITION

[COMAR 26.11.06.03D]

The Permittee shall not cause or permit any building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.

2. OPEN BURNING

[COMAR 26.11.07]

Except as provided in COMAR 26.11.07.04, the Permittee shall not cause or permit an open fire from June 1 through August 31 of any calendar year. Prior to any open burning, the Permittee shall request and receive approval from the Department.

3. AIR POLLUTION EPISODE

[COMAR 26.11.05.04]

When requested by the Department, the Permittee shall prepare in writing standby emissions reduction plans, consistent with good industrial practice and safe operating procedures, for reducing emissions creating air pollution during periods of Alert, Warning, and Emergency of an air pollution episode.

4. REPORT OF EXCESS EMISSIONS AND DEVIATIONS

[COMAR 26.11.01.07] and [COMAR 26.11.03.06C(7)]

The Permittee shall comply with the following conditions for occurrences of excess emissions and deviations from requirements of this permit, including those in Section VI – State-only Enforceable Conditions:

a. Report any deviation from permit requirements that could endanger human health or the environment, by orally notifying the Department immediately upon discovery of the deviation;

b. Promptly report all occurrences of excess emissions that are expected to last for one hour or longer by orally notifying the Department of the onset and termination of the occurrence;

c. When requested by the Department the Permittee shall report all deviations from permit conditions, including those attributed to malfunctions as defined in COMAR

26.11.01.07A, within 5 days of the request by submitting a written description of the deviation to the Department. The written report shall include the cause, dates and times of the onset and termination of the deviation, and an account of all actions planned or taken to reduce, eliminate, and prevent recurrence of the deviation;

d. The Permittee shall submit to the Department semi-annual monitoring reports that confirm that all required monitoring was performed, and that provide accounts of all deviations from permit requirements that occurred during the reporting periods. Reporting periods shall be January 1 through June 30 and July 1 through December 31, and reports shall be submitted within 30 days of the end of each reporting period. Each account of deviation shall include a description of the deviation, the dates and times of onset and termination, identification of the person who observed or discovered the deviation, causes and corrective actions taken, and actions taken to prevent recurrence. If no deviations from permit conditions occurred during a reporting period, the Permittee shall submit a written report that so states.

e. When requested by the Department, the Permittee shall submit a written report to the Department within 10 days of receiving the request concerning an occurrence of excess emissions. The report shall contain the information required in COMAR 26.11.01.07D(2).

5. ACCIDENTAL RELEASE PROVISIONS

[COMAR 26.11.03.03B(23)] and [40 CFR 68]

Should the Permittee become subject to 40 CFR 68 during the term of this permit, the Permittee shall submit risk management plans by the date specified in 40 CFR 68.150 and shall certify compliance with the requirements of 40 CFR 68 as part of the annual compliance certification as required by 40 CFR 70.

The Permittee shall initiate a permit revision or reopening according to the procedures of 40 CFR 70.7 to incorporate appropriate permit conditions into the Permittee's Part 70 permit.

6. GENERAL TESTING REQUIREMENTS

[COMAR 26.11.01.04]

The Department may require the Permittee to conduct, or have conducted, testing to determine compliance with this Part 70 permit. The Department, at its option, may witness or conduct these tests. This testing shall be done at a reasonable time, and all information gathered during a testing operation shall be provided to the Department.

7. EMISSIONS TEST METHODS

[COMAR 26.11.01.04]

Compliance with the emissions standards and limitations in this Part 70 permit shall be determined by the test methods designated and described below or other test methods submitted to and approved by the Department.

Reference documents of the test methods approved by the Department include the following:

a. 40 CFR 60, appendix A

b. 40 CFR 51, appendix M

c. The Department's Technical Memorandum 91-01 "Test Methods and Equipment Specifications for Stationary Sources", (January 1991), as amended through Supplement 3, (October 1, 1997)

8. EMISSIONS CERTIFICATION REPORT

[COMAR 26.11.01.05-1] and [COMAR 26.11.02.19C] and
[COMAR 26.11.02.19D]

The Permittee shall certify actual annual emissions of regulated pollutants from the facility on a calendar year basis.

a. The certification shall be on forms obtained from the Department and submitted to the Department not later than April 1 of the year following the year for which the certification is required;

b. The individual making the certification shall certify that the information is accurate to the individual's best knowledge. The individual shall be:

   (1) Familiar with each source for which the certifications forms are submitted, and

   (2) Responsible for the accuracy of the emissions information;

c. The Permittee shall maintain records necessary to support the emissions certification including the following information if applicable:

   (1) The total amount of actual emissions of each regulated pollutant and the total of all regulated pollutants;

(2) An explanation of the methods used to quantify the emissions and the operating schedules and production data that were used to determine emissions, including significant assumptions made;

(3) Amounts, types and analyses of all fuels used;

(4) Emissions data from continuous emissions monitors that are required by this permit, including monitor calibration and malfunction information;

(5) Identification, description, and use records of all air pollution control equipment and compliance monitoring equipment including:

(a) Significant maintenance performed,
(b) Malfunctions and downtime, and
(c) Episodes of reduced efficiency of all equipment;

(6) Limitations on source operation or any work practice standards that significantly affect emissions; and

(7) Other relevant information as required by the Department.

9. COMPLIANCE CERTIFICATION REPORT

[COMAR 26.11.03.06G(6) and (7)]

The Permittee shall submit to the Department and EPA Region III a report certifying compliance with each term of this Part 70 permit including each applicable standard, emissions limitation, and work practice for the previous calendar year by April 1 of each year.

a. The compliance certification shall include:

(1) The identification of each term or condition of this permit which is the basis of the certification;

(2) The compliance status;

(3) Whether the compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of each source, currently and over the reporting period; and

(5) Any other information required to be reported to the Department that is necessary to determine the compliance status of the Permittee with this permit.

b. The Permittee shall submit the compliance certification reports to the Department and EPA simultaneously.

10. CERTIFICATION BY RESPONSIBLE OFFICIAL

[COMAR 26.11.02.02F]

All application forms, reports, and compliance certifications submitted pursuant to this permit shall be certified by a responsible official as to truth, accuracy, and completeness. The Permittee shall expeditiously notify the Department of an appointment of a new responsible official.

The certification shall be in the following form:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

11. SAMPLING AND EMISSIONS TESTING RECORD KEEPING

[COMAR 26.11.03.06C(5)]

The Permittee shall gather and retain the following information when sampling and testing for compliance demonstrations:

a. The location as specified in this permit, and the date and time that samples and measurements are taken;

b. All pertinent operating conditions existing at the time that samples and measurements are taken;

c. The date that each analysis of a sample or emissions test is performed and the name of the person taking the sample or performing the emissions test;

d. The identity of the Permittee, individual, or other entity that performed the analysis;

e. The analytical techniques and methods used; and

f. The results of each analysis.

12. GENERAL RECORDKEEPING

[COMAR 26.11.03.06C(6)]

The Permittee shall retain records of all monitoring data and information that support the compliance certification for a period of five (5) years from the date that the monitoring, sample measurement, application, report or emissions test was completed or submitted to the Department.

These records and support information shall include:

a. All calibration and maintenance records;

b. All original data collected from continuous monitoring instrumentation;

c. Records which support the annual emissions certification; and

d. Copies of all reports required by this permit.

13. GENERAL CONFORMITY

[COMAR 26.11.26.09]

The Permittee shall comply with the general conformity requirements of 40 CFR 93, Subpart B and COMAR 26.11.26.09.

14. ASBESTOS PROVISIONS

[40 CFR 61, Subpart M]

The Permittee shall comply with 40 CFR 61, Subpart M when conducting any renovation or demolition activities at the facility.

15. OZONE DEPLETING REGULATIONS

[40 CFR 82, Subpart F]

The Permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for MVACs in subpart B:

a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the prohibitions and required practices pursuant to 40 CFR 82.154 and 82.156.

b. Equipment used during the maintenance, service, repair or disposal of appliances shall comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

c. Persons performing maintenance, service, repairs or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.

d. Persons performing maintenance, service, repairs or disposal of appliances shall certify with the Administrator pursuant to 40 CFR 82.162.

e. Persons disposing of small appliances, MVACS, and MVAC-like appliances as defined in 40 CFR 82.152, shall comply with record keeping requirements pursuant to 40 CFR 82.166.

f. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.

g. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

16. ACID RAIN PERMIT

Not applicable

SECTION IV PLANT SPECIFIC CONDITIONS

This section provides tables that include the emissions standards, emissions limitations, and work practices applicable to each emissions unit located at this facility. The Permittee shall comply with all applicable emissions standards, emissions limitations and work practices included herein.

The tables also include testing, monitoring, record keeping and reporting requirements specific to each emissions unit. In addition to the requirements included here in **Section IV**, the Permittee is also subject to the general testing, monitoring, record keeping and reporting requirements included in **Section III – Plant Wide Conditions** of this permit.

Unless otherwise provided in the specific requirements for an emissions unit, the Permittee shall maintain at the facility for at least five (5) years, and shall make available to the Department upon request, all records that the Permittee is required under this section to establish. [Authority: COMAR 26.11.03.06C(5)(g)]

Table IV – 1

1.0	**Emissions Unit Number – EU No. 1 and 6** EU-1: One (1) Cleaver Brooks 20.9 million BTU per hour (ARA Registration No. 025-0558-5-0284). EU-6: One (1) Hurst natural gas-fired boiler rated at 10.35 million BTU per hour (ARA Registration No. 025-0558-5-0368).
1.1	**Applicable Standards/Limitations :** A. Visible Emissions Limitations **COMAR 26.11.09.05A(2)**, the Permittee may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers. **COMAR 26.11.09.05A(3),** section A(2) does not apply to emissions during load changing, soot blowing, start-up, or adjustments or occasional cleaning of control equipment if: (1) The visible emissions are not greater than 40 percent opacity; and (2) The visible emissions do not occur for more than six (6) consecutive minutes in any 60-minute period B. Control of Sulfur Oxides **COMAR 26.11.09.07A(2)(b)**, which establishes that a person may not burn, sell, or make available for sale any distillate fuel with a sulfur content in excess of 0.3 percent by weight.

