Statement of Basis

Tier I Operating Permit No. T1-2020.0025
Project ID 62743

Foam Molders Inc
Post Falls, Idaho

Facility ID 055-00047

Final

December 3, 2020

Kelli Wetzel KW
Permit Writer

The purpose of this Statement of Basis is to set forth the legal and factual basis for the Tier I operating permit terms and conditions, including references to the applicable statutory or regulatory provisions for the terms and conditions, as required by IDAPA 58.01.01.362

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1. ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

acfm	actual cubic feet per minute
ASTM	American Society for Testing and Materials
Btu	British thermal unit
CAA	Clean Air Act
cfm	cubic feet per minute
CFR	Code of Federal Regulations
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	CO_2 equivalent emissions
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EPA	U.S. Environmental Protection Agency
EPS	expandable polystyrene
GHG	greenhouse gases
gph	gallons per hour
gpm	gallons per minute
gr	grains (1 lb = 7,000 grains)
HAP	hazardous air pollutants
hp	horsepower
hr/yr	hours per consecutive 12 calendar month period
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
iwg	inches of water gauge
km	kilometers
lb/hr	pounds per hour
m	meters
MACT	Maximum Achievable Control Technology
mg/dscm	milligrams per dry standard cubic meter
MMBtu	million British thermal units
MMscf	million standard cubic feet
MRRR	Monitoring, Recordkeeping and Reporting Requirements
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
NSPS	New Source Performance Standards
O&M	operation and maintenance
O_2	oxygen
PC	permit condition
PM	particulate matter
$PM_{2.5}$	particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
ppm	parts per million
ppmw	parts per million by weight
PSD	Prevention of Significant Deterioration
psig	pounds per square inch gauge
PTC	permit to construct
PTE	potential to emit
RMP	risk management plan
Rules	*Rules for the Control of Air Pollution in Idaho*

scf	standard cubic feet
SIP	State Implementation Plan
SO_2	sulfur dioxide
SO_x	sulfur oxides
T/day	tons per calendar day
T/hr	tons per hour
T/yr	tons per consecutive 12 calendar month period
T1	Tier I operating permit
T2	Tier II operating permit
TAP	toxic air pollutants
ULSD	ultra low sulfur diesel
U.S.C.	United States Code
VOC	volatile organic compound

2. INTRODUCTION AND APPLICABILITY

Foam Molders Inc is a manufacturer of polystyrene insulation and packaging and is located at Post Falls, Idaho. The facility is classified as a major facility, as defined by IDAPA 58.01.01.008.10.c, because it emits or has the potential to emit VOCs above the major source threshold of 100 tons-per-year.

At the time of this permitting action, the facility is not a major source of HAP emissions. As a major facility, Foam Molders Inc is required to apply for a Tier I operating permit pursuant to IDAPA 58.01.01.301. The application for a Tier I operating permit must contain a certification from Foam Molders Inc as to its compliance status with all applicable requirements (IDAPA 58.01.01.314.09).

IDAPA 58.01.01.362 requires that as part of its review of the Tier I application, DEQ shall prepare a technical memorandum (i.e. statement of basis) that sets forth the legal and factual basis for the draft Tier I operating permit terms and conditions including reference to the applicable statutory provisions or the draft denial. This document provides the basis for the draft Tier I operating permit for Foam Molders Inc.

The format of this Statement of Basis follows that of the permit. Foam Molders Inc's Tier I operating permit is organized into sections. They are as follows:

Section 1 – Acronyms, Units, and Chemical Nomenclature

The acronyms, units, and chemical nomenclature used in the permit are defined in this section.

Section 2 - Tier I Operating Permit Scope

The scope describes this permitting action.

Section 3 - Facility-wide Conditions

The Facility-wide Conditions section contains the applicable requirements (permit conditions) that apply facility-wide. Where required, monitoring, recordkeeping and reporting requirements (MRRR) sufficient to assure compliance with a permit condition follows the permit condition.

Sections 4 – Processing Equipment

The emissions unit-specific sections of the permit contain the applicable requirements that specifically apply to each regulated emissions unit. Some requirements that apply to an emissions unit (e.g. opacity limits) may be contained in the Facility-wide Conditions Section. As with the facility-wide conditions, monitoring, recordkeeping and reporting requirements (MRRR) sufficient to assure compliance with an applicable requirement follows the applicable requirement.

Section 5 - Insignificant Activities

This section contains a list of units or activities that are insignificant on the basis of size or production rate. Units and activities listed in this section must be listed in the permit application. The regulatory

citation for units and activities that are insignificant on the basis of size or production rate is IDAPA 58.01.01.317.01.b.

Section 6 - General Provisions

The final section of the permit contains standard terms and conditions that apply to all major facilities subject to IDAPA 58.01.01.300. This section is the same for all Tier I facilities. The General Provisions have been reviewed by EPA and contain all terms and conditions required by IDAPA 58.01.01 et al as well as requirements from other air quality laws, rules and regulations. Each general provision has been paraphrased so it is more easily understood by the general public; however, there is no intent to alter the effect of the requirement. Should there be a discrepancy between a paraphrased general provision in this statement of basis and a rule or permit, the rule or permit shall govern.

