

Statement of Basis

**Permit to Construct No. P-2017.0005
Project ID 61840**

**IDAHO MINERALS LLC
Malad, Idaho**

Facility ID 071-00008

Final

February 17, 2017

**Tom Burnham
Permit Writer**

LB

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.

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ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
CAA	Clean Air Act
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
gr/dscf	grains (1 lb = 7,000 grains) per dry standard cubic feet
EPA	U.S. Environmental Protection Agency
HAP	Hazardous Air Pollutant
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
IM	Idaho Minerals, LLC
lb/hr	pounds per hour
MACT	Maximum Achievable Control Technology
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
NSPS	New Source Performance Standards
PC	permit condition
PM	particulate matter
PM ₁₀	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
PSD	Prevention of Significant Deterioration
PTC	permit to construct
Rules	Rules for the Control of Air Pollution in Idaho
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SM	Synthetic Minor
SO ₂	sulfur dioxide
SO _x	sulfur oxides
TAP	Toxic Air Pollutant
T/yr	tons per year
VOC	volatile organic compound

FACILITY INFORMATION

Description

Idaho Minerals located in Malad City, Idaho, is a perlite expanding plant manufacturing horticultural medium, insulating wall fill, cryogenic insulation, and other expanded perlite products. The plant consists of crude ore unloading equipment, ore storage silos, perlite expanding equipment, warehouse, and offices.

Perlite ore is delivered to the facility by covered trucks that unload the material into a concrete hopper. The ore flows from the hopper to the No. 1 unloading conveyor then to the No. 2 unloading conveyor which is a traveling belt so it can be moved on tracks to position the discharge over the proper silo. Crude ore is stored in six steel silos. The No. 5 reclaim conveyor is fed by the silo discharge conveyor and delivers ore to the No. 6 reclaim conveyor which leads to the expander surge bin. The expander vibratory feeder receives the ore from the surge bin and delivers it to the elevator. The elevator carries the ore to the ore distribution pipes at the top of the expander which is fired with propane gas and maintains a temperature of approximately 1,700 °F. The flame softens the ore and the internal moisture expands the ore 10-20 times the original size. The expanded perlite is cooled by air and collected in the primary product collector which is a cyclone that separates the expanded perlite from the cooler separator which acts as a separator of the fines from the coarse aggregates. The coarse aggregates are collected in the coarse product packer. The fines are carried to the baghouse which separates the perlite fines from the air stream which is discharged to the atmosphere via the expander baghouse. Fine product passes through a 10” rotary valve then to the fine product packer. Expander baghouse fines are collected in the baghouse fines packer via an 8” rotary airlock.

Permitting History

This Tier II operating permit is a revision of an existing Tier II operating permit. 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).

February 20, 1996	Tier II Operating Permit No. 071-00008, initial permit for National Perlite Products Company, Permit status (S)
September 20, 1999	IM was named as the new owner of the National Perlite Products Company located in Malad City, Idaho.
August 25, 2003	Tier II Operating Permit No. T2-020312, renewed permit for IM (S)
September 5, 2008	Tier II Operating Permit No T2-2008.0121, renewed permit for IM (A, but will become S upon issuance of this permit)

Application Scope

This permit to construct (PTC) is for converting facility’s Tier II to a PTC.

Application Chronology

January 19, 2017	DEQ received an application and an application fee.
January 26, 2017	DEQ determined that the application was complete.
January 26, 2017	DEQ made available the draft permit and statement of basis for peer and regional office review.
February 1, 2017	DEQ made available the draft permit and statement of basis for applicant review
February 14, 2017	DEQ received the permit processing fee.
February 17, 2017	DEQ issued the final permit and statement of basis.

TECHNICAL ANALYSIS

This PTC is for converting the facility's Tier II to a PTC. No changes are made in the permit, or at the facility; therefore, technical analyses are not conducted for this permitting action.

For technical information and analysis regarding this facility, refer to statements of basis for previous permits issued to the facility, including the Tier II Operating Permit No T2-2008.0121 issued on September 5, 2008.

REGULATORY ANALYSIS

This PTC is for converting the facility's Tier II to a PTC. No changes are made in the permit, or at the facility; therefore, only new regulatory analysis is discussed in this section. For other regulatory analysis, refer to statements of basis for previous permits issued to the facility, including the Tier II Operating Permit No. T2-2008.0121 issued on September 5, 2008.

Permit to Construct (IDAPA 58.01.01.201)

IDAPA 58.01.01.201 Permit to Construct Required

The permittee has requested to convert the Tier II to a PTC. Therefore, a permit to construct is required to be issued in accordance with IDAPA 58.01.01.220. This permitting action was processed in accordance with the procedures of IDAPA 58.01.01.200-228.

MACT Applicability (40 CFR 63)

This permitting action does not alter the applicability status of existing affected sources at the facility.

Permit Conditions Review

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

Permit Condition 2.10

IDAPA 58.01.01.600-616 is changed to IDAPA 58.01.01.600-624 as the Rules have been revised since the Tier II issued on 09/05/2008.

Permit conditions 3.6 and 3.7 and 4.6 and 4.7

Baghouse procedures were updated to current standard language, requiring an operating procedures document for each baghouse within 60 days of issuing this permit. In addition, a weekly see/no-see monitor replaces the pressure drop monitor.

General Provisions

Current PTC template is used. General Provisions are updated.

PUBLIC REVIEW

Public Comment Opportunity

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

PTC Fee Calculation

Instructions:

Fill in the following information and answer the following questions with a Y or N. Enter the emissions increases and decreases for each pollutant in the table.

Company: IDAHO MINERALS LLC
 Address: 456 W 445 N / P.O.Box 209
 City: Malad
 State: Idaho
 Zip Code: 83252
 Facility Contact: Bradley Hess
 Title: General Manager
 AIRS No.: 071-00008

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

Emissions Inventory			
Pollutant	Annual Emissions Increase (T/yr)	Annual Emissions Reduction (T/yr)	Annual Emissions Change (T/yr)
NO _x	0.0	0	0.0
SO ₂	0.0	0	0.0
CO	0.0	0	0.0
PM10	0.0	0	0.0
VOC	0.0	0	0.0
TAPS/HAPS	0.0	0	0.0
Total:	0.0	0	0.0
Fee Due	\$ 250.00		

Comments: T2 to PTC conversion