Table IV – 1	
	Note: Compliance with this requirement also provides compliance with the emissions standard for sulfur dioxide (SO_2) established in **40 CFR §60.42c** for affected boilers that burn fuel oil. Specifically, **40 CFR §60.42c(d)** establishes that compliance with the SO_2 standard for affected units may be demonstrated by use of fuel oil with a sulfur content that does not exceed 0.5 percent by weight.
1.2	**Testing Requirements:** A. Visible Emissions Limitations See Monitoring, Record Keeping, and Reporting Requirements. B. Control of Sulfur Oxides See Monitoring, Record Keeping, and Reporting Requirements.
1.3	**Monitoring Requirements:** A. Visible Emissions Limitations (1) The Cleaver Brooks boiler shall burn natural gas only except during periods of gas curtailment, gas supply emergencies, or periodic testing on No. 2 fuel oil (not to exceed 48 hours during any calendar year). Note: A natural gas curtailment or supply interruption means any period during which the supply of natural gas to the affected facility is halted for reasons beyond the control of the facility. The act of entering into a contractual agreement with a supplier of natural gas established for curtailment purposes does not constitute a reason that is under the control of a facility for the purposes of this definition. An increase in the cost or unit price of natural gas does not constitute a period of natural gas curtailment or interruption. **[Authority: 40 CFR §63.11195(e) and §63.11237]** (2) The Hurst boiler (EU-6) shall burn natural gas only. **[Authority: COMAR 26.11.03.06C]** B. Control of Sulfur Oxides The Permittee shall obtain certifications, from the facility's fuel oil suppliers upon each delivery of fuel oil, that provide the weight percent of sulfur content in No. 2 fuel oil burned in the Cleaver Brooks boiler during periods of gas curtailment, gas supply emergencies, or periodic testing. **[Authority: COMAR 26.11.03.06C]**

Table IV – 1	
1.4	**Record Keeping Requirements:** A. Visible Emissions Limitations The Permittee shall maintain the records of any incident of visible emissions observed from each boiler and any period of on site for a period of at least 5 years. **[Authority: COMAR 26.11.03.06C(7)]** B. Control of Sulfur Oxides The Permittee shall maintain records of certifications from fuel oil suppliers that provide the weight percent sulfur content in No. 2 fuel oil and any period of natural gas curtailment on site for a period of at least 5 years. **[Authority: COMAR 26.11.03.06C(7)](c)]**
1.5	**Reporting Requirements:** A. Visible Emissions Limitations The Permittee shall report any incident of visible emissions in accordance with permit condition number 4, Section III, Plant Wide Conditions, "Report of Excess Emissions and Deviations." **[Authority: COMAR 26.11.03.06C(7)]** B. Control of Sulfur Oxides (1) The Permittee shall include SO_2 emissions in each annual emissions certification. **[Authority: COMAR 26.11.02.19C and D]** (2) Upon the Department 's request, the Permittee shall submit any period of natural gas curtailment and No. 2 fuel oil has been used in the Cleave brooks boiler. **[Authority: COMAR 26.11.03.06C]** (3)

A permit shield shall cover the applicable requirements of the Clean Air Act that are listed in the table above for Emissions Unit Nos. EU-1 and EU-6.

Table IV – 2	
2.0	**Emissions Unit Number – EU No. 2** EU-2: Expandable Polystyrene Shape-Molding (EPS) System Operation (ARA Registration No. 025-0558-6-02424).
2.1	**Applicable Standards/Limitations :** VOC Emissions Control (1) The VOC emissions from EPS process including all fugitive emissions shall not

Table IV – 2	
	exceed 2.40 pounds per 100 pounds of raw bead based on a weighted average for each monthly period. **[Authority: NSR-2017-1 and Permit to Construct 025-0558 issued October 1, 2017]** (2) **COMAR 26.11.19.19**, which requires the Permittee to comply with control of VOC emissions from expandable polystyrene operations. Note: Lifoam's expandable polystyrene operation is subject to the Lowest Achievable Emission Rate (LAER) requirements, 2.40 pounds per 100 pounds of raw bead based on a weighted average for each monthly period, which are more stringent than the requirements under **COMAR 26.11.19.19**.
2.2	**Testing Requirements:** VOC Emissions Control (1) All required stack emissions performance tests shall be conducted in accordance with the testing specifications in the Department's Technical Memorandum 91-01, "Test Methods and Equipment Specifications for Stationary Sources", January, 1991, as amended through Supplement 3 (October 1, 1997), or other test methods approved by the Department. **[Authority: Permit to Construct 025-0558 issued October 1, 2017]** (2) The Permittee shall conduct additional stack test at a frequency of not less than once each 3 years, beginning 3 years after the date of the initial test. **[Authority: COMAR 26.11.19.19D(3)]** (3) At least 30 days prior to each required stack emissions performance tests, the Permittee shall submit to the Department a test protocol for review and approval. **[Authority: Permit to Construct 025-0558 issued October 1, 2017]** (4) During each required stack emissions performance tests, the EPS process shall be operated at 90 percent or higher of its rated capacity unless an alternate operating scenario is approved by the Department. **[Authority: Permit to Construct 025-0558 issued October 1, 2017]** (5) During the stack emissions performance tests, the Permittee shall collect following information: **[Authority: Permit to Construct 025-0558 issued October 1, 2017]** (a) Hourly process rate of the EPS process, pounds/hr of raw bead; (b) The pentane content in raw beads, pounds per 100 pounds of raw bead; (c) VOC, as propane, concentration by volume, ppmv, at both the inlet and the outlet of the RTO, (d) Flue gas flow rate, actual cubic feet per minute (acfm), at both the inlet and the

Table IV – 2	
	outlet of the RTO; (e) Moisture content (%) of the flue gases at both the inlet and the outlet of the RTO; (f) The combustion chamber temperature of the RTO; and (g) Temperature of flue gases at both the inlet and outlet of the RTO.
2.3	**<u>Monitoring Requirements:</u>** <u>VOC Emissions Control</u> (1) The flue gases from the following equipment and operation shall vent through the RTO prior to discharging into the atmosphere: **[Authority: Permit to Construct 025-0558 issued October 1, 2017]** (a) Two (2) pre-expanders; (b) Twenty-six (26) aging bags; (c) Nineteen (19) shape molding presses; and (d) Local exhaust ventilations (e.g. floor sweeps). (2) When the EPS process is in operation, the combustion chamber temperature of the RTO shall be maintained at least 1,525^{o} F or the temperature established during the latest stack emission performance test to achieve at least 98% VOC control efficiency or no more than 10 ppmv of VOC, as propane, concentration in the flue gases leaving the RTO. **[Authority: Permit to Construct 025-0558 issued October 1, 2017]** (3) The Permittee shall use the latest emission performance test to establish the following information: **[Authority: Permit to Construct 025-0558 issued October 1, 2017]** (a) RTO control efficiency (C), %, which is calculated by [1- (A/B)] x 100: where A = Total mass VOC leaving the RTO and B = Total mass VOC entering the RTO during the stack emission performance test; (b) The overall capture efficiency (D) for the ESP process, %, which D = (E/F) x 100: where E = Total mass VOC entering the RTO and F = Total mass VOC in total raw bead usage during the stack emissions performance test; and (c) The overall VOC control efficiency (G), %, = (C x D)/100

Table IV – 2	
	(4) The RTO shall be fired with natural gas only. **[Authority: Permit to Construct 025-0558 issued October 1, 2017]** (5) The pentane content in polystyrene raw bead shall not exceed 6.0 percent by weight on a monthly average. **[Authority: Permit to Construct 025-0558 issued October 1, 2017]** Note: The Permittee shall obtain from suppliers certificates of analysis that provide the weight percent VOC content of the polystyrene beads in each container of beads received at the facility. The Permittee shall monitor the monthly average weight percent VOC content in the polystyrene raw beads. (6) The EPS raw bead usage shall not exceed 6.3 million pounds for any 12-month, rolling monthly. **[Authority: MDE Settlement Agreement and Consent Order signed on October 14, 2016, NSR approval (NSR-2017-01), and Permit to Construct 025-0558 issued October 1, 2017]**
2.4	**Record Keeping Requirements:** VOC Emissions Control The following records with supporting documentation shall be maintained on site for at least five (5) years and shall be made available to the Department upon request: **[Authority: Permit to Construct 025-0558 issued October 1, 2017 and COMAR 26.11.03.06C]** (1) All stack emission performance test reports; (2) VOC emissions, pounds per 100 pound of raw bead, from the EPS process on a weighted average for each monthly period; (3) Premises wide VOC emissions for each month and for each rolling 12-month period, calculated monthly; (4) Continuous RTO combustion chamber temperature for each operating day; (5) A Certificate of Analysis (CoA) for each shipment from the supplier indicating the amount of VOC in the expandable polystyrene raw beads, percentage by weight; (6) Monthly average weight percent VOC content in the polystyrene raw beads; (7) The most current CAM plan; (8) Monthly and annual raw bead throughputs; (9) The cause and time periods of emergency bypass from the RTO when the EPS process is in operation; and

Table IV – 2	
	(10) Records of any repairs and maintenance made to the emissions control system.
2.5	**Reporting Requirements:** VOC Emissions Control (1) Within 60 days following the required stack emissions performance tests, the Permittee shall submit to the Department a stack emissions performance test report and a compliance demonstration, including the following information: **[Authority: Permit to Construct 025-0558 issued October 1, 2017]** (a) Hourly process rate of the EPS process, pounds/hr of raw bead; (b) The pentane content in raw beads, pounds per 100 pounds of raw bead; (c) VOC, as propane, concentration by volume, ppmv, at both the inlet and the outlet of the RTO, (d) Flue gas flow rate, acfm, at both the inlet and the outlet of the RTO; (e) Moisture content (%) of the flue gases at both the inlet and the outlet of the RTO; (f) Temperature of flue gases at both the inlet and outlet of the RTO; (g) The combustion chamber temperature of the RTO; and (h) Pounds per hour of VOC entering and leaving the RTO. (2) The Permittee shall make available to the Department upon request all records maintained associated with the ESP operation. **[Authority: COMAR 26.11.03.06C]**

A permit shield shall cover the applicable requirements of the Clean Air Act that listed in the table above for Emissions Unit No. EU-2.