3. FACILITY INFORMATION

3.1 Facility Description

Foam Molders Inc operates a facility that manufactures polystyrene insulation and packaging which is located in Post Falls, ID. Expandable Polystyrene (EPS) raw materials (Beads), arrive at the facility in 1,000 to 2,250 lb containersor supersacks. The beads contain an encapsulated blowing agent, pentane, which ranges from 3.5 to 6.5% by weight. The emission rates at each phase of operation vary according to such factors such as density of the expanded beads and size and shape of the finished parts and means of storage of the finished parts. The beads are conveyed from the containers into a pre-expander where the beads are partially expanded to their desired density, this material is referred to as pre-puff. This pre-puff is stored in silos and set to age for a varying degree of time. After the aging process, the pre-puff is then conveyed to a variety of molding machines in which the pre-puff is heated by steam and expands to fill the cavity to create varying shapes and finished products. During this entire process approximately 77% (URS Corporation, “Pentane Emissions Profile for Expanded Polystyrene Foam Manufacturing Industry.”) of the blowing agent is emitted. The remaining 23% is emitted from the product over a period.

3.2 Facility Permitting History

Tier I Operating Permit History

This is the initial Tier I operating permit for the facility.

Underlying Permit History - Includes every underlying permit issued to this facility

The following information is the comprehensive permitting history of all underlying applicable permits issued to this Tier I facility. This information was derived from a review of the permit files available to DEQ. Permit status is noted as active and in effect (A) or superseded (S).

February 7, 2019	P-2007.0228, Increase VOC emissions to 200 tons per year, Permit status (A)
February 29, 2008	P-2007.0228, DEQ determined that the Tier II portion of the permit was no longer required and the regional office requested a requirement limiting the boiler to burning natural gas only, Permit status (S)
June 9, 2006	Tier II/PTC No. P-060109, Installation of a pre-expander and block mold which increased the EPS throughput limit and the VOC emission rate limit, Permit status (S)
December 10, 2002	Tier II/PTC No. 055-00047, Removed specific equipment descriptions so as to maintain operational flexibility by allowing for the installation, replacement, and/or removal of the process equipment, while limiting total daily and total annual facility-wide VOC emissions from the facility, Permit status (S)
September 26, 2000	Tier II No. 055-00047, Permit whole facility and limit emissions below major source levels, Permit status (S)

4. APPLICATION SCOPE AND APPLICATION CHRONOLOGY

4.1 Application Scope

This permit is the initial Tier I operating permit for this facility.

4.2 Application Chronology

June 30, 2020	DEQ received an application.
August 27, 2020	DEQ determined that the application was complete.
September 30, 2020	DEQ made available the draft permit and statement of basis for peer and regional office review.
October 8, 2020	DEQ made available the draft permit and statement of basis for applicant review.
October 19 – November 18, 2020	DEQ provided a public comment period on the proposed action.
November 20, 2020	DEQ provided the proposed permit and statement of basis for EPA review.
December 3, 2020	DEQ issued the final permit and statement of basis.

5. EMISSIONS UNITS, PROCESS DESCRIPTION(S), AND EMISSIONS INVENTORY

This section lists the emissions units, describes the production or manufacturing processes, and provides the emissions inventory for this facility. The information presented was provided by the applicant in its permit application. Also listed in this section are the insignificant activities based on size or production rate.

5.1 Process No. 1 – Processing Equipment

The EPS raw material (beads) arrives in 1,000-pound boxes. The beads are vacuum fed to the pre-expander where they are partially expanded to their desired density, using steam from a natural gas-fired boiler. Steam is used to heat the beads and to release pentane, which is the encapsulated blowing agent contained within the beads. Expanded beads are aged in the prepuff storage for a period between two to 48 hours, to allow the prepuff to stabilize. The material is then transferred into molds or presses where, using steam, the beads are fused together into desired shapes, based on the mold forms. The molded shapes are then cut to their final size and shape and stored. Each step of the process results in pentane emissions.

VOC emissions, as pentane, are emitted from the processes and equipment referenced above; the above referenced equipment is hereafter referred to as "process equipment."

Process No. 2 – Boilers A, B, and C

Table 5. lists the emissions units and control devices associated with Boilers A, B, and C.

Table 5.1 EMISSIONS UNITS, CONTROL DEVICE, AND DISCHARGE POINT INFORMATION

Emissions Unit ID No.	Emissions Unit Description	Control Device (if applicable)
Boiler A	6.3 MMBtu/hr, natural gas, constructed in 1996	None
Boiler B	6.3 MMBtu/hr, natural gas, constructed in 2009	None
Boiler C	3.4 MMBtu/hr, natural gas, constructed in 2007	None

The boilers provide steam to the facility. Two of the boilers have been previous exempted and have no applicable federal requirements.

5.2 Insignificant Emissions Units Based on Size or Production Rate

This section contains a list of units or activities that are insignificant on the basis of size or production rate. Units and activities listed in this section must be listed in the permit application. Table 5. lists the units and activities which have been determined to be insignificant on the basis of size or production rate. The regulatory authority for emissions units and activities that are insignificant on the basis of size or production rate is IDAPA 58.01.01.317.01.b.

Table 5.2 INSIGNIFICANT EMISSION UNITS AND REGULATORY AUTHORITY/JUSTIFICATION

Emissions Unit / Activity	Regulatory Authority / Justification
Cooling towers	IDAPA 58.01.01.317.01.b(i)(13)

5.3 Non-applicable Requirements for Which a Permit Shield is Requested

The facility has not requested a permit shield.

5.4 Emissions Inventory

Table 5. summarizes the emissions inventory for this major facility. All values are expressed in units of tons-per-year and represent the facility's potential to emit. Potential to emit is defined as the maximum capacity of a facility or stationary source to emit an air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or source to emit an air pollutant, including air pollution control equipment and restrictions on hour of operation or on the type or amount of material combusted, stored or processed shall be treated as part of its design if the limitation or the effect it would have on emission is state or federally enforceable.

The documentation provided by the applicant for the emissions inventory and emission factors is provided as Appendix A of this statement of basis.

