



Air Quality Permitting Statement of Basis

September 15, 2005

Permit to Construct No. P-050507

**THOMPSON PAVING, INC.
REXBURG, IDAHO**

Facility ID No. 777-00299

Prepared By:

**Ken Hanna, Permit Writer
AIR QUALITY DIVISION**

FINAL

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Acronyms, Units, and Chemical Nomenclatures

acfm	actual cubic feet per minute
AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
ASTM	American Society for Testing and Materials
Btu	British thermal unit
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EPA	U.S. Environmental Protection Agency
gr	grain (1 lb = 7,000 grains)
HAPs	Hazardous Air Pollutants
hp	horsepower
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
km	kilometer
lb/hr	pound per hour
m	meter(s)
MACT	Maximum Achievable Control Technology
MMBtu	million British thermal units
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
NSPS	New Source Performance Standards
O ₃	ozone
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
PTE	potential to emit
Rules	Rules for the Control of Air Pollution in Idaho
scf	standard cubic feet
SM	Synthetic Minor
SO ₂	sulfur dioxide
SO _x	sulfur oxides
T/yr	tons per year
µg/m ³	micrograms per cubic meter
UTM	Universal Transverse Mercator
VOC	volatile organic compound

1. PURPOSE

The purpose for this memorandum is to satisfy the requirements of IDAPA 58.01.01.200, Rules for the Control of Air Pollution in Idaho, for issuing permits to construct.

2. FACILITY DESCRIPTION

The facility is a portable, drum-mix HMA plant used for the production of asphaltic concrete. The dryer burner is permitted to be fired on fuel oil, natural gas, or propane gas.

3. FACILITY / AREA CLASSIFICATION

Hot-mix asphalt plants (including collocated operations producing asphalt, concrete, and/or aggregate) are not designated facilities, as defined in IDAPA 58.01.01.006.27. This facility is not a major facility as defined in IDAPA 58.01.01.006.55 and IDAPA 58.01.01.008.10. The Standard Industrial Classification Code for this HMA facility is 2951. The AIRS facility classification for this facility is "SM" because allowable emissions are less than all thresholds for Tier I permits. The spreadsheet included as Appendix A automatically determines the facility classification.

The HMA facility is a portable source and may operate in both attainment and nonattainment areas throughout the state of Idaho.

4. APPLICATION SCOPE

Thompson Paving, Inc. (Thompson Paving) submitted a PTC application for a revision of an existing PTC. Thompson Paving has purchased the portable hot-mix asphalt facility formerly owned and operated by ASM (ASM). ASM was issued PTC No. 777-00299 on March 22, 2002 for the facility. Thompson Paving has requested that the March 22, 2002 PTC be revised to reflect a change in ownership and change in the facility's name. Thompson Paving has certified, pursuant to IDAPA 58.01.01.123, that it will comply with all of the existing terms and conditions of the permit. No other changes were requested.

4.1 *Application Chronology*

July 18, 2005 DEQ received a letter from Thompson's notifying DEQ of the purchase of the ASM hot-mix asphalt plant.

August 12, 2005 The PTC application was determined to be complete.

5. PERMIT ANALYSIS

This section of the Statement of Basis describes the regulatory requirements for this PTC action.:

5.1 *Equipment Listing*

Thompson Paving's portable hot-mix asphalt plant and diesel generator operating parameters are listed below.

Portable HMA Plant

Manufacturer/Model: AEDCO
Type: Drum-mix
Throughput Capacity: 100 T/hr
Burner Fuel Type: #2 Fuel Oil
Dryer Heat Input: 27 million British thermal units per hour

Air Pollution Control Device

Type: Wet scrubber
Manufacturer: AEDCO
Model: Venturi type

HMA Stack Information

Stack Height: 15 ft
Stack Diameter: 2 ft
Exhaust Gas Flow Rate: 18,000 actual cubic feet per minute (acfm)
Stack Exhaust Temperature: 310°F

Generator

Manufacturer/Model: Caterpillar
Rated Power Output: 200 kW
Fuel Type: Diesel
Fuel Usage: 5-7 gal/hr
Stack Height: 12 ft
Stack Diameter: 0.42 ft
Exhaust Gas Flow Rate: 1,186 acfm
Stack Exhaust Temperature: 534°F

5.1 Process Description

The facility is a portable, drum-mix HMA plant used for the production of asphaltic concrete. The dryer burner is permitted to be fired on fuel oil, natural gas, or propane gas.