Table IV – 3	
3.0	**Emissions Unit Number - EU-3** EU-3: Screen Printing Operation (ARA Registration No. 025-0558-6-0425).
3.1	**Applicable Standards/Limitations :** Control of VOC Emissions (1) If the facility-wide VOC emissions from all screen-printing operations are 20 or more pounds per day on any day, the maximum VOC content of any ink or clear coating

Table IV – 3

may not exceed 3.3 pounds of VOC per gallon, as applied. **[Authority: COMAR 26.11.19.18C(1)(b)]**

(2) If the facility-wide VOC emissions from all screen-printing operations are 20 or more pounds per day on any day, the maximum VOC content of any specialty ink may not exceed the following: **[Authority: COMAR 26.11.19.18C(1)(d)]**

Ink	Maximum pounds VOC per gallon
Acid/etch resist	3.3
Anoprint	3.1
Conductive	8.0
Electroluminescent	8.0

(3) If the facility-wide VOC emissions from all screen-printing operations are 20 or more pounds per day on any day, the maximum VOC content of any ink removal or reclamation product may not exceed the following: **[Authority: COMAR 26.11.19.18C(2)]**

Product	Maximum pounds VOC per gallon
Screen Reclamation	1.0
Ink Removal	3.3
Haze Removal	4.0

(4) If total facility-wide VOC emissions from all screen printing operations are 20 or more pounds per day on any day, then thereafter the Permittee shall implement a VOC leak detection and repair program designed to minimize unintended emissions of VOC from process equipment and components, e.g., in-process vessels, storage tanks, pumps, compressors, valves, flanges and other pipeline fittings, pressure relief valves, process drains, and open-ended pipes. **[Authority: COMAR 26.11.19.16]**

3.2 **Testing Requirements:**

Control of VOC Emissions

See Monitoring and Record Keeping

3.3 **Monitoring Requirements:**

Control of VOC Emissions

(1) If total facility-wide VOC emissions from all screen-printing operations are 20 or more pounds per day, the Permittee shall ensure that the maximum VOC content in each ink, ink removal product or ink reclamation product does not exceed each specific limit of **COMAR 26.11.19.18C(1)(b), 18C(1)(d) and 18C(2)**.

Table IV – 3	
	(2) If total facility-wide VOC emissions from all screen-printing operations are 20 or more pounds per day, the Permittee shall implement a VOC leak detection and repair program designed to minimize unintended emissions of VOC from process equipment and components, e.g., in-process vessels, storage tanks, pumps, compressors, valves, flanges and other pipeline fittings, pressure relief valves, process drains, and open-ended pipes. **[Authority: COMAR 26.11.19.16]**
3.4	**Record Keeping Requirements:** Control of VOC Emissions The following records with supporting documentation shall be maintained on site for at least five (5) years and shall be made available to the Department upon request: (1) The total monthly consumption of inks, coatings, cleanup materials, and any other materials containing VOC that are associated with screen printing operations, pounds or gallons per month; (2) The VOC content of each ink, coating, cleanup material, and any other materials containing VOC that are associated with screen printing operations; (3) The total facility-wide VOC emissions, pounds/day, with supporting information from all screen-printing operations; and (4) The VOC leak detection and repair program if total facility-wide VOC emissions from all screen-printing operations are 20 or more pounds per day. **[COMAR 26.11.03.06]**
3.5	**Reporting Requirements:** Control of VOC Emissions The Permittee shall report to the Department within 30 calendar days when total facility-wide VOC emissions from all screen-printing operations are 20 or more pounds per day. **[COMAR 26.11.03.06]**

A permit shield shall cover the applicable requirements of the Clean Air Act that are listed in the table above for Emissions Unit Nos. EU-3.

Table IV – 4	
4.0	**Emissions Unit Number – EU-5** EU-5: Rigid Polyurethane Foam Container Manufacturing Operation (ARA Registration No. 025-0558-5-0482).
4.1	**Applicable Standards/Limitations :** Control of VOC Emissions (1) In accordance with **COMAR 26.11.19.09-1C**, if the total pre-controlled VOC emissions from industrial solvent cleaning operations at the facility are 15 pounds or more per day, the Permittee shall not use any cleaning material unless the vapor pressure of the cleaning solution is less than or equal to 8 mmHg at 20 degrees Celsius (0.152 psia). (2) If total facility-wide VOC emissions from all industrial solvent cleaning operations are 15 or more pounds per day on any day, then thereafter the Permittee shall implement a VOC leak detection and repair program in accordance with **COMAR 26.11.19.16**. (3)
4.2	**Testing Requirements:** Control of VOC Emissions See Monitoring and Record Keeping
4.3	**Monitoring Requirements:** Control of VOC Emissions The Permittee shall monitor the VOC emissions, pounds/day, from the premises-wide industrial solvent cleaning operations to ensure compliance with COMAR 26.11.19.09-1C and COMAR 26.11.19.16. **[Authority: COMAR 26.11.03.06C]**
4.4	**Record Keeping Requirements:** Control of VOC Emissions The following records with supporting documentation shall be maintained on site for at least five (5) years and shall be made available to the Department upon request: **[Authority: COMAR 26.11.03.06C]** (1) The total monthly production, pounds per month, of polyurethane foam container. (2) The total daily VOC emissions, pounds/day, from the premises-wide industrial solvent cleaning operations;

Table IV – 4	
	(3) The vapor pressure of each industrial solvent cleaning material; (4) The VOC leak detection and repair program if total facility-wide VOC emissions from all industrial solvent cleaning operations are 15 or more pounds per day.
4.5	**<u>Reporting Requirements</u>:** <u>Control of VOC Emissions</u> The Permittee shall report to the Department within 30 calendar days when total facility-wide VOC emissions from all industrial solvent cleaning operations are 15 or more pounds per day. **[COMAR 26.11.03.06]**

A permit shield shall cover the applicable requirements of the Clean Air Act that are listed in the table above for Emissions Unit Nos. EU-5.

Table IV-5 Compliance Assurance Monitoring (CAM) Plan - Part 64 Requirements	
Indicator No. 1	
I. Indicator 64.4(a)(1)	RTO Combustion Chamber Temperature
Monitoring Approach	Monitor temperature of the RTO combustion chamber
II. Indicator Range 64.4(a)(2) Reporting Threshold	When EU-2 is in operation and is processing EPS materials, the Permittee shall maintain the 3-hour block average RTO combustion chamber temperature at a minimum of 1,525^{o}F, or the temperature established during the most recent stack test, to achieve at least 98% VOC destruction efficiency. An excursion is defined as a 3-hour block average RTO combustion chamber temperature is less than 1,525^{o}F, or the temperature established during the most recent stack test, An excursion shall trigger an investigation, corrective action, and a reporting requirement. All excursions and corrective actions taken shall be reported to the ARA within five (5) business days following the day of excursion.
III. Performance Criteria 64.4(a)(3)	
A. Data Representatives	Temperature recorded automatically on a data acquisition system.
B. Verification of Operational Status	The temperature monitoring system is in place to document compliance status.

C. QA/QC Practices and Criteria	Calibration, maintenance and operation of the temperature monitoring system is conducted according to manufacturer's specification.
D. Monitoring Frequency	Continuous
E. Data Collection	Temperature recorded automatically on a data acquisition system. The records shall be maintained on site for at least five (5) years.
F. Averaging Period	3-hour block average

Table IV-5 Compliance Assurance Monitoring (CAM) Plan - Part 64 Requirements	
	Indicator No. 2
I. Indicator 64.4(a)(1)	Pentane content in raw bead
Monitoring Approach	The operators shall obtain from suppliers certificates of analysis that provide the weight percent VOC content of the polystyrene raw beads in each container of raw beads received at the facility. The Permittee shall monitor the monthly average weight percent of VOC content in the polystyrene raw beads.
II. Indicator Range 64.4(a)(2) Reporting Threshold	An excursion occurs if the monthly average weight percent of VOC content in the polystyrene raw beads exceeds 6%. All excursions and corrective actions taken shall be reported to the ARA within five (5) business days following the day of excursion.
III. Performance Criteria 64.4(a)(3)	
A. Data Representatives	Operators monitor and record the pentane content in raw beads for each container received at the facility.
B. Verification of Operational Status	The certificate of analysis for each shipment is documented.
C. QA/QC Practices and Criteria	Each operator is trained according to its standard operating procedures.
D. Monitoring Frequency	The pentane content in each raw bead container received at the facility is monitored for monthly average weight percent of VOC content in the polystyrene raw beads.
E. Data Collection	The pentane content in each raw bead container received at the facility is recorded.
F. Averaging Period	Each calendar month

Table IV-5 Compliance Assurance Monitoring (CAM) Plan - Part 64 Requirements	
	Indicator No. 3
IV. Indicator 64.4(a)(1)	Polystyrene raw bead usage
Monitoring Approach	1. The raw bead usage, the pentane content and the RTO temperature shall be monitored simultaneously each operating day to demonstrate compliance with the VOC emissions limit. 2. The raw bead usage and the pentane content shall be monitored simultaneously for each raw bead shipments to demonstrate compliance with the pentane limit. 3. The raw bead usage shall be monitored to demonstrate the raw bead throughput limit.
V. Indicator Range 64.4(a)(2)	An excursion occurs if the following occurs: 1. VOC emissions exceed 2.40 pounds of VOC per 100 pounds of raw bead on a monthly average. 2. The pentane content in raw bead exceeds 6% by weight on a monthly average. 3. The raw beads annual throughput exceeds 6.3 million pounds.
Reporting Threshold	All excursions and corrective actions taken shall be reported to the ARA within five (5) business days following the day of excursion.
VI. Performance Criteria 64.4(a)(3)	
A. Data Representatives	Operators monitor and record daily raw beads throughput.
B. Verification of Operational Status	The certificate of analysis for each shipment and production are documented.
C. QA/QC Practices and Criteria	Each operator is trained according to its standard operating procedures.
D. Monitoring Frequency	Raw bead throughput is monitored daily.
E. Data Collection	Polystyrene raw bead throughput.
F. Averaging Period	Monthly and annually

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6.0	**Emissions Unit – Facility Wide Requirements**
6.1	**Applicable Standards/Limitation :** VOC Emissions Control The total premises-wide VOC emission shall not exceed 78.0 tons for any rolling 12-month period, calculated monthly. **[Authority: Permit to Construct 025-0558 issued October 1, 2017]**
6.2	**Testing Requirements:** VOC Emissions Control See Monitoring, Record Keeping, and Reporting Requirements.
6.3	**Monitoring Requirements:** VOC Emissions Control (1) Within 15 days of the end of each calendar month, the Permittee shall determine facility-wide VOC emissions for the month and for the most recent period of 12 consecutive months during which any part of the facility is operated. **[Authority: Permit to Construct 025-0558 issued October 1, 2017]** (2) Permittee shall implement "good operating practices" designed to minimize emissions of VOC to the atmosphere. **[Authority: COMAR 26.11.19.02I]** (3) Where applicable, "good operating practices" shall include, at a minimum: **[Authority: COMAR 26.11.19.02I(2)(b)]** (a) Provisions for training of operators on practices, procedures, and maintenance requirements that are consistent with the equipment manufacturers' recommendations and the source's experience in operating the equipment, with the training to include proper procedures for maintenance of air pollution control equipment; (b) Maintenance of covers on containers and other vessels that contain VOC and VOC-containing materials when not in use; (c) Minimize spills of VOC-containing cleaning materials; (d) Convey VOC-containing cleaning materials from one location to another in closed containers or pipelines; (e) Minimize VOC emissions from cleaning of storage, mixing, and conveying

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equipment;

(f) As practical, scheduling of operations to minimize color or material changes when applying VOC coatings or other materials by spray gun;

(g) For spray gun applications of coatings, use of high volume low pressure (HVLP) or other high efficiency application methods where practical; and

(h) As practical, mixing or blending materials containing VOC in closed containers and taking preventive measures to minimize emissions for products that contain VOC.