Table 5.3 EMISSIONS INVENTORY - POTENTIAL TO EMIT (T/yr)

Source Description	$PM_{10}/PM_{2.5}$ T/yr	NO_x T/yr	SO_2 T/yr	CO T/yr	VOC T/yr	HAP T/yr
Processing Equipment	0.00	0.00	0.00	0.00	200.0	0.00
Boilers A, B, and C	0.52	0.04	6.87	5.77	0.38	0.01
Total Emissions	0.52	0.04	6.87	5.77	200.38	0.01

6. EMISSIONS LIMITS AND MRRR

This section contains the applicable requirements for this T1 facility.

This section is divided into the following subsections.

- Facility-Wide Conditions;
- Processing Equipment Emissions Limits;
- Tier I Operating Permit General Provisions.

MRRR

Monitoring, recordkeeping and reporting requirements (MRRR) are the means with which compliance with an applicable requirement is demonstrated. In this section, the applicable requirement (permit condition) is provided first followed by the MRRR. Should an applicable requirement not include sufficient MRRR to satisfy IDAPA 58.01.01.322.06, 07, and 08, then the permit must establish adequate monitoring, recordkeeping and reporting sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit (i.e. gap filling). In addition to the specific MRRR provided for each applicable requirement, generally applicable facility-wide conditions and

general provisions may also be provided, such as performance testing, reporting, and certification requirements.

The legal and factual basis for each permit condition is provided for in this document. If a permit condition was changed due to facility draft comments or public comments, an explanation of the changes is provided.

State Enforceability

An applicable requirement that is not required by the federal CAA and has not been approved by EPA as a SIP-approved requirement is identified as a "State-only" requirement and is enforceable only under state law. State-only requirements are not enforceable by the EPA or citizens under the CAA. State-only requirements are identified in the permit within the citation of the legal authority for the permit condition.

Federal Enforceability

Unless identified as "State-only," all applicable requirements, including MRRR, are state and federally enforceable. It should be noted that while a violation of a MRRR is a violation of the permit, it is not necessarily a violation of the underlying applicable requirement (e.g. emissions limit).

To minimize the length of this document, the following permit conditions and MRRR have been paraphrased. Refer to the permit for the complete requirements.

6.1 Facility-Wide Conditions

Permit Condition 3.1 - Fugitive Dust

All reasonable precautions shall be taken to prevent PM from becoming airborne in accordance with IDAPA 58.01.01.650-651.

[IDAPA 58.01.01.650-651, 3/30/2007]

MRRR (Permit Conditions 3.2 through 3.4)

- Monitor and maintain records of the frequency and the methods used to control fugitive dust emissions;
- Maintain records of all fugitive dust complaints received and the corrective action taken in response to the complaint; and
- Conduct facility-wide inspections of all sources of fugitive emissions. If any of the sources of fugitive dust are not being reasonably controlled, corrective action is required.

[IDAPA 58.01.01.322.06, 07, 08, 4/5/2000]

Permit Condition 3.5 - Odors

The permittee shall not allow, suffer, cause, or permit the emission of odorous gases, liquids, or solids to the atmosphere in such quantities as to cause air pollution.

[IDAPA 58.01.01.775-776 (State-only), 5/1/1994]

MRRR (Permit Condition 3.6)

- Maintain records of all odor complaints received and the corrective action taken in response to the complaint; and
- Take appropriate corrective action if the complaint has merit, and log the date and corrective action taken.

[IDAPA 58.01.01.322.06, 07 (State only), 5/1/1994]

Permit Condition 3.7 - Visible Emissions

The permittee shall not discharge any air pollutant to the atmosphere from any point of emission for a period or periods aggregating more than three minutes in any 60-minute period which is greater than 20% opacity as determined by procedures contained in IDAPA 58.01.01.625. These provisions shall not apply

when the presence of uncombined water, nitrogen oxides, and/or chlorine gas is the only reason for the failure of the emission to comply with the requirements of this section.

[IDAPA 58.01.01.625, 4/5/2000]

MRRR (Permit Condition 3.8 through 3.9)

- Conduct facility-wide inspections of all emissions units subject to the visible emissions standards (or rely on continuous opacity monitoring);
- If visible emissions are observed, take appropriate corrective action and/or perform a Method 9 opacity test;
- Maintain records of the results of each visible emissions inspection.

[IDAPA 58.01.01.322.06, 07, 5/1/1994]

Permit Conditions 3.10 through 3.14 - Excess Emissions

The permittee shall comply with the procedures and requirements of IDAPA 58.01.01.130-136 for excess emissions. The provisions of IDAPA 58.01.01.130-136 shall govern in the event of conflicts between the excess emissions facility wide conditions and the regulations of IDAPA 58.01.01.130-136.

[IDAPA 58.01.01.130-136, 4/5/2000]

MRRR (Permit Conditions 3.11 through 3.14)

- Take appropriate action to correct, reduce, and minimize emissions from excess emissions events;
- Prohibit excess emissions during any DEQ Atmospheric Stagnation Advisory or Wood Stove Curtailment Advisory; and
- Notify DEQ of each excess emissions events as soon as possible, including information regarding upset, breakdown, or safety events.
- Submit a report for each excess emissions event to DEQ; and
- Maintain records of each excess emissions event.

[IDAPA 58.01.01.130-136, 4/5/2000]

Permit Condition 3.15 – Fuel-Burning Equipment PM Standards

The permittee shall not discharge to the atmosphere from any fuel-burning equipment PM in excess of 0.015 gr/dscf of effluent gas corrected to 3% oxygen by volume for gas, 0.050 gr/dscf of effluent gas corrected to 3% oxygen by volume for liquid, 0.050 gr/dscf of effluent gas corrected to 8% oxygen by volume for coal, and 0.080 gr/dscf of effluent gas corrected to 8% oxygen by volume for wood products.

