

Statement of Basis

Final

**Hitt Pit, Inc.
Idaho Falls, Idaho
Facility ID No. 019-00024
Permit to Construct No. P-2009.0117**

**January 22, 2010
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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

AAC	acceptable ambient concentrations for non-carcinogens
AACC	acceptable ambient concentrations for carcinogens
acfm	actual cubic feet per minute
AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
BMP	best management practices
Btu	British thermal units
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CAS No.	Chemical Abstracts Service registry number
CBP	concrete batch plant
cfm	cubic feet per minute
CFR	Code of Federal Regulations
CI	compression ignition
CO	carbon monoxide
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EF	emissions factor
EL	screening emission levels
EPA	U.S. Environmental Protection Agency
FEC	Facility Emissions Cap
gpm	gallons per minute
gph	gallons per hour
gr	grain (1 lb = 7,000 grains)
HAP	hazardous air pollutants
HMA	hot mix asphalt
hp	horsepower
hr/yr	hours per year
ICE	internal combustion engines
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
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
NAAQS	National Ambient Air Quality Standard
NAICS	North American Industry Classification System
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
NSPS	New Source Performance Standards
O&M	operations and maintenance
PAH	polyaromatic hydrocarbons
PC	permit condition

PCB	polychlorinated biphenyl
PERF	Portable Equipment Relocation Form
PM	particulate matter
PM ₁₀	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
POM	polycyclic organic matter
ppm	parts per million
PSD	Prevention of Significant Deterioration
PTC	permit to construct
PTC/T2	permit to construct and Tier II operating permit
PTE	potential to emit
RAP	recycled asphalt pavement
RFO	reprocessed fuel oil
Rules	Rules for the Control of Air Pollution in Idaho
scf	standard cubic feet
SCL	significant contribution limits
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SM	synthetic minor
SM80	synthetic minor facility with emissions greater than or equal to 80% of a major source threshold
SO ₂	sulfur dioxide
SO _x	sulfur oxides
T/yr	tons per consecutive 12-calendar month period
T2	Tier II operating permit
TAP	toxic air pollutants
TEQ	toxicity equivalent
T-RACT	Toxic Air Pollutant Reasonably Available Control Technology
U.S.C.	United States Code
UTM	Universal Transverse Mercator
VE	visible emissions
VOC	volatile organic compounds
yd ³	cubic yards
µg/m ³	micrograms per cubic meter

FACILITY INFORMATION

Description

A front end loader will transfer aggregate from the aggregate stockpile to a cold feed hopper which feeds a conveyor. The conveyor transfers aggregate to a drum mix dryer with a maximum rated capacity of 250 tons per hour of asphalt. The dryer is fired by propane. Asphalt oil is added approximately 2/3 of the way down the asphalt dryer. Finished asphalt is transferred by drag conveyor to a storage silo. Finished asphalt drops from the silo into trucks, and is then taken off the plant site.

Emissions from the drum mix dryer are controlled by a Venturi scrubber.

Fugitive dust emission generated by front end loader and truck traffic shall be controlled by applying a dust suppressant to unpaved roads.

Emissions associated with transferring aggregate into the cold feed hopper and transferring aggregate from the hopper to the belt conveyor are uncontrolled.

This permit pertains to the following equipment

- Aggregate belt conveyor
- Cold feed hopper
- Genco FP-162 drum mix dryer
- Venturi scrubber, with stack 40 feet high and 3 feet x 3 feet diameter
- Drag conveyor
- Silo

The emission sources regulated by the permit are listed in the following table.

Source Descriptions	Emission Controls
<p>The Hot Asphalt Mix (HMA) Plant</p> <p>Parallel flow drum mix</p> <p>Manufacturer: Custom built Model: Genco FP-162 Maximum asphalt production: 250 T/hr Required annual asphalt production: 40,000 T/yr Burner fuel type: Propane Maximum burner fuel usage rate: 450 gallons/hr Installed: 1988</p>	<p>Venturi scrubber</p> <p>Manufacturer: Custom built Model: Genco FP-162 Design scrubbing liquid flow: 464 gallons per minute Design pressure drop: 17.4 inch of water Control efficiency: unknown</p> <p>Stack parameters:</p> <p>Stack height: 40 feet Stack exhaust flow rate: 16,342 actual cubic feet per minute Stack inside diameter: 36.3 inch Stack exhaust gas temperature: 114 °F</p>

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 replaced (R).