(4) "Good operating practices" shall be established in writing, shall be made available to the Department upon request, and shall be either included as part of an operator training program or posted where clearly visible to operators. **[Authority: COMAR 26.11.19.02I(2)(c)]**

(5) The Permittee shall take all reasonable precautions to prevent or minimize the discharge of VOC into the atmosphere when cleaning process equipment and coating application equipment, including containers, vessels, tanks, lines, spray application devices, and pumps. Reasonable precautions for equipment cleanup shall include, at a minimum: **[Authority: COMAR 26.11.19.02I(3)]**

(a) Storing all waste materials, including VOC-contaminated cloth and paper, in closed containers;

(b) For frequently cleaned equipment, preparing written standard operating procedures that include, wherever practical, provisions for using non-VOC or low-VOC cleaning agents, and procedures designed to minimize the quantities of VOC-containing cleaning materials used;

(c) Where practical, using enclosed spray-applicator cleaning methods, VOC-recycling systems and other spray-applicator cleaning methods designed to reduce or eliminate VOC emissions; and

(d) Where practical, using detergents, high-pressure water, or other non-VOC cleaning options to clean coating lines, containers, and process equipment.

(6) With regard to storage and transfer of VOC, the Permittee shall, at a minimum: **[Authority: COMAR 26.11.19.02I(4)]**

(a) Install conservation vents, or other vapor control measures designed to minimize standing losses, on all storage tanks with a capacity of 2000 gallons or more in VOC service; and

(b) For stationary storage tanks with capacities greater than 10,000 gallons and less than 40,000 gallons that store VOC or VOC-containing materials,

Table IV – 6	
	excluding gasoline, with vapor pressures greater than 1.5 psia, use vapor balance, vapor control lines, or other vapor control measures, whenever VOC are transferred from tank trucks into such tanks.
6.4	**Record Keeping Requirements:** VOC Emissions Control (1) The Permittee shall maintain records of all required determinations of facility-wide VOC emissions, the methods by which such determinations were made, and all data used in the emissions calculations. **[Authority: COMAR 26.11.03.06C]** (2) The Permittee shall display the good operating practices visible to the operators. **[Authority: COMAR 26.11.19.02I(2)(c)(iii)]**
6.5	**Reporting Requirements:** Control of VOC Emissions (1) If the Permittee determines that facility-wide VOC emissions for any period of twelve (12) consecutive months exceeds 78 tons, the Permittee shall report, in accordance with requirements under COMAR 26.11.01.07, occurrences of excess emissions, to the Compliance Program of the Air and Radiation Administration. **[Authority: Permit to Construct No. 025-0558 issued October 1, 2017]** (2) The Permittee shall make the good operating practices information as required by COMAR 26.11.19.02I available to the Department upon request. **[Authority: COMAR 26.11.19.02I(2)(c)(ii)]**

A permit shield shall cover the applicable requirements of the Clean Air Act that listed in the table above for facility wide requirements.

SECTION V INSIGNIFICANT ACTIVITIES

This section provides a list of insignificant emissions units that were reported in the Title V permit application. The applicable Clean Air Act requirements, if any, are listed below the insignificant activity.

(1) No. 1 Stationary Internal Combustion engines with less than 500 brake horsepower (373 kilowatts) of power output; Note: One (1) 27.1 hp propane/natural gas-fired engine for an emergency generator.

The 27 Hp emergency generator is subject to the following requirements:

(A) COMAR 26.11.09.05E(2), Emissions During Idle Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.

(B) COMAR 26.11.09.05E(3), Emissions During Operating Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.

(C) Exceptions:

(i) COMAR 26.11.09.05E(2) does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.

(ii) COMAR 26.11.09.05E(2) does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:

(a) Engines that are idled continuously when not in service: 30 minutes
(b) all other engines: 15 minutes.

(iii) COMAR 26.11.09.05E(2) & (3) do not apply while maintenance, repair or testing is being performed by qualified mechanics.

(D) The Permittee shall comply with the requirements for 40 CFR 60, Subpart JJJJ.

(E) The Permittee meets the requirements of 40 CFR, Part 63, Subpart ZZZZ by meeting the requirements of 40 CFR, Part 60,

Subpart JJJJ for the emergency generator. No further requirements apply to the emergency generator under 40 CFR, Part 63, Subpart ZZZZ. **[Reference: 40 CFR §63.6590(c)(1)]**

(2) ✓ Space heaters utilizing direct heat transfer and used solely for comfort heat; note: 4 heat pump/AC units in office area & 2 space heaters in the warehouse.

(3) ✓ Water cooling towers and water cooling ponds unless used for evaporative cooling of water from barometric jets or barometric condensers, or used in conjunction with an installation requiring a permit to operate: 2 cooling water tower to the EPS molding cooling water system.

(4) ✓ Equipment for drilling, carving, cutting, routing, turning, sawing, planning, spindle sanding, or disc sanding of wood or wood products;

(5) Containers, reservoirs, or tanks used exclusively for:

(a) ✓ Storage of butane, propane, or liquid petroleum, or natural gas;

(b) No. 44 Storage of lubricating oils; containers sizes ranging from 10 ounces to 300 gallons;

(c) No. 300 The storage of VOC normally used as solvents, diluents, thinners, inks, colorants, paints, lacquers, enamels, varnishes, liquid resins, or other surface coatings and having individual capacity of 200 gallons (7.6 cubic meters) or less; Note: Containers sizes range from 16 ounces to 55 gallons and inventory varies throughout the year (300 is approximate)

(6) ✓ Certain recreational equipment and activities, such as fireplaces, barbecue pits and cookers, fireworks displays, and kerosene fuel use. Note: Two propane-fired grills for seasonal barbecues.

SECTION VI STATE-ONLY ENFORCEABLE CONDITIONS

The Permittee is subject to the following State-only enforceable requirements:

1. Applicable Regulations:

   (1) COMAR 26.11.06.08 and 26.11.06.09, which generally prohibit the discharge of emissions beyond the property line in such a manner that a nuisance or air pollution is created.

   (2) COMAR 26.11.15.05, which requires that the Permittee implement "Best Available Control Technology for Toxics" (T – BACT) to control emissions of toxic air pollutants.

   (3) COMAR 26.11.15.06, which prohibits the discharge of toxic air pollutants to the extent that such emissions will unreasonably endanger human health

2. Record Keeping and Reporting:

   The Permittee shall submit to the Department, by April 1 of each year during the term of this permit, a written certification of the results of an analysis of emissions of toxic air pollutants from the Permittee's facility during the previous calendar year. The analysis shall include either:

   (1) a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or

   (2) a revised compliance demonstration, developed in accordance with requirements included under COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.

LIFOAM INDUSTRIES, LLC
121 BATA BOULEVARD
BELCAMP, MD 21017
PART 70 OPERATING PERMIT NO. 24-025-0558
PERMIT FACT SHEET

BACKGROUND

Lifoam Industries, Inc. (Lifoam) is an expandable polystyrene shape-molding (EPS) facility located at 121 Bata Boulevard, Belcamp in Harford County, Maryland. The applicable SIC code is 3086.

The major activity at the facility includes the expansion and shape-molding polystyrene operation which expands and molds expandable polystyrene beads into a variety of marketable products (e.g. picnic coolers, packing materials for fragile products). The expandable polystyrene shape-molding operation (EPO) including the raw bead storage, two (2) polystyrene bead pre-expanders, twenty-six (26) pre-puff bead aging bags, nineteen (19) shape-molding machines, and the finish product storage. The EPS process is equipped with a regenerative thermal oxidizer (RTO) to reduce VOC emissions (ARA Registration No. 025-0558-6-0424).

The expansion/molding process at Lifoam begins when pentane-impregnated polystyrene beads are transferred from storage totes to the facility's pre-expander where the beads are contacted with steam. The steam softens the polystyrene and expands the impregnated pentane, which initiates a partial expansion of the beads. The partially expanded beads are transferred to holding bags for aging, which may require anywhere from a few hours to a few days. After the partially expanded beads have been sufficiently aged, they are transferred from the holding bags to any of the shape-molding machines where the beads are fully expanded and molded under heat and pressure to form a final product. The pre-expanders and aging bags are housed inside the permanent total enclosure (PTE). The flue gases from pre-expanders, aging bags and shape-molding machines are vented through a regenerative thermal oxidizer (RTO) to reduce VOC emission before discharging into the atmosphere.

Other than the EPS operation, Lifoam also operates the following equipment:

(a) One screen printing process including nine (9) manually operated screen printing units installed in 2006 (ARA Registration No. 025-0558-6-0425) to add logos or other designs to some of the mold EPS products.

(b) One (1) Cleaver Brooks 20.9 million BTU per hour boiler installed in 2006 (ARA Registration No. 025-0558-5-0284) with natural gas as the primary fuel source and fuel oil as a back when natural gas service is interrupted;

(c) One (1) Hurst natural gas fired 10.35 million BTU per hour boiler which was converted in 2017 from the previous steam-generating thermal oxidizer (SGTO; ARA Registration No. 025-0558-5-0368) with natural gas as only fuel source; and

(d) Rigid polyurethane foam container manufacturing operation installed in 2012 (ARA Registration No. 025-0558-6-0482).