[IDAPA 58.01.01.676-677, 5/1/1994]

MRRR

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

Permit Condition 3.16 - Sulfur Content Limits

The permittee shall not sell, distribute, use, or make available for use any of the following:

- Distillate fuel oil containing more than the following percentages of sulfur:
  - ASTM Grade 1 fuel oil, 0.3% by weight.
  - ASTM Grade 2 fuel oil, 0.5% by weight.
- Coal containing greater than 1.0% sulfur by weight.
- DEQ may approve an exemption from these fuel sulfur content requirements (IDAPA 58.01.01.725.01 725.04) if the permittee demonstrates that, through control measures or other means,

SO2 emissions are equal to or less than those resulting from the combustion of fuels complying with these limitations.

[IDAPA 58.01.01.725, 3/29/2010]

MRRR - (Permit Condition 3.17)

The permittee shall maintain documentation of supplier verification of fuel sulfur content on an as received basis.

[IDAPA 58.01.01.322.06, 5/1/1994]

Permit Condition 3.18 - Open Burning

The permittee shall comply with the *Rules for Control of Open Burning*, IDAPA 58.01.01.600-623.

[IDAPA 58.01.01.600-623, 5/08/2009]

MRRR

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

Permit Condition 3.19 - Asbestos

The permittee shall comply with all applicable requirements of 40 CFR 61, Subpart M—"National Emission Standard for Asbestos."

[40 CFR 61, Subpart M]

MRRR

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

Permit Condition 3.20 - Accidental Release Prevention

(a)

An owner or operator of a stationary source that has more than a threshold quantity of a regulated substance in a process, as determined under 40 CFR 68.115, shall comply with the requirements of the Chemical Accident Prevention Provisions at 40 CFR 68 no later than the latest of the following dates:

- Three years after the date on which a regulated substance present above a threshold quantity is first listed under 40 CFR 68.130.
- The date on which a regulated substance is first present above a threshold quantity in a process.

[40 CFR 68.10 (a)]

MRRR

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

Permit Condition 3.21 - Recycling and Emissions Reductions

The permittee shall comply with applicable standards for recycling and emissions reduction of refrigerants and their substitutes pursuant to 40 CFR 82, Subpart F, Recycling and Emissions Reduction.

[40 CFR 82, Subpart F]

MRRR

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

Permit Condition 3.22 - Monitoring and Recordkeeping

The permittee shall maintain sufficient records to assure compliance with all of the terms and conditions of this operating permit. Records of monitoring information shall include, but not be limited to, the following: (a) the date, place, and times of sampling or measurements; (b) the date analyses were performed; (c) the company or entity that performed the analyses; (d) the analytical techniques or methods used; (e) the results of such analyses; and (f) the operating conditions existing at the time of sampling or measurement. All monitoring records and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes, but is not limited to, all calibration and maintenance records, all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. All records required to be maintained by this permit shall be made available in either hard copy or electronic format to DEQ representatives upon request.

[IDAPA 58.01.01.322.06, 07, 5/1/1994]

MRRR

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

Permit Conditions 3.23 through 3.26 - Performance Testing

If performance testing is required, the permittee shall provide notice of intent to test to DEQ at least 15 days prior to the scheduled test or shorter time period as provided in a permit, order, consent decree, or by DEQ approval. DEQ may, at its option, have an observer present at any emissions tests conducted on a source. DEQ requests such testing not be performed on weekends or state holidays.

All testing shall be conducted in accordance with the procedures in IDAPA 58.01.01.157. Without prior DEQ approval, any alternative testing is conducted solely at the permittee's risk. If the permittee fails to obtain prior written approval by DEQ for any testing deviations, DEQ may determine that the testing does not satisfy the testing requirements. Therefore, prior to conducting any performance test, the permittee is encouraged to submit in writing to DEQ, at least 30 days in advance, the following for approval:

- The type of method to be used.
- Any extenuating or unusual circumstances regarding the proposed test.
- The proposed schedule for conducting and reporting the test.

[IDAPA 58.01.01.157, 4/5/00; IDAPA 58.01.01.322.06, 08.a, 09, 5/1/1994]

MRRR (Permit Conditions 3.24 and 3.26)

The permittee shall submit compliance test report(s) to DEQ following testing.

[IDAPA 58.01.01.157, 4/5/00; IDAPA 58.01.01.322.06, 08.a, 09, 5/1/1994]

Permit Condition 3.27 - Reports and Certifications

This permit condition establishes generally applicable MRRR for submittal of reports, certifications, and notifications to DEQ and/or EPA as specified.

[IDAPA 58.01.01.322.08, 11, 5/1/1994]

MRRR

No specific monitoring is required for this facility-wide condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

6.2 Emissions Unit-Specific Emissions Limits and MRRR

Processing Equipment

Permit Condition 4.1

PC 4.1 includes a daily and annual VOC emissions limit. They are taken from the underlying PTC No. P-2007.0228 issued 02/07/2019. They are applicable requirements for the Tier I operating permit in accordance with IDAPA 58.01.01.008.03.

MRRR - (Permit Conditions 4.2 and 4.5)

PC 4.2 includes the equations needed to determine compliance with the VOC emissions limits. PC 4.5 includes the monitoring, recordkeeping, and reporting requirements.

Permit Condition 4.3

PC 4.3 includes a daily and annual throughput limit based on pentane content of the EPS beads.

MRRR – (Permit Condition 4.5)

PC 4.5 includes the monitoring, recordkeeping, and reporting requirements for pentane content in the EPS beads.

Permit Condition 4.4

PC 4.4 includes a limit on the weight percentage pentane content limit in the EPS beads.

MRRR – (Permit Condition 4.5)

PC 4.5 includes the monitoring, recordkeeping, and reporting requirements for weight percentage pentane content in the EPS beads.