May 27, 1988 PTC No. 0260-90024, for a new asphalt plant and crushing operations (A, will be R after issuance of this permit)

Application Scope

This permitting action is to

- Transfer ownership of the HMA plant
- Delete the crushing operating section from the revised permit because Hitt Pit, Inc. no longer owns the crushers
- Include the monitoring requirements that were not addressed in the old permit

Application Chronology

September 8, 2009	DEQ received an application.
October 5, 2009	DEQ determined that the application was incomplete.
October 27, 2009	DEQ received supplemental information from the applicant.
November 25, 2009	DEQ determined that the application was complete.
December 24, 2009	DEQ made available the draft permit and statement of basis for peer and regional office review.
January 5, 2010	DEQ made available the draft permit and statement of basis for applicant review.
January 22, 2010	DEQ issued the final permit and statement of basis.

TECHNICAL ANALYSIS

This permitting action is for changing ownership of the HMA plant, removing crushing operation section of the existing permit, and adding the monitoring requirements that were not addressed in the old permit. Technical analysis, such as emissions calculations, or modeling is not required.

REGULATORY ANALYSIS

Attainment Designation (40 CFR 81.313)

The facility is located in Bonneville County, which is designated as attainment or unclassifiable for PM_{2.5}, PM₁₀, SO₂, NO₂, CO, and Ozone. Refer to 40 CFR 81.313 for additional information.

Permit to Construct (IDAPA 58.01.01.201)

This permitting action is processed in accordance with the procedures of IDAPA 58.01.01.209.06.a or 209.04.

Tier II Operating Permit (IDAPA 58.01.01.401)

The applicant did not apply for a Tier II operating permit in accordance with IDAPA 58.01.01.401.

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

The facility is not classified as a major facility as defined in IDAPA 58.01.01.008.10. Therefore, the requirements of IDAPA 58.01.01.300–399 are not applicable to this permitting action.

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 52.21. Therefore in accordance with 40 CFR 52.21(a)(2), PSD requirements are not applicable to this permitting action. 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.

NSPS Applicability (40 CFR 60)

The HMA plant is subject to 40 CFR 60 Subpart I—Standards of Performance for Hot Mix Asphalt Facilities. It was addressed in the existing permit. The requirements were included in the old permit.

NESHAP Applicability (40 CFR 61)

The facility is not subject to any NESHAP requirements in 40 CFR 61.

MACT Applicability (40 CFR 63)

The facility is not subject to any MACT standards in 40 CFR Part 63.

CAM Applicability (40 CFR 64)

The facility is not classified as a major source (refer to Title V Classification section); the requirements of CAM are not applicable.

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 Conditions 1 through 4

PCs 1 through 4 state the purpose of the permitting action, identify the existing permit to be replaced, and summarize the regulated emissions units in this permit.

Permit Conditions 5 and 6

PCs 5 and 6 are taken from the old permit, HMA section, PCs 1.1 and 1.2. They provide descriptions of process and emissions controls.

Permit Condition 7

PC 7 contains emissions limits taken from old permit, HMA Section, PC 2.1. However, the process weight rate limit in the old PC is removed because the dryer stack is required to comply with more stringent emissions limit as specified in 40 CFR 60.92. Based on August 2, 1990 source test data, the PM emissions were 5.25 lb/hr at 148 T/yr production aggregate. It is well below 22 lb/hr process weight rate in the old permit.

When calculating the annual emissions, the permittee is required to use the actual hours recorded in accordance with PC 19. Minor changes are made to the old permit, HMA Section, PC 2.1.

- “Annual PM emissions shall not exceed five tons per year, as determined by multiplying the actual emission rate (measured by an approved emissions test) or the allowable emission rate (if actual is not available) by the actual hours of operation per year **recorded in accordance with Permit Condition 19.**”

The allowable PM emissions rate is: 250 T/hr asphalt (maximum capacity) x 0.045 lb/T (emissions factor taken from AP-42, Table 11.1-3, rev. 3/04) = 11.25 lb/hr.

Permit Condition 8

PC 8 contains opacity limit taken from the old permit, HMA Section, PC 2.2.