New Sources Performance Standard (NSPS)

The facility's boilers are subject to federal New Source Performance Standards (NSPS) promulgated under 40 CFR 60, Subpart A (General Provisions) and Subpart Dc for Commercial-Industrial-Institutional Steam Generating Units with rated heat input capacities of more than 10 MMBtu/hr and not more than 100 MMBtu/hr that were constructed or modified after June 9, 1989).

Note: Since the Cleaver Brooks boiler are required to burn natural gas only except during periods of gas curtailment, gas supply emergencies, or periodic testing on No. 2 fuel oil (not to exceed 48 hours during any calendar year) and the Hurst boiler only burns natural gas, they are not subject to the **40 CFR Part 63 requirements**.

New Source Review (NSR) Approval

On October 1, 2017, the Department issued the NSR Approval # NSR-2017-01 to amend NSR-2016-1 issued on August 11, 2016 because Lifoam needs to increase production of EPS operations to account for a portion of production loss caused by a fire occurred in a sister plant on July 12, 2016 in Peabody, Massachusetts. The NSR-2016-01 was issued in 2016 to supersede the NSR-2008-01 for an update to both the lowest achievable emissions rate and the emission offset requirements.

Compliance Assurance Monitoring (CAM) requirements

Per 40 CFR 64.2(a), the CAM requirements are applicable to a unit which is located at a major source and subject to an emission limitation or standard; uses a control device to achieve compliance; has pre-control emissions of at least 100% of the major source amount; and must not otherwise be exempt from CAM under 40 CFR 64.2(b)(1)(i). Applicability determinations are made on a pollutant-by-pollutant basis for each emissions unit.

Compliance Assurance Monitoring (CAM) is intended to provide a reasonable assurance of compliance with applicable requirements under the Clean Air Act for large emission units that rely on air pollution control (APC) equipment to achieve compliance. The CAM approach establishes monitoring for the purpose of:

(1) documenting continued operation of the control measures within ranges of specified indicators of performance (such as emissions, control device parameters, and process parameters) that are designed to provide a reasonable assurance of compliance with applicable requirements;

(2) indicating any excursions from these ranges; and

(3) responding to the data so that the cause or causes of the excursions are corrected.

Discussion of Lifoam's CAM Applicability

Lifoam's EPS process is subject to the CAM requirements as shown in the following CAM determination table. An emissions unit is subject to the CAM requirements if it meets all requirements in the table below:

VOC CAM Applicability Determination

CAM Reference	Requirement	Description	CAM Applicable?
§64.2(a)(1)	Is the Unit subject to emission limitation or standard for the applicable pollutant?	Yes, it is subject to the lowest achievable emissions rate (LAER) of 2.40 lbs per 100 lbs bead under COMAR 26.11.17.03(B)(2) and the NSR Approval (NSR-2017-01).	Yes
§64.2(a)(2)	Does the Unit use a control device to achieve compliance?	Yes, it is equipped with a regenerative thermal oxidizer.	Yes
§64.2(a)(3)	Are the potential pre-control emissions of applicable pollutant from the Unit at least 100 percent of major source amount?	Yes, the pre-control emissions from EU-2 are greater than 25 tons/yr.	Yes
§64.2(b)	Exemption – Is the Unit Equipped with a continuous emission monitoring system or exempted under §64.2(b)?	No applicable exemptions.	Yes

The following table summarizes the actual emissions from Lifoam Industries, LLC Belcamp based on its Annual Emission Certification Reports:

Table 1: Actual Emissions

Year	NO_x (TPY)	SO_x (TPY)	PM_{10} (TPY)	CO (TPY)	VOC (TPY)	Total HAP (TPY)
2011	2.91	0.02	0.04	2.44	15.69	0.06
2012	3.79	0.02	0.07	3.19	22.44	0.06
2013	2.79	0.02	0.05	2.35	22.58	0.36
2014	2.86	0.02	0.06	2.36	23.92	0.15
2015	3.28	0.02	0.07	2.72	28.59	0.28
2016	3.54	0.02	0.07	2.96	30.83	0.30

The major source thresholds that invoke applicability of Title V permitting requirements for facilities located in Harford County are 25 tons per year for VOC, 25 tons per year for

NO_x, 100 tons per year for each of the other criteria pollutants, 10 tons per year for a single HAP and 25 tons per year for the combined total of all HAP. Since actual VOC emissions from the facility are greater than the major source threshold for VOC in Harford County, Lifoam is required under COMAR 26.11.03.01 to obtain a Title V – Part 70 Operating Permit.

GREENHOUSE GAS (GHG) EMISSIONS

Lifoam emits the following greenhouse gases (GHGs) related to Clean Air Act requirements: carbon dioxide, methane, and nitrous oxide. These GHGs originate from various processes (i.e., boilers) contained within the facility premises applicable to Lifoam. The Permittee shall quantify facility wide GHGs emissions and report them in accordance with Section 3 of the Part 70 permit. According to the emission certifications reports for years 2014, 2015, and 2016, as shown in Table 3, Lifoam is not a major source (threshold: 100,000tpy CO_2e) for GHG's.

The following table summarizes the actual emissions from Lifoam based on its Annual Emission Certification Reports:

Table 3: Greenhouse Gases Emissions Summary

GHG	**Conversion factor**	**2014** tpy CO_2e	**2015** tpy CO_2e	**2016** tpy CO_2e
Carbon dioxide CO_2	1	3,476	3,984	4,294
Methane CH_4	25	2	2	1
Nitrous Oxide N_2O	300	19	22	13
Total GHG CO_{2eq}		**3,497**	**4,008**	**4,308**

EMISSION UNIT IDENTIFICATION

Lifoam has identified the following emission units as being subject to Title V permitting requirements and having applicable requirements.

Table 2: Emission Unit Identification

Emissions Unit Number	ARA Registration Number	Emissions Unit Name and Description	Date of Installation
EU-1	025-0558-5-0284	One (1) Cleaver Brooks 20.9 million BTU per hour boiler fired with natural gas and No. 2 fuel when gas service is interrupted.	2006
EU-2	025-0558-6-0424	One (1) expandable polystyrene shape-molding (EPS) process with maximum raw bead throughput of 6,300,000 pounds per year (lb/yr), including the raw bead storage, two (2) pre-expanders, twenty-six (26) pre-puff bead aging bags, nineteen (19) molding presses, and the finish product storage. The EPS process, excluding product storage, is equipped with a regenerative thermal oxidizer (RTO) for VOC emission	2006, 2008, 2009, 2016, and 2017
EU-3	025-0558-6-0425	One (1) silk screen printing operation including up to nine (9) manually operated screen printing units.	2006, 2009
EU-5	025-0558-6-0482	One (1) rigid polyurethane foam container manufacturing process (PUR) consisting of sixteen (16) molding stations.	2012
EU-6	025-0558-5-0368	One (1) Hurst 10.35 million BTU per hour boiler fired by natural gas only. It previously served as a steam-generating thermal oxidizer (SGTO) from 2009 to 2016.	2006, converted back to a steam boiler in 2017

AN OVERVIEW OF THE PART 70 PERMIT

The Fact Sheet is an informational document. If there are any discrepancies between the Fact Sheet and the Part 70 permit, the Part 70 permit is the enforceable document.

Section I of the Part 70 Permit contains a brief description of the facility and an inventory list of the emissions units for which applicable requirements are identified in Section IV of the permit.

Section II of the Part 70 Permit contains the general requirements that relate to administrative permit actions. This section includes the procedures for renewing, amending, reopening, and transferring permits, the relationship to permits to construct and approvals, and the general duty to provide information and to comply with all applicable requirements.

Section III of the Part 70 Permit contains the general requirements for testing, record keeping and reporting; and requirements that affect the facility as a whole, such as open burning, air pollution episodes, particulate matter from construction and demolition activities, asbestos provisions, ozone depleting substance provisions, general conformity, and acid rain permit. This section includes the requirement to report excess emissions and deviations, to submit an annual emissions certification report and an annual compliance certification report, and results of sampling and testing.

Section IV of the Part 70 Permit identifies the emissions standards, emissions limitations, operational limitations, and work practices applicable to each emissions unit located at the facility. For each standard, limitation, and work practice, the permit identifies the basis upon which the Permittee will demonstrate compliance. The basis will include testing, monitoring, record keeping, and reporting requirements. The demonstration may include one or more of these methods.

Section V of the Part 70 Permit contains a list of insignificant activities. These activities emit very small quantities of regulated air pollutants and do not require a permit to construct or registration with the Department. For insignificant activities that are subject to a requirement under the Clean Air Act, the requirement is listed under the activity.

Section VI of the Part 70 Permit contains State-only enforceable requirements. Section VI identifies requirements that are not based on the Clean Air Act, but solely on Maryland air pollution regulations. These requirements generally relate to the prevention of nuisances and implementation of Maryland's Air Toxics Program.

REGULATORY REVIEW/TECHNICAL REVIEW/COMPLIANCE METHODOLOGY

Emissions Unit Number – EU No. 1 and 6 (Table IV-1 of the Permit)

EU-1: One (1) Cleaver Brooks 20.9 million BTU per hour (ARA Registration No. 025-0558-5-0284).

EU-6: One (1) Hurst natural gas-fired boiler rated at 10.35 million BTU per hour (ARA Registration No. 025-0558-5-0368).

Both EU-1 and EU-6 are subject 40 CFR 60, Subpart Dc (New Source Performance Standards (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units). The EU-1 boiler is fired by natural gas as the primary fuel and No. 2 fuel oil as a back-up fuel, only during periods of gas curtailment, gas supply emergencies, or periodic testing. The EU-6 boiler is fired by natural gas only.

Note: Boilers that burn fuel oil as back-up in this manner are not subject to the NESHAP requirements of 40 CFR 63, Subpart JJJJJJ for fuel oil fired boilers.

Applicable Standards/Limits:

A. Visible Emissions Limitations

Applicable Standards and Regulations

COMAR 26.11.09.05A(2), the Permittee may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers.

Exceptions: COMAR 26.11.09.05A(2) does not apply to emissions during load changing, soot blowing, startup, or occasional cleaning of control equipment if:

(1) The visible emissions are not greater than 40 percent opacity; and
(2) The visible emissions do not occur for more than 6 consecutive minutes in any sixty-minute period. **[COMAR 26.11.09.05A(3)]**

Compliance Demonstration

(1) The Cleaver Brooks boiler shall burn natural gas only except during periods of gas curtailment, gas supply emergencies, or periodic testing on No. 2 fuel oil (not to exceed 48 hours during any calendar year).