6.3 General Provisions

Unless expressly stated, there are no MRRR for the general provisions.

General Compliance, Duty to Comply

The permittee must comply with the terms and conditions of the permit.

[IDAPA 58.01.01.322.15.a, 5/1/1994; 40 CFR 70.6(a)(6)(i)]

General Compliance, Need to Halt or Reduce Activity Not a Defense

The permittee cannot use the fact that it would have been necessary to halt or reduce an activity as a defense in an enforcement action.

[IDAPA 58.01.01.322.15.b, 5/1/1994; 40 CFR 70.6(a)(6)(ii)]

General Compliance, Duty to Supplement or Correct Application

The permittee must promptly submit such supplementary facts or corrected information upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application. The permittee must also provide information as necessary to address any new requirements that become applicable after the date a complete application has been filed but prior to the release of a draft permit.

[IDAPA 58.01.01.315.01, 5/1/1994; 40 CFR 70.5(b)]

Reopening, Additional Requirements, Material Mistakes, Etc.

This term lists the instances when the permit must be reopened and revised, including times when additional requirements become applicable, when the permit contains mistakes, or when revision or revocation is necessary to assure compliance with applicable requirements.

[IDAPA 58.01.01.322.15.c, 5/1/1994; IDAPA 58.01.01.386, 3/19/1999; 40 CFR 70.7(f)(1), (2); 40 CFR 70.6(a)(6)(iii)]

Reopening, Permitting Actions

This term discusses modification, revocation, reopening, and/or reissuance of the permit for cause. If the permittee files a request to modify, revoke, reissue, or terminate the permit, the request does not stay any permit condition, nor does notification of planned changes or anticipated noncompliance.

[IDAPA 58.01.01.322.15.d, 5/1/1994; 40 CFR 70.6(a)(6)(iii)]

Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege.

[IDAPA 58.01.01.322.15.e, 5/1/1994; 40 CFR 70.6(a)(6)(iv)]

Information Requests

The permittee must furnish, within a reasonable time to DEQ, any information, including records required by the permit, that is requested in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit.

[Idaho Code §39-108; IDAPA 58.01.01.122, 4/5/2000; IDAPA 58.01.01.322.15.f, 4/5/2000; 40 CFR 70.6(a)(6)(v)]

Information Requests, Confidential Business Information

Upon request, the permittee must furnish to DEQ copies of records required to be kept by this permit. For information claimed to be confidential, the permittee may furnish such records along with a claim of confidentiality in accordance with Idaho Code §9-342A and applicable implementing regulations including IDAPA 58.01.01.128.

[IDAPA 58.01.01.322.15.g, 5/1/1994; IDAPA 58.01.01.128, 4/5/00; 40 CFR 70.6(a)(6)(v)]

Severability

If any provision of the permit is held to be invalid, all unaffected provisions of the permit will remain in effect and enforceable.

[IDAPA 58.01.01.322.15.h, 5/1/1994; 40 CFR 70.6(a)(5)]

Changes Requiring Permit Revision or Notice

The permittee may not commence construction or modification of any stationary source, facility, major facility, or major modification without first obtaining all necessary permits to construct or an approval under IDAPA 58.01.01.213, or complying with IDAPA 58.01.01.220 through 223. The permittee must comply with IDAPA 58.01.01.380 through 386 as applicable.

[IDAPA 58.01.01.200-223, 4/2/2008; IDAPA 58.01.01.322.15.i, 3/19/1999; IDAPA 58.01.01.380-386, 7/1/2002; 40 CFR 70.4(b)(12), (14), (15), and 70.7(d), (e)]

Changes that are not addressed or prohibited by the Tier I operating permit require a Tier I operating permit revision if such changes are subject to any requirement under Title IV of the CAA, 42 U.S.C. Section 7651 through 7651c, or are modifications under Title I of the CAA, 42 U.S.C. Section 7401 through 7515. Administrative amendments (IDAPA 58.01.01.381), minor permit modifications (IDAPA 58.01.01. 383), and significant permit modifications (IDAPA 58.01.01.382) require a revision to the Tier I operating permit. IDAPA 58.01.01.502(b)(10) changes are authorized in accordance with IDAPA 58.01.01.384. Off permit changes and required notice are authorized in accordance with IDAPA 58.01.01.385.

[IDAPA 58.01.01.381-385, 7/1/2002; IDAPA 58.01.01.209.05, 4/11/2006; 40 CFR 70.4(b)(14) and (15)]

Federal and State Enforceability

All permit conditions are federally enforceable unless specified in the permit as a state or local only requirement. State and local only requirements are not required under the CAA and are not enforceable by EPA or by citizens.

[IDAPA 58.01.01.322.15.j, 5/1/1994; IDAPA 58.01.01.322.15.k, 3/23/1998; Idaho Code §39-108; 40 CFR 70.6(b)(1), (2)]

Inspection and Entry

Upon presentation of credentials, the facility shall allow DEQ or an authorized representative of DEQ to do the following:

- Enter upon the permittee's premises where a Tier I source is located or emissions related activity is conducted, or where records are kept under conditions of this permit;
- Have access to and copy, at reasonable times, any records that are kept under the conditions of this permit;
- Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
- As authorized by the Idaho Environmental Protection and Health Act, sample or monitor, at reasonable times, substances or parameters for the purpose of determining or ensuring compliance with this permit or applicable requirements.

[Idaho Code §39-108; IDAPA 58.01.01.322.15.l, 5/1/1994; 40 CFR 70.6(c)(2)]

New Applicable Requirements

The permittee must continue to comply with all applicable requirements and must comply with new requirements on a timely basis.

