Statement of Basis

Permit to Construct No. P-2016.0046
Project ID 61762

FMI – EPS, LLC
Jerome, Idaho

Facility ID 053-00005

Final

August 23 2016
Tom Burnham
Permit Writer

The purpose of this Statement of Basis is to satisfy the requirements of IDAPA 58.01.01.et seq, Rules for the Control of Air Pollution in Idaho, for issuing air permits.
ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

acfm  actual cubic feet per minute
AFS   AIRS Facility Subsystem
AIRS  Aerometric Information Retrieval System
Btu   British thermal units
CAA   Clean Air Act
CO    carbon monoxide
DEQ   Department of Environmental Quality
dscf  dry standard cubic feet
EL    screening emission levels
EPA   U.S. Environmental Protection Agency
ft    foot (feet)
HAP   hazardous air pollutants
IDAPA a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
lbs   pounds
lb/hr  pounds per hour
MACT  Maximum Achievable Control Technology
MMBtu million British thermal units
NESHAP National Emission Standards for Hazardous Air Pollutants
NO₂   nitrogen dioxide
NOₓ   nitrogen oxides
NSPS  New Source Performance Standards
PC    Permit condition
PM    particulate matter
PM₂.₅ particulate matter with an aerodynamic diameter less than or equal to 2.5 micrometers
PM₁₀  particulate matter with an aerodynamic diameter less than or equal to 10 micrometers
PSD   Prevention of Significant Deterioration
PTC   permit to construct
PTE   potential to emit
Rules Rules for the Control of Air Pollution in Idaho
scf   standard cubic feet
SCL   significant contribution limits
SO₂   sulfur dioxide
SOₓ   sulfur oxides
T/yr  tons per consecutive 12 calendar month period
T/mo  tons per month
T2    Tier II operating permit
TAP   toxic air pollutants
VOC   volatile organic compounds
FACILITY INFORMATION

Description

FMI – EPS, LLC produces expanded polystyrene (EPS) bead products. 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 6 to 48 hours, to allow the prepuff to stabilize. The material is then transferred into molds 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.

Volatile organic compounds (VOC) emissions, as pentane, are emitted from the processes and equipment referenced above, the above referenced equipment is hereafter referred to as "process equipment".

Permitting History

The following 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).

June 8, 2006 P-060406 issued to convert T2-030407 to T2/PTC Combo (A, but will be S upon issuance of this permit)
June 21, 2004 T2-030407 issued for modification to add new equipment. P-053005 permit number replaced with new numbering system (S)
September 22, 2000 Initial T2 issued for emissions from EPS process (S)

Application Scope

The facility has requested to convert the existing T2/PTC Combo operating permit to a permit to construct. The T2/PTC Combo operating permit is being converted to a permit to construct in accordance with the DEQ's Standard Operating Procedure for converting Tier II operating permits to permits to construct.

No other modifications were requested by the facility.

Application Chronology

July 15, 2016 DEQ received an application and an application fee.
July 22, 2016 DEQ determined that the application was complete.
August 2, 2016 DEQ made available the draft permit and statement of basis for peer and regional office review.
August 8, 2016 DEQ made available the draft permit and statement of basis for applicant review.
August 17, 2016 DEQ received the permit processing fee.
August 23, 2016 DEQ issued the final permit and statement of basis.
TECHNICAL ANALYSIS

Emissions Units and Control Equipment

<table>
<thead>
<tr>
<th>Source</th>
<th>Control Equipment</th>
<th>Emissions Point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiler A</td>
<td>None</td>
<td>Boiler stack</td>
</tr>
<tr>
<td>Manufacturer: Superior</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model: 6-750</td>
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<td></td>
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<tr>
<td>Construction date: 1996</td>
<td></td>
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<tr>
<td>Rated heat capacity: 6.3 MMBtu/hr</td>
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<tr>
<td>Burner type: Horizontally fired</td>
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<tr>
<td>Stack diameter: 14 inches</td>
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<tr>
<td>Stack height: 32 feet</td>
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<tr>
<td>Fuel: Natural gas</td>
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</tr>
<tr>
<td>Processing equipment</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Emissions Inventories

Emission inventory was developed for the EPS Expansion Process and the natural gas-fired boiler and is contained in the T2-030407 Statement of Basis dated May 7, 2004. For this permitting action of converting the permit from the T2/PTC combo permit to a PTC, toxic, hazardous, and criteria emissions have not changed.

Regulatory Review

There are no newly applicable state or federal requirements. The Regulatory Review provided in the May 7, 2004 T2-030407 Statement of Basis that supports issuance of the Tier II operating permit does not change as a result of converting this T2/PTC combo permit to a PTC and is not repeated in this statement of basis.

The T2/PTC combo permit is being converted to a PTC in accordance with the DEQ’s Standard Operating Procedure for converting Tier II operating permits to permits to construct.

Ambient Air Quality Impact Analyses

No modeling is required for this permit because there is no emissions increase.

Permit Conditions Review

This section describes the permit conditions for those permit conditions that have been added, revised, modified or deleted as a result of this permitting action.

Permit Condition 3.7

The requirement for calculating actual throughput of beads was change from “daily and annually” to “daily and monthly”.

There are no new permit conditions resulting from this permitting action, and “SOP – Existing T2 to PTC Conversion” internal guidance document was followed. General Provisions were updated as a result of this permitting action.

PUBLIC REVIEW

Because this permitting action does not authorize an increase in emissions, an opportunity for public comment period was not required or provided in accordance with IDAPA 58.01.01.209.04.
APPENDIX A – PROCESSING FEE

Company: FMI - EPS
Address: 280 Rose St
City: Jerome
State: ID
Zip Code: 83338
Facility Contact: Chris Hell
Title: General Manager
AIRS No.: 053-00005

- Does this facility qualify for a general permit (i.e. concrete batch plant, hot-mix asphalt plant)? Y/N
- Did this permit require engineering analysis? Y/N
- Is this a PSD permit Y/N (IDAPA 58.01.01.205.04)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Annual Emissions Increase (T/yr)</th>
<th>Annual Emissions Reduction (T/yr)</th>
<th>Annual Emissions Change (T/yr)</th>
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<tr>
<td>NOx</td>
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<tr>
<td>SO2</td>
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<td>CO</td>
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<td>PM10</td>
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<tr>
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<td>TAPS/HAPS</td>
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<td>Total</td>
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Fee Due $ 250.00