Note: A natural gas curtailment or supply interruption means any period during which the supply of natural gas to the affected facility is halted for reasons beyond the control of the facility. The act of entering into a contractual agreement with a supplier of natural gas established for curtailment purposes does not

constitute a reason that is under the control of a facility for the purposes of this definition. An increase in the cost or unit price of natural gas does not constitute a period of natural gas curtailment or interruption. **[40 CFR §63.11195(e) and §63.11237]**

(2) The Hurst boiler (EU-6) shall burn natural gas only. **[COMAR 26.11.03.06C]**

(3) To verify no visible emissions when burning #2 fuel oil, an observer is required to perform a visual observation of stack exhaust gases to look for visible emissions for a 12-minute period once for each 168 hours that the boiler burns oil. If a boiler does not burn oil for more than 100 hours in a calendar year, this visible emission observation requirement is waived. **[COMAR 26.11.03.06C]**

(4) The Permittee shall maintain the records of any incident of visible emissions observed from each boiler and any period of on site for a period of at least 5 years. **[COMAR 26.11.03.06C(7)]**

(5) The Permittee shall report any incident of visible emissions in accordance with permit condition number 4, Section III, Plant Wide Conditions, "Report of Excess Emissions and Deviations." **[COMAR 26.11.03.06C(7)]**

Rationale for Compliance Demonstration

The Permittee shall burn only natural gas or No. 2 fuel oil only during periods of gas curtailment, gas supply emergencies, or periodic testing on No. 2 fuel oil (not to exceed 48 hours during any calendar year) in the EU-1 boiler. Boilers that burn primarily natural gas in this size range are set up to operate in an automatic mode without oversight of an operator and require minimal preventative maintenance to maintain a level of combustion performance that does not cause visible emissions. If visible emissions occur, it would only occur when burning oil and only when the boiler has not been properly maintained and operated. Observations when burning oil and follow-up maintenance when any visible emissions are observed are sufficient to demonstrate compliance. If visible emissions are observed the Permittee is required to take action to determine the causes of the problem and implement corrective action as practicable.

B. Control of Sulfur Oxides

Applicable Standards and Regulations

40 CFR §60.42c(d), which states that no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur.

COMAR 26.11.09.07A(2)(b), which establishes that a person may not burn, sell, or make available for sale any distillate fuel with a sulfur content in excess of 0.3 percent by weight.

Note: Compliance with this requirement should also comply with the requirements of 40 CFR §60.42c.

Compliance Demonstration

(1) The Permittee shall obtain from fuel oil suppliers, for each delivery of fuel oil, certificates of analysis that provide the sulfur content of any no. 2 fuel oil to be burned in EU-1. **[COMAR 26.11.03.06C]**

(2) The Permittee is also required to maintain for at least 5 years, and to make available to the Department upon request, records of hours of boiler operation fired by no. 2 fuel oil and all analyses from fuel oil suppliers that provide the sulfur content of any no. 2 fuel oil burned in EU-1. **[COMAR 26.11.03.06C]**

(3) The Permittee shall submit to the Department semi-annual reports concerning the sulfur content of any no. 2 fuel oil burned in EU-1. Such reports must be submitted by the 30th day following the end of the reporting period and must include the following:
   (a) calendar dates covered in the reporting period;
   (b) records of fuel oil supplier certifications that include:
      (i) the name of the supplier,
      (ii) a statement from the supplier that the oil complies with the specifications under the definition of distillate oil in 40 CFR §60.41c, and
      (iii) the sulfur content or maximum sulfur content of the oil; and
   (c) a certified statement signed by the Permittee that the records of fuel oil supplier certifications included in the report represent all of the fuel oil combusted in EU-1 during the reporting period.

[COMAR 26.11.03.06C; and 40 CFR §60.44c(h), §60.48c(d), §60.48c(e)(1) & e(11), §60.48c(f)(1) and §60.48c(j)]

Rationale for Compliance Demonstration

The required certificates of analysis obtained from the facility's fuel oil suppliers should demonstrate the facility compliance status.

Emissions Unit Number – EU No. 2 (Table IV-2 of the Permit)

EU-2: Expandable Polystyrene Shape-Molding (EPS) Operation (ARA Registration No. 025-0558-6-0424).

VOC Emissions Control

Applicable Standards and Regulations

(1) LAER Requirements - The VOC emissions from EPS process including all fugitive emissions shall not exceed 2.40 pounds per 100 pounds of raw bead based on a weighted average for each monthly period. **[Authority: NSR-2017-01 and Permit to Construct 025-0558 issued October 1, 2017]**

(2) **COMAR 26.11.19.19**, which requires the Permittee to comply with control of VOC emissions from expandable polystyrene operations.

Note: Lifoam's expandable polystyrene operation is subject to the Lowest Achievable Emission Rate (LAER) requirements, 2.40 pounds per 100 pounds of raw bead based on a weighted average for each monthly period, which are more stringent than the requirements under **COMAR 26.11.19.19**.

Compliance Demonstration

(1) All required stack emissions performance tests shall be conducted in accordance with the testing specifications in the Department's Technical Memorandum 91-01, "Test Methods and Equipment Specifications for Stationary Sources", January, 1991, as amended through Supplement 3 (October 1, 1997), or other test methods approved by the Department. **[Authority: Permit to Construct 025-0558 issued October 1, 2017]**

(2) The Permittee shall conduct additional stack test at a frequency of not less than once each 3 years, beginning 3 years after the date of the initial test. **[Authority: COMAR 26.11.19.19D(3)]**

(3) At least 30 days prior to each required stack emissions performance tests, the Permittee shall submit to the Department a test protocol for review and approval. **[Authority: Permit to Construct 025-0558 issued October 1, 2017]**

(4) During each required stack emissions performance tests, the EPS process shall be operated at 90 percent or higher of its rated capacity unless an alternate operating scenario is approved by the Department. **[Authority: Permit to Construct 025-0558 issued October 1, 2017]**

(5) During the stack emissions performance tests, the Permittee shall collect following information: **[Authority: Permit to Construct 025-0558 issued October 1, 2017]**
   (a) Hourly process rate of the EPS process, pounds/hr of raw bead;
   (b) The pentane content in raw beads, pounds per 100 pounds of raw bead;
   (c) VOC, as propane, concentration by volume, ppmv, at both the inlet and the outlet of the RTO,
   (d) Flue gas flow rate, actual cubic feet per minute (acfm), at both the inlet and the outlet of the RTO;
   (e) Moisture content (%) of the flue gases at both the inlet and the outlet of the RTO;
   (f) The combustion chamber temperature of the RTO; and
   (g) Temperature of flue gases at both the inlet and outlet of the RTO.

(6) The flue gases from the following equipment and operation shall vent through the RTO prior to discharging into the atmosphere: **[Authority: Permit to Construct 025-0558 issued October 1, 2017]**

(a) Two (2) pre-expanders;
(b) Twenty-six (26) aging bags;
(c) Nineteen (19) shape molding presses; and
(d) Local exhaust ventilations (e.g. floor sweeps).

(7) When the EPS process is in operation, the combustion chamber temperature of the RTO shall be maintained at least 1,525^{o} F or the temperature established during the latest stack emission performance test to achieve at least 98% VOC control efficiency or no more than 10 ppmv of VOC, as propane, concentration in the flue gases leaving the RTO. **[Authority: Permit to Construct 025-0558 issued October 1, 2017]**

(8) The Permittee shall use the latest emission performance test to establish the following information: **[Authority: Permit to Construct 025-0558 issued October 1, 2017]**
(a) RTO control efficiency (C), %, which is calculated by [1- (A/B)] x 100: where A = Total mass VOC leaving the RTO and B = Total mass VOC entering the RTO during the stack emission performance test;
(b) The overall capture efficiency (D) for the ESP process, %, which D = (E/F) x 100: where E = Total mass VOC entering the RTO and F = Total mass VOC in total raw bead usage during the stack emissions performance test; and
(c) The overall VOC control efficiency (G), %, = (C x D)/100

(9) The RTO shall be fired with natural gas only. **[Authority: Permit to Construct 025-0558 issued October 1, 2017]**

(10) The pentane content in polystyrene raw bead shall not exceed 6.0 percent by weight on a monthly average. **[Authority: Permit to Construct 025-0558 issued October 1, 2017]**

(11) The EPS raw bead usage shall not exceed 6.3 million pounds for any 12-month, rolling monthly. **[Authority: MDE Settlement Agreement and Consent Order signed on October 14, 2016, NSR approval (NSR-2017-01), and Permit to Construct 025-0558 issued October 1, 2017]**

(12) The following records with supporting documentation shall be maintained on site for at least five (5) years and shall be made available to the Department upon request: **[Authority: Permit to Construct 025-0558 issued October 1, 2017]**
(a) All stack emission performance test reports;
(b) VOC emissions, pounds per 100 pound of raw bead, from the EPS process on a weighted average for each monthly period;
(c) Premises wide VOC emissions for each month and for each rolling 12-month period, calculated monthly;
(d) Continuous RTO combustion chamber temperature for each operating day;
(e) A Certificate of Analysis (CoA) for each shipment from the supplier indicating the amount of VOC in the expandable polystyrene raw beads, percentage by weight;

(f) Monthly average weight percent VOC content in the polystyrene raw beads;
(g) Monthly and annual raw bead throughputs;
(h) The most current CAM plan;
(i) The cause and time periods of emergency bypass from the RTO when the EPS process is in operation; and
(j) Records of any repairs and maintenance made to the emissions control system.

(13) Within 60 days following the required stack emissions performance tests, the Permittee shall submit to the Department a stack emissions performance test report and a compliance demonstration, including the following information: **[Authority: Permit to Construct 025-0558 issued October 1, 2017 and COMAR 26.11.03.06C]**
(a) Hourly process rate of the EPS process, pounds/hr of raw bead;
(b) The pentane content in raw beads, pounds per 100 pounds of raw bead;
(c) VOC, as propane, concentration by volume, ppmv, at both the inlet and the outlet of the RTO,
(d) Flue gas flow rate, acfm, at both the inlet and the outlet of the RTO;
(e) Moisture content (%) of the flue gases at both the inlet and the outlet of the RTO;
(f) Temperature of flue gases at both the inlet and outlet of the RTO;
(g) The combustion chamber temperature of the RTO; and
(h) Pounds per hour of VOC entering and leaving the RTO.