[IDAPA 58.01.01.322.10, 4/5/2000; IDAPA 58.01.01.314.10.a.ii, 5/1/1994; 40 CFR 70.6(c)(3) citing 70.5(c)(8)]

Fees

The owner or operator of a Tier I source shall pay annual registration fees to DEQ in accordance with IDAPA 58.01.01.387 through IDAPA 58.01.01.397.

[IDAPA 58.01.01.387, 4/2/2003; 40 CFR 70.6(a)(7)]

Certification

All documents submitted to DEQ shall be certified in accordance with IDAPA 58.01.01.123 and comply with IDAPA 58.01.01.124.

[IDAPA 58.01.01.322.15.o, 5/1/1994; 40 CFR 70.6(a)(3)(iii)(A); 40 CFR 70.5(d)]

Renewal

The permittee shall submit an application to DEQ for a renewal of this permit at least six months before, but no earlier than 18 months before, the expiration date of this operating permit. To ensure that the term of the operating permit does not expire before the permit is renewed, the owner or operator is encouraged to submit a renewal application nine months prior to the date of expiration.

[IDAPA 58.01.01.313.03, 4/5/2000; 40 CFR 70.5(a)(1)(iii)]

If a timely and complete application for a Tier I operating permit renewal is submitted, but DEQ fails to issue or deny the renewal permit before the end of the term of this permit, then all the terms and conditions of this permit including any permit shield that may have been granted pursuant to IDAPA 58.01.01.325 shall remain in effect until the renewal permit has been issued or denied.

[IDAPA 58.01.01.322.15.p, 5/1/1994; 40 CFR 70.7(b)]

Permit Shield

Compliance with the terms and conditions of the Tier I operating permit, including those applicable to all alternative operating scenarios and trading scenarios, shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that:

- Such applicable requirements are included and are specifically identified in the Tier I operating permit; or
    - DEQ has determined that other requirements specifically identified are not applicable and all of the criteria set forth in IDAPA 58.01.01.325.01(b) have been met.

- The permit shield shall apply to permit revisions made in accordance with IDAPA 58.01.01.381.04 (administrative amendments incorporating the terms of a permit to construct), IDAPA 58.01.01.382.04 (significant modifications), and IDAPA 58.01.01.384.03 (trading under an emissions cap).
- Nothing in this permit shall alter or affect the following:
  - Any administrative authority or judicial remedy available to prevent or terminate emergencies or imminent and substantial dangers;
  - The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
  - The applicable requirements of the acid rain program, consistent with 42 U.S.C. Section 7651(g)(a); and
  - The ability of EPA to obtain information from a source pursuant to Section 114 of the CAA; or the ability of DEQ to obtain information from a source pursuant to Idaho Code §39-108 and IDAPA 58.01.01.122.

[Idaho Code §39-108 and 112; IDAPA 58.01.01.122, 4/5/2000; IDAPA 58.01.01.322.15.m, 325.01, 5/1/1994; IDAPA 58.01.01.325.02, 3/19/1999; IDAPA 58.01.01.381.04, 382.04, 383.05, 384.03, 385.03, 3/19/1999; 40 CFR 70.6(f)]

Compliance Schedule and Progress Reports

- For each applicable requirement for which the source is not in compliance, the permittee shall comply with the compliance schedule incorporated in this permit.
- For each applicable requirement that will become effective during the term of this permit and that provides a detailed compliance schedule, the permittee shall comply with such requirements in accordance with the detailed schedule.
- For each applicable requirement that will become effective during the term of this permit that does not contain a more detailed schedule, the permittee shall meet such requirements on a timely basis.
- For each applicable requirement with which the permittee is in compliance, the permittee shall continue to comply with such requirements.

[IDAPA 58.01.01.322.10, 4/5/2000; IDAPA 58.01.01.314.9, 5/1/1994; IDAPA 58.01.01.314.10, 4/5/2000; 40 CFR 70.6(c)(3) and (4)]

Periodic Compliance Certification

The permittee shall submit compliance certifications during the term of the permit for each emissions unit to DEQ and the EPA as specified.

- Compliance certifications for all emissions units shall be submitted annually unless otherwise specified; and
- All original compliance certifications shall be submitted to DEQ and a copy of all compliance certifications shall be submitted to the EPA.

[IDAPA 58.01.01.322.11, 4/6/2005; 40 CFR 70.6(c)(5)(iii) as amended, 62 Fed. Reg. 54900, 54946 (10/22/1997); 40 CFR 70.6(c)(5)(iv)]

False Statements

The permittee may not make any false statement, representation, or certification in any form, notice, or report required under this permit, or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.125, 3/23/1998]

No Tampering

The permittee may not render inaccurate any monitoring device or method required under this permit or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.126, 3/23/1998]

Semiannual Monitoring Reports.

In addition to all applicable reporting requirements identified in this permit, the permittee shall submit reports of any required monitoring at least every six months as specified.

[IDAPA 58.01.01.322.15.q, 3/23/1998; IDAPA 58.01.01.322.08.c, 4/5/2000; 40 CFR 70.6(a)(3)(iii)]

Reporting Deviations and Excess Emissions

Each and every applicable requirement, including MRRR, is subject to prompt deviation reporting. Deviations due to excess emissions must be reported in accordance Sections 130-136. All instances of deviation from Tier I operating permit requirements must be included in the deviation reports. The reports must describe the probable cause of the deviation and any corrective action or preventative measures taken. Deviation reports must be submitted at least every six months unless the permit specifies a different time period as required by IDAPA 58.01.01.322.08.c. Examples of deviations include, but are not limited to, the following:

- Any situation in which an emissions unit fails to meet a permit term or condition.
- Emission control device does not meet a required operating condition.
- Observations or collected data that demonstrate noncompliance with an emissions standard.
- Failure to comply with a permit term that requires a report.