Specific visible emissions (VE) monitoring was not included as a separate permit condition in the revised permit because of the following reasons:

- The most recent issued PTC for HMA with Venturi scrubber was reviewed. Specific VE monitoring was not included in that permit as a separate permit condition.
- Based on discussion with a DEQ's inspector, specific VE monitoring as a separate permit condition may not be effective, and focusing on proper operation of the scrubber will be more effective.

Permit Condition 9

First two bullets of PC 9 contain requirements of fugitive control taken from old permit, HMA Section, PC 3.2. The details of the requirements are spelled out in the revised permit.

Section 1-1252 in the old PC 3.2 corresponds to IDAPA 58.01.01.650 & 651. Section 1-1605 in the old PC 3.2 corresponds to IDAPA 58.01.01.808.

The last bullet in PC 9 is taken from old permit, HMA Section, PC 3.3.

New Permit Conditions 10 to 14

PCs 10 through 14 are requirements related to Venturi scrubber operation and monitoring. The permittee is required to develop an operations and maintenance manual for the scrubber, to monitor pressure drop across the scrubber and scrubber flow rate, and to operate the scrubber all the time during the operation of the drum dryer.

The data obtained from August 2, 1990 source test indicated that to meet the PM grain loading standard, emissions from the drum dryer need to be controlled by the Venturi scrubber.

To ensure compliance with PM and opacity emissions limits, it is important that the permittee, at all times, maintains the scrubber in good working order and operates the scrubber as efficiently as practicable.

New Permit Condition 15

PC 15 allows propane and No.2 fuel to be used in the drum dryer.

According to the application, the drum dryer is currently using propane. Because the dryer was permitted to use No.2 oil, the fuel option of No.2 fuel oil is kept in the permit for future operation flexibility.

At the time of issuing this permit, the emissions factors (EFs) used for HMA general permit (draft) are taken from AP-42 Section 11.1, Table 11.1-3. The EFs, when using same control equipment, are the same for dryers fired by natural gas, propane, fuel oil, or waste oil. Consequently, the estimated emissions are not fuel type dependent.

New Permit Condition 16

PC 16 regarding fuel sulfur content as required in IDAPA 58.01.01.728 has been included in the recent issued permits for all HMA plants. It is added to the revised permit.

New Permit Condition 17

PC 17 regarding controlling odors as required in IDAPA 58.01.01.775-776 has been included in the recent issued permits for all HMA plants. It is added to the revised permit.

Permit Condition 18

PC 18 requires inspection of the fugitive sources to ensure that the methods used to reasonably control fugitive emissions are effective.

Permit Condition 19

PC 19 requires monitoring scrubber operating parameters and HMA plant operating hours.

As specified in PC 7, second bullet, the annual HMA plant operating hours will be used to calculate annual emissions rate to demonstrate compliance with 5 T/yr annual emissions limit.

As specified in PCs 12 and 13, the scrubber operating parameters shall be maintained in accordance with the O&M manual.

Permit Condition 20

PC 20 is a recordkeeping requirement to demonstrate compliance with PC 16.

Permit Condition 21

PC 21 is a recordkeeping requirement to demonstrate compliance with PC 17.

Permit Condition 22

PC 22 requires source test of the drum dryer once every five years to demonstrate compliance with grain loading standard and opacity limit.

This requirement has been added to all HMA plants. My understanding is that this decision on testing HMA drum dryer across the board was based on historical compliance data.

It is specified that source test method will be in accordance with 40 CFR 60.93 (i.e., method 5).

PC 3.1 in HMA section of the old permit is removed because the initial testing was complete on August 2, 1990.

Permit Condition 23

PC 23 requires the applicant to submit source testing reporting for the test required in PC 22.

General Provision

General Provisions taken from the current template replace the ones in the old permit.

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 – PERMIT FEES

In accordance with IDAPA 58.01.01.224, this permitting action, plant ownership change, is exempt from PTC application fee and processing fee.

APPENDIX B– FACILITY DRAFT COMMENTS

Facility comments

“The "Maximum asphalt production" should read 250 tons per hour as per the existing permit. Comment (A2): In FORM HMAP, the maximum hourly asphalt rate should have been 250 tons/hour. The 180 tons/hour that was inadvertently used is an approximate average of this past years production which included start up, shut down and stand by time.”

DEQ's response

Maximum hourly production rate is kept as 250 tons per hour of asphalt in the permit and the statement of basis.