(14) The Permittee shall make available to the Department upon request all records maintained associated with the ESP operation. **[Authority: COMAR 26.11.03.06C]**

Rationale for Compliance Demonstration
The requirements imposed for demonstrating compliance with LAER for EU-2 are comprehensive and are consistent with Compliance Assurance Monitoring (CAM) requirements established under 40 CFR 64, shown in Table VI-5. Compliance with emission limits would be determined based on the emission factors (related to RTO control efficiency and the system capture efficiency) collected from the stack performance test, RTO combustion chamber temperature (related to RTO control efficiency) monitoring, monthly average of pentane content in raw bead, and monthly raw bead throughput. The reporting and recordkeeping requirements are sufficient to document compliance status.

Emissions Unit Number – EU No. 3 (Table IV-3 of the Permit)

EU-3: Screen Printing Operation (ARA Registration No. 025-0558-6-0425).

VOC Emissions Control

Applicable Standards/Limitations

(1) If the facility-wide VOC emissions from all screen-printing operations are 20 or more pounds per day on any day, the maximum VOC content of any ink or clear coating may not exceed 3.3 pounds of VOC per gallon, as applied. **[Authority: COMAR 26.11.19.18C(1)(b)]**

(2) If the facility-wide VOC emissions from all screen-printing operations are 20 or more pounds per day on any day, the maximum VOC content of any specialty ink may not exceed the following: **[Authority: COMAR 26.11.19.18C(1)(d)]**

Ink	Maximum pounds VOC per gallon
Acid/etch resist	3.3
Anoprint	3.1
Conductive	8.0
Electroluminescent	8.0

(3) If the facility-wide VOC emissions from all screen-printing operations are 20 or more pounds per day on any day, the maximum VOC content of any ink removal or reclamation product may not exceed the following: **[Authority: COMAR 26.11.19.18C(2)]**

Product	Maximum pounds VOC per gallon
Screen Reclamation	1.0
Ink Removal	3.3
Haze Removal	4.0

(4) If total facility-wide VOC emissions from all screen printing operations are 20 or more pounds per day on any day, then thereafter the Permittee shall implement a VOC leak detection and repair program designed to minimize unintended emissions of VOC from process equipment and components, e.g., in-process vessels, storage tanks, pumps, compressors, valves, flanges and other pipeline fittings, pressure relief valves, process drains, and open-ended pipes. **[Authority: COMAR 26.11.19.16]**

Compliance Demonstration

(1) If total facility-wide VOC emissions from all screen-printing operations are 20 or more pounds per day, the Permittee shall ensure that the maximum VOC content in each ink, ink removal product or ink reclamation product does not exceed each specific limit of **COMAR 26.11.19.18C(1)(b), 18C(1)(d) and 18C(2)**.

(2) If total facility-wide VOC emissions from all screen-printing operations are 20 or more pounds per day, the Permittee shall implement a VOC leak detection and repair program designed to minimize unintended emissions of VOC from process equipment and components, e.g., in-process vessels, storage tanks, pumps,

compressors, valves, flanges and other pipeline fittings, pressure relief valves, process drains, and open-ended pipes. **[Authority: COMAR 26.11.19.16]**

(3) The following records with supporting documentation shall be maintained on site for at least five (5) years and shall be made available to the Department upon request:

(a) The total monthly consumption of inks, coatings, cleanup materials, and any other materials containing VOC that are associated with screen printing operations, pounds or gallons per month;
(b) The VOC content of each ink, coating, cleanup material, and any other materials containing VOC that are associated with screen printing operations;
(c) The total facility-wide VOC emissions, pounds/day, with supporting information from all screen-printing operations; and
(d) The VOC leak detection and repair program if total facility-wide VOC emissions from all screen-printing operations are 20 or more pounds per day.
[COMAR 26.11.03.06]

(4) The Permittee shall report to the Department within 30 calendar days when total facility-wide VOC emissions from all screen-printing operations are 20 or more pounds per day. **[COMAR 26.11.03.06]**

Rationale for Compliance Demonstration
Daily VOC emission calculation would determine whether or not a VOC leak detection and repair program is needed. The reporting and recordkeeping requirements for VOC content in each material are sufficient to document compliance status.

Emissions Unit Number – EU No. 5 (Table IV-4 of the Permit)

EU-5: Rigid Polyurethane Foam Container Manufacturing Operation (ARA Registration No. 025-0558-5-0482).

Control of VOC Emissions

Applicable Standards/Limitations
(1) In accordance with **COMAR 26.11.19.09-1C**, if the total pre-controlled VOC emissions from industrial solvent cleaning operations at the facility are 15 pounds or more per day, the Permittee shall not use any cleaning material unless the vapor pressure of the cleaning solution is less than or equal to 8 mmHg at 20 degrees Celsius (0.152 psia).

(2) If total facility-wide VOC emissions from all industrial solvent cleaning operations are 15 or more pounds per day on any day, then thereafter the Permittee shall implement a VOC leak detection and repair program in accordance with **COMAR 26.11.19.16**.

Compliance Demonstration

(1) The Permittee shall monitor the VOC emissions, pounds/day, from the premises-wide industrial solvent cleaning operations to ensure compliance with COMAR 26.11.19.09-1C and COMAR 26.11.19.16. **[Authority: COMAR 26.11.03.06C]**

(2) The following records with supporting documentation shall be maintained on site for at least five (5) years and shall be made available to the Department upon request: **[Authority: COMAR 26.11.03.06C]**

(a) The total monthly production, pounds per month, of polyurethane foam container.
(b) The total daily VOC emissions, pounds/day, from the premises-wide industrial solvent cleaning operations;
(c) The vapor pressure of each industrial solvent cleaning material;
(d) The VOC leak detection and repair program if total facility-wide VOC emissions from all industrial solvent cleaning operations are 15 or more pounds per day.

(3) The Permittee shall report to the Department within 30 calendar days when total facility-wide VOC emissions from all industrial solvent cleaning operations are 15 or more pounds per day. **[Authority: COMAR 26.11.03.06C]**

Rationale for Compliance Demonstration

The daily VOC emissions from premises-wide industrial solvent cleaning operations would determine whether or not the Permittee is required to meet the vapor pressure limit for each industrial solvent cleaning material and the Permittee shall implement a VOC leak detection and repair program. The record keeping and reporting requirements are sufficient to document compliance status.

Table IV-5 Compliance Assurance Monitoring (CAM) Plan - Part 64 Requirements	
Indicator No. 1	
I. Indicator 64.4(a)(1)	RTO Combustion Chamber Temperature
Monitoring Approach	Monitor temperature of the RTO combustion chamber
II. Indicator Range 64.4(a)(2)	When EU-2 is in operation and is processing EPS materials, the Permittee shall maintain the 3-hour block average RTO combustion chamber temperature at a minimum of 1,525^{o}F, or the temperature established during the most recent stack test, to achieve at least 98% VOC destruction efficiency. An excursion is defined as a 3-hour block average RTO combustion chamber temperature is less than 1,525^{o}F, or the temperature established during the most recent stack test,
Reporting Threshold	An excursion shall trigger an investigation, corrective action, and a reporting requirement. All excursions and corrective actions taken shall be reported to the ARA within five (5) business days following the day of

	excursion.
III. Performance Criteria 64.4(a)(3)	
A. Data Representatives	Temperature recorded automatically on a data acquisition system.
B. Verification of Operational Status	The temperature monitoring system is in place to document compliance status.
C. QA/QC Practices and Criteria	Calibration, maintenance and operation of the temperature monitoring system are conducted according to manufacturer's specifications.
D. Monitoring Frequency	Continuous
E. Data Collection	Temperature recorded automatically on a data acquisition system. The records shall be maintained on site for at least five (5) years.
F. Averaging Period	3-hour block average

Table IV-6 Compliance Assurance Monitoring (CAM) Plan - Part 64 Requirements	
	Indicator No. 2
I. Indicator 64.4(a)(1)	Pentane content in raw bead
Monitoring Approach	The operators shall obtain from suppliers certificates of analysis that provide the weight percent VOC content of the polystyrene raw beads in each container of raw beads received at the facility. The Permittee shall monitor the monthly average weight percent of VOC content in the polystyrene raw beads.
II. Indicator Range 64.4(a)(2) Reporting Threshold	An excursion occurs if the monthly average weight percent of VOC content in the polystyrene raw beads exceeds 6%. All excursions and corrective actions taken shall be reported to the ARA within five (5) business days following the day of excursion.
III. Performance Criteria 64.4(a)(3)	
A. Data Representatives	Operators monitor and record the pentane content in raw beads for each container received at the facility.
B. Verification of Operational Status	The certificate of analysis for each shipment is documented.
C. QA/QC Practices and Criteria	Each operator is trained according to its standard operating procedures.
D. Monitoring Frequency	The pentane content in each raw bead container received at the facility is monitored for monthly average weight percent of VOC content in the polystyrene raw beads.
E. Data Collection	The pentane content in each raw bead container received at the facility is recorded.