[IDAPA 58.01.01.322.15.q, 3/23/1998; IDAPA 58.01.01.135, 4/11/2006; 40 CFR 70.6(a)(3)(iii)]

Permit Revision Not Required, Emissions Trading

No permit revision will be required, under any approved, economic incentives, marketable permits, emissions trading, and other similar programs or processes, for changes that are provided for in the permit.

[IDAPA 58.01.01.322.05.b, 4/5/2000; 40 CFR 70.6(a)(8)]

Emergency

In accordance with IDAPA 58.01.01.332, an "emergency" as defined in IDAPA 58.01.01.008, constitutes an affirmative defense to an action brought for noncompliance with such technology-based emissions limitation if the conditions of IDAPA 58.01.01.332.02 are met.

[IDAPA 58.01.01.332.01, 4/5/2000; 40 CFR 70.6(g)]

7. REGULATORY REVIEW

7.1 Attainment Designation (40 CFR 81.313)

The facility is located in Kootenai which is designated as attainment or unclassifiable for $PM_{10,}$ $PM_{2.5}$, CO, NO_2, SO_X, and Ozone. Reference 40 CFR 81.313.

7.2 Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70)

This facility is major for VOC. Therefore, a Title V operating permit is required.

7.3 PSD Classification (40 CFR 52.21)

The facility is not a major stationary source as defined in 40 CFR 52.21(b)(1), nor is it undergoing any physical change at a stationary source not otherwise qualifying under paragraph 40 CFR 52.21(b)(1) as a major stationary source, that would constitute a major stationary source by itself as defined in 40 CFR 52.

The facility is not a designated facility as defined in 40 CFR 52.21(b)(1)(i)(a), and does not have facility-wide emissions of any criteria pollutant that exceed 250 T/yr.

7.4 NSPS Applicability (40 CFR 60)

Foam Molder's steam boilers are all less than 10 MMBtu/hr which is the applicability limit for steam-generating units per 40 CFR 60 Subpart Dc. Therefore, 40 CFR 60 NSPS provisions do not apply to this facility.

7.5 NESHAP Applicability (40 CFR 61)

The 40 CFR 61 NESHAP provisions do not apply to this facility.

7.6 MACT Applicability (40 CFR 63)

The 40 CFR 63 NESHAP provisions do not apply to this facility.

7.7 CAM Applicability (40 CFR 64)

There is no pollution control equipment to make this rule applicable to this facility. Emissions are not controlled from the processing equipment or the boilers.

7.8 Acid Rain Permit (40 CFR 72-75)

The acid rain provisions do not apply to this facility.

8. PUBLIC COMMENT

As required by IDAPA 58.01.01.364, a public comment period was made available to the public from October 19, 2020 to November 18, 2020. During this time, comments were not submitted in response to DEQ's proposed action.

9. EPA REVIEW OF PROPOSED PERMIT

As required by IDAPA 58.01.01.366, DEQ provided the proposed permit to EPA Region 10 for its review and comment on November 20, 2020 via the online the Electronic Permit System (EPS). On November 23, 2020, EPA Region 10 responded to DEQ via e-mail indicating that the permit was not reviewed and there was no objection to issuance.

Appendix A - Emissions Inventory

Potential to Emit

Facility: FMI-EPS (Post Falls

Facility ID: 055-00047

Project: Modify Existing PTC to emit 200 TPY of VOC (Pentane) and modify current emissions rate

Uncontrolled Emissions – Pentane (lbs / 24 hours)

Uncontrolled Pentane emissions

Max Uncontrolled Pentane per day = $EPS_{max\ d}$ * R * $P\%_{max}$

= 213,000 lbs per day * 0.77 * .065

Max Potential to Emit (24 hours) = **10,660.65 lbs pentane per day**

Max Potential to Emit (hour) = 10,660.65 lbs pentane per day / 24 hours per day

Max Potential to Emit (hour) = **444.19 lbs pentane per hour**

Where

$EPS_{max\ d}$ = Maximum Uncontrolled EPS Throughput per day

= 8,900 lbs per hour * 24 hours per day

= 213,600 lbs per day

R = Emission Rate of Pentane

= 0.77 (Corporation, URS, 2009)

$P\%_{max}$ = Maximum Pentane Content by percentage of EPS

= 6.5% (Corporation, URS, 2009)

Controlled Pentane Emissions = EPS_{limit} * R * P%

$EPS_{limit\ lbs}$ = P / (R * P%)

= 2,856 / (0.77 * P%)

Where

P = Pentane Restrictions per 24 hours of 2,856 lbs

P% = Actual Pentane content by % of material processed

9456 N. McGuire Rd. Post Falls, Id. 83854 · 888-777-8485 · 208-777-8485 · Fax: 208-777-9527

280 Rose St. Jerome, Id. 83338 · 877-634-1307 · 208-324-5998 · Fax: 208-324-8240

Uncontrolled Emissions – VOC (tons per year)

Max Uncontrolled Pentane year	= $EPS_{max\ y}$ * R * $VOC\%_{max}$ / 2,000 lbs per ton
	= 77,964,000 lbs per day * 0.77 * .065 / 2,000 lbs per ton
Max Potential to Emit (year)	**= 1951 tons per year**
Where	
$EPS_{max\ y}$	= Maximum Uncontrolled EPS Throughput per year
	= 8,900 lbs per hour * 24 hours per day * 365 days per year
	= 77,964,000 lbs per year
R	= Emission Rate of Pentane
	= 0.77 (Corporation, URS, 2009)
$VOC\%_{max}$	= Maximum Pentane Content by percentage of EPS
	= 6.5% (Corporation, URS, 2009)

Controlled VOC Emissions	**= $EPS_{limit\ lbs}$ * R * VOC%**
$EPS_{limit\ lbs}$	**= VOC_{limit} / (R * VOC%)**
	= 200 voc tons per year * 2000 lbs per ton / (0.77 * VOC%)
Where	
VOC_{limit}	= 200 tons per year
VOC%	= Actual VOC content by % of material processed

Bibliography

Corporation, URS. (2009). *Pentane Emissions Profile for Expanded Polystyrene Foam Manufacturing Industry.* Austin, TX: URS Corporation.