F. Averaging Period	Each calendar month

Table IV-6 Compliance Assurance Monitoring (CAM) Plan - Part 64 Requirements	
	Indicator No. 3
IV. Indicator 64.4(a)(1)	Polystyrene raw bead usage
Monitoring Approach	1. The raw bead usage, the pentane content and the RTO temperature shall be monitored simultaneously each operating day to demonstrate compliance with the VOC emissions limit. 2. The raw bead usage and the pentane content shall be monitored simultaneously for each raw bead shipments to demonstrate compliance with the pentane limit. 3. The raw bead usage shall be monitored to demonstrate the raw bead throughput limit.
V. Indicator Range 64.4(a)(2) Reporting Threshold	An excursion occurs if the following occurs: 1. VOC emissions exceed 2.40 pounds of VOC per 100 pounds of raw bead on a monthly average. 2. The pentane content in raw bead exceeds 6% by weight on a monthly average. 3. The raw beads annual throughput exceeds 6.3 million pounds. All excursions and corrective actions taken shall be reported to the ARA within five (5) business days following the day of excursion.
VI. Performance Criteria 64.4(a)(3)	
A. Data Representatives	Operators monitor and record daily raw beads throughput.
B. Verification of Operational Status	The certificate of analysis for each shipment and production are documented.
C. QA/QC Practices and Criteria	Each operator is trained according to its standard operating procedures.
D. Monitoring Frequency	Raw bead throughput is monitored daily.
E. Data Collection	Polystyrene raw bead throughput.
F. Averaging Period	Monthly and annually

Emissions Unit – Facility Wide Requirements

VOC Emissions Control

Applicable Standards/Limitation
The total premises-wide VOC emission shall not exceed 78.0 tons for any rolling 12-month period, calculated monthly. **[Authority: Permit to Construct 025-0558 issued October 1, 2017]**

Compliance Demonstration
(1) Within 15 days of the end of each calendar month, the Permittee shall determine facility-wide VOC emissions for the month and for the most recent period of 12 consecutive months during which any part of the facility is operated. **[Authority: Permit to Construct 025-0558 issued October 1, 2017]**

(2) Permittee shall implement "good operating practices" designed to minimize emissions of VOC to the atmosphere. **[Authority: COMAR 26.11.19.02I]**

(3) Where applicable, "good operating practices" shall include, at a minimum: **[Authority: COMAR 26.11.19.02I(2)(b)]**
- (a) Provisions for training of operators on practices, procedures, and maintenance requirements that are consistent with the equipment manufacturers' recommendations and the source's experience in operating the equipment, with the training to include proper procedures for maintenance of air pollution control equipment;
- (b) Maintenance of covers on containers and other vessels that contain VOC and VOC-containing materials when not in use;
- (c) Minimize spills of VOC-containing cleaning materials;
- (d) Convey VOC-containing cleaning materials from one location to another in closed containers or pipelines;
- (e) Minimize VOC emissions from cleaning of storage, mixing, and conveying equipment;
- (f) As practical, scheduling of operations to minimize color or material changes when applying VOC coatings or other materials by spray gun;
- (g) For spray gun applications of coatings, use of high volume low pressure (HVLP) or other high efficiency application methods where practical; and
- (h) As practical, mixing or blending materials containing VOC in closed containers and taking preventive measures to minimize emissions for products that contain VOC.

(4) "Good operating practices" shall be established in writing, shall be made available to the Department upon request, and shall be either included as part of an operator training program or posted where clearly visible to operators. **[Authority: COMAR 26.11.19.02I(2)(c)]**

(5) The Permittee shall take all reasonable precautions to prevent or minimize the discharge of VOC into the atmosphere when cleaning process equipment and coating application equipment, including containers, vessels, tanks, lines, spray application devices, and pumps. Reasonable precautions for equipment cleanup shall include, at a minimum: **[Authority: COMAR 26.11.19.02I(3)]**
   (a) Storing all waste materials, including VOC-contaminated cloth and paper, in closed containers;
   (b) For frequently cleaned equipment, preparing written standard operating procedures that include, wherever practical, provisions for using non-VOC or low-VOC cleaning agents, and procedures designed to minimize the quantities of VOC-containing cleaning materials used;
   (c) Where practical, using enclosed spray-applicator cleaning methods, VOC-recycling systems and other spray-applicator cleaning methods designed to reduce or eliminate VOC emissions; and
   (d) Where practical, using detergents, high-pressure water, or other non-VOC cleaning options to clean coating lines, containers, and process equipment.

(6) With regard to storage and transfer of VOC, the Permittee shall, at a minimum: **[Authority: COMAR 26.11.19.02I(4)]**
   (a) Install conservation vents, or other vapor control measures designed to minimize standing losses, on all storage tanks with a capacity of 2000 gallons or more in VOC service; and
   (b) For stationary storage tanks with capacities greater than 10,000 gallons and less than 40,000 gallons that store VOC or VOC-containing materials, excluding gasoline, with vapor pressures greater than 1.5 psia, use vapor balance, vapor control lines, or other vapor control measures, whenever VOC are transferred from tank trucks into such tanks.

(7) The Permittee shall maintain records of all required determinations of facility-wide VOC emissions, the methods by which such determinations were made, and all data used in the emissions calculations. **[Authority: COMAR 26.11.03.06C]**

(8) The Permittee shall display the good operating practices visible to the operators. **[Authority: COMAR 26.11.19.02I(2)(c)(iii)]**

(9) If the Permittee determines that facility-wide VOC emissions for any period of twelve (12) consecutive months exceeds 78 tons, the Permittee shall report, in accordance with requirements under COMAR 26.11.01.07, occurrences of excess emissions, to the Compliance Program of the Air and Radiation Administration. **[Authority: Permit to Construct No. 025-0558-6-0424]**

(10) The Permittee shall make the good operating practices information as required by COMAR 26.11.19.02I available to the Department upon request. **[Authority: COMAR 26.11.19.02I(2)(c)(ii)]**

Rationale for Compliance Demonstration

Monthly determinations of facility-wide VOC emissions are appropriate because the Permittee's facility-wide VOC emissions limit applies to all periods of 12 consecutive months rather than to periods of calendar years. Permittee shall implement "good operating practices" designed to minimize emissions of VOC to the atmosphere. "Good operating practices" shall be established in writing, shall be made available to the Department upon request, and shall be either included as part of an operator training program or posted where clearly visible to operators.

If the Permittee determines that facility-wide VOC emissions for any period of twelve (12) consecutive months exceeds 78 tons, the Permittee shall report, in accordance with requirements under COMAR 26.11.01.07, occurrences of excess emissions, to the Compliance Program of the Air and Radiation Administration.

COMPLIANCE SCHEDULE

Lifoam installed a regenerative thermal oxidizer (RTO) to replace the existing steam-generating thermal oxidizer (SGTO) in 2016. The stack performance test on June 2017 demonstrated the plant is in compliance with LAER requirement of less than 2.4 lb VOC/100 lb raw bead on a weight average for each monthly period when the raw bead concentration is below 5%. The Permittee is required to continuously monitor operating parameters that are directly related to control device capture and destruction efficiencies. The Permittee is required to establish minimum acceptable values for those operating parameters through performance testing.

Lifoam has fulfilled the MDE Settlement Agreement and Consent Order signed on October 14, 2016 and is currently in compliance with all applicable air quality regulations.

TITLE IV – ACID RAIN

Not Applicable

TITLE VI – OZONE DEPLETING SUBSTANCES

Lifoam is not subject to Title VI requirements.

SECTION 112(r) – ACCIDENTAL RELEASE

Lifoam is not subject to the requirements of Section 112(r).

PERMIT SHIELD

Lifoam requested that a permit shield be expressly included in the Permittee's Part 70 permit. Permit shields are granted on an emission unit by emission unit basis. If an emission unit is covered by a permit shield, a permit shield statement will follow the emission unit table in Section IV - Plant Specific Conditions of the permit. In this case, a permit shield was granted for each emission unit covered by the permit.

INSIGNIFICANT ACTIVITIES

This section provides a list of insignificant emissions units that were reported in the Title V permit application. The applicable Clean Air Act requirements, if any, are listed below the insignificant activity.

(1) No. 1 Stationary Internal Combustion engines with less than 500 brake horsepower (373 kilowatts) of power output; Note: One (1) 27 Hp propane/natural gas-fired engine for an emergency generator.

The 27 Hp emergency generator is subject to the following requirements:

(A) COMAR 26.11.09.05E(2), Emissions During Idle Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.

(B) COMAR 26.11.09.05E(3), Emissions During Operating Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.

(C) Exceptions:

(i) COMAR 26.11.09.05E(2) does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.

(ii) COMAR 26.11.09.05E(2) does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:

(a) Engines that are idled continuously when not in service: 30 minutes
(b) all other engines: 15 minutes.

(iii) COMAR 26.11.09.05E(2) & (3) do not apply while maintenance, repair or testing is being performed by qualified mechanics.

(D) The Permittee shall comply with the requirements for 40 CFR 60, Subpart JJJJ.

(E) The Permittee meets the requirements of 40 CFR, Part 63, Subpart ZZZZ by meeting the requirements of 40 CFR, Part 60, Subpart JJJJ for the emergency generator. No further requirements apply to the emergency generator under 40 CFR, Part 63, Subpart ZZZZ. **[Reference: 40 CFR §63.6590(c)(1)]**

(2) ✓ Space heaters utilizing direct heat transfer and used solely for comfort heat; note: 4 heat pump/AC units in office area & 2 space heaters in the warehouse.

(3) ✓ Water cooling towers and water cooling ponds unless used for evaporative cooling of water from barometric jets or barometric condensers, or used in conjunction with an installation requiring a permit to operate: 2 cooling water tower to the EPS molding cooling water system.

(4) ✓ Equipment for drilling, carving, cutting, routing, turning, sawing, planning, spindle sanding, or disc sanding of wood or wood products;

(5) Containers, reservoirs, or tanks used exclusively for:

(a) ✓ Storage of butane, propane, or liquid petroleum, or natural gas;

(b) No. 44 Storage of lubricating oils; containers sizes ranging from 10 ounces to 300 gallons;

(c) No. 300 The storage of VOC normally used as solvents, diluents, thinners, inks, colorants, paints, lacquers, enamels, varnishes, liquid resins, or other surface coatings and having individual capacity of 200 gallons (7.6 cubic meters) or less; Note: Containers sizes range from 16 ounces to 55 gallons and inventory varies throughout the year (300 is approximate)

(6) ✓ Certain recreational equipment and activities, such as fireplaces, barbecue pits and cookers, fireworks displays, and kerosene fuel use. Note: Two propane-fired grills for seasonal barbecues.

STATE ONLY ENFORCEABLE REQUIREMENTS

The Permittee is subject to the following State-only enforceable requirements:

1. Applicable Regulations:

   (1) COMAR 26.11.06.08 and 26.11.06.09, which generally prohibit the discharge of emissions beyond the property line in such a manner that a nuisance or air pollution is created.

   (2) COMAR 26.11.15.05, which requires that the Permittee implement "Best Available Control Technology for Toxics" (T – BACT) to control emissions of toxic air pollutants.

   (3) COMAR 26.11.15.06, which prohibits the discharge of toxic air pollutants to the extent that such emissions will unreasonably endanger human health

2. Record Keeping and Reporting:

   The Permittee shall submit to the Department, by April 1 of each year during the term of this permit, a written certification of the results of an analysis of emissions of toxic air pollutants from the Permittee's facility during the previous calendar year. The analysis shall include either:

   (1) a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or

   (2) a revised compliance demonstration, developed in accordance with requirements included under COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.