Potential To Emit Calculator for Boilers and Emergency Engines

7/1/2016

Emissions from Auxiliary Heaters - Criteria Pollutants

16 Heat Input (MMBtu/hr)

Purple values are pulled from other worksheet
Blue values are results

Worst Case PTE (ton/yr)	Pollutant									
	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO	VOC	CO2	Single HAP	Combined HAP
	0.52	**0.52**	**0.52**	**0.04**	**6.87**	**5.77**	**0.38**	**8244.71**	**0.01**	**0.01**

Fuel Type: **Natural Gas** Used: Y

	Pollutant									
	PM	PM_{10}[2]	$PM_{2.5}$	SO_2	NO_X	CO	VOC	CO2	Single HAP	Combined HAP
Emission Factor[1] (lb/MMSCF)	7.6	7.6	7.6	0.6	100	84	5.5	120000	0.075	0.083
PTE (ton/yr)	**0.52**	**0.52**	**0.52**	**0.04**	**6.87**	**5.77**	**0.38**	**8244.71**	**0.01**	**0.01**

Note:
1. Emission factors are from AP-42, Chapter 1.4, Tables 1.4-1 and 1.4-2 (updated 07/98).
2. Assumed PM and $PM_{2.5}$ emissions are equal to PM_{10} emissions.
3. If in extreme or severe ozone nonattainment, NOx emission factor reflects NOx limit in general permit.

Methodology
PTE (ton/yr) = Heat Input (MMBtu/hr) x 1 MMSCF/1,020 MMBtu x EF (lb/MMSCF) x 8760 hr/yr x 1 ton/2000 lb

Fuel Type: **LPG** Used: N Sulfur Content: 0.00 %

	Pollutant									
	PM	PM_{10}[2]	$PM_{2.5}$	SO_2	NO_X	CO	VOC	CO2	Single HAP	Combined HAP
Emission Factor[1] (lbs/kgal)	0.7	0.7	0.7	0	13	7.5	1.0	12500	0.075	0.083
PTE (ton/yr)	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Note:
1. Emission factors are from AP-42, Chapter 1.5, Tables 1.5 (updated 07/08).
2. Assumed PM and $PM_{2.5}$ emissions are equal to PM_{10} emissions.

Methodology
PTE (ton/yr) = Heat Input (MMBtu/hr) x 1 kgal/91.5 MMBtu x EF (lb/kgal) x 8760 hr/yr x 1 ton/2000 lb

Fuel Type: **Liquid Fuel** Used: N Sulfur Content: 0.0015 %

	Pollutant									
	PM^2	PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO	VOC	CO2	Single HAP	Combined HAP
Emission Factor[1] (lb/kgal)	2.0	3.3	2.55	0.213	20	5.0	0.34	22300	0.033	0.04035
PTE (ton/yr)	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Note:
1. Emission factors are from AP-42, Chapter 1.3, Tables 1.3-1, 1.3-2, and 1.3-3 for Fuel Oil Combustion (updated 05/10).
2. Assume PM emissions are equal to PM10 emissions.

Methodology
PTE (ton/yr) = Heat Input (MMBtu/hr) x 1 kgal/140 MMBtu x EF (lb/kgal) x 8760 hr/yr x 1 ton/2000 lb

Appendix B - Facility Comments on Draft Permit

The following comments were received from the facility on the DRAFT permit on October 13, 2020 prior to the Public Comment period:

Facility Comment: Section 3.1 thru 3.4 Fugitive Dust, the processing of EPS Resin does not create any dust at all. Could this section, MRRR be considered not applicable?

DEQ Response: Permit Conditions 3.1 through 3.4 are facility wide conditions pertaining to the control of fugitive dust. These are conditions that are present in every Tier I Operating Permit issued in the State of Idaho.

Facility Comment: Section 3.7 thru 3.9 Visible Emissions, any visible emissions that are produced is through steam exhaust or uncombined water which would be the sole cause. Could this section and MRRR be considered not applicable?

DEQ Response: Permit Conditions 3.7 through 3.9 are facility wide conditions pertaining to visible emissions. These are conditions that are present in every Tier I Operating Permit issued in the State of Idaho.

Facility Comment: Section 3.16 thru 3.17 Sulfur Content, per previous permit condition (P-2007.0228) FMI is limited to using only Natural Gas in our boilers. This section should now be non-applicable.

DEQ Response: Permit Conditions 3.16 and 3.17 are facility wide conditions pertaining to the sulfur content in the fuel. DEQ acknowledges that the three boilers in P-2007.0228 are found in the regulated sources table and listed as natural gas boilers. The sulfur content permit conditions pertain to any equipment facility wide and are present in every Tier I Operating Permit issued in the State of Idaho.

Facility Comment: Statement of Basis Section 3.2, 2nd paragraph, the description of pentane emissions does not correlate with evidence submitted via Pentane Emissions Profile for Expanded Polystyrene Foam Manufacturing Industry. Austin, TX: URS Corporation. Specifically the final sentence in stating that the final 15% of pentane remains in the product does not correlate with our permit in which the factor of emittance is 77%. (If this is not a public document than I don't think this should be a problem).

DEQ Response: The facility description has been updated to match the application which correctly describes the pentane emissions.