The standard PTC requested will allow this HMA facility to collocate and simultaneously operate with one other portable plant (i.e., rock crusher, HMA plant, and/or concrete batch plant) in attainment areas. It is important to note, during collocated operations this HMA plant is then part of a single, larger source engaged in the production of either asphalt, concrete, and/or aggregate, depending upon which type of portable plant the hot-mix plant is collocated with. While collocated, the two portable plants are now considered to be one source, and the emissions of this single source is the sum of the emissions from the two portable plants. This single, larger source must comply with all applicable federal, state, and local requirements. To maintain compliance, specific requirements and limitations have been included in the standard PTC for this HMA plant for collocated operations. As described in the following sections of this technical memorandum, specific conservative assumptions and calculations were made to determine these standard PTC collocation requirements. For this reason, the permit for the other portable plant with which this HMA plant will collocate must also contain specific collocation requirements based on the same conservative assumptions and calculations used in this Standard PTC.

When collocated, this HMA plant is then part of a single, larger source that produces either HMA, concrete, and/or aggregate, depending upon which type of portable plant the hot-mix plant is collocated with. The equipment used by this single, larger source would include the HMA plant equipment listed above, plus the equipment of the other portable plant. To see an equipment description for the other portable plant, see the corresponding permitting files for that plant.

5.2 Emissions Inventory

Emission estimates for this HMA facility were calculated using a Lotus spreadsheet and emission factors obtained from AP-42, Section 11.1, 1/95 edition. For purposes of maximum flexibility, the spreadsheet calculates the potential to emit (PTE) based on the worst-case emission factor of all possible fuels to be used at the hot-mix plant (diesel fuel oils, propane, and natural gas). The following air pollutant emissions are calculated by the spreadsheet: particulate matter (PM), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM₁₀), oxides of nitrogen (NO_x), sulfur dioxide (SO₂), and carbon monoxide (CO). In calculating the PTE for each pollutant, the spreadsheet solves for the most-limiting pollutant which will give the facility a PTE of less than 100 tons per any consecutive 12-month period (i.e., 99 T/yr). In addition, allowable operational limits for the facility, which corresponds to the PTE <100 T/yr, are given as part of the spreadsheet output. A copy of the spreadsheet showing all calculations and results is presented as Appendix B of this memo.

For collocated operations, a conservative approach is taken by limiting the emissions of each of the collocated units to half of the levels allowed when operating alone. Therefore, the combined emissions of the two collocated sources will be within the allowable levels. See the information below for a more detailed description. This approach is designed to result in acceptable throughput limits for most collocation situations. In cases where the throughput limits are too restrictive, a site-specific analysis and permit amendment may be completed.

In summary, the emission estimates for this facility assume 100 T/hr throughput to a drum-mix HMA plant, one #2 fuel oil-fired dryer, one diesel-fired electrical generator set rated at 200 kW, and fugitive dust emissions from specified sources (see the spreadsheet). The most limiting pollutant which gives the facility a PTE of 99 T/yr is NO_x.

Collocated Operations in Attainment Areas. Standard PTCs will only allow collocation with one other portable source (i.e., rock-crushing plant, HMA plant, or concrete batch plant) that has also received a standard PTC specifically allowing collocation. When a combination of one portable HMA unit and one other portable unit are operated at a single location, the emissions of both units must be added together when determining PTE. Consistent with the approach taken for attainment area operations, the spreadsheet inherently limits the combined emissions of the two portable units to below certain triggering levels (i.e., Prevention of Significant Deterioration and Title V thresholds) by limiting the maximum throughput of each. For collocated operations, half of the attainment area triggering levels is used as limits for calculating throughput for each source.

The HMA plant throughput is then established based on the most-limiting pollutant or pollutants (i.e., the pollutant whose emission rate is closest to 49.5 T/yr). For collocated attainment area operations, the most limiting pollutant which gives the HMA facility a PTE of 49.5 T/yr is NO_x.

5.3 Modeling

Modeling of the asphalt plant stack emissions and the electrical generator set emissions was conducted using EPA-approved SCREEN 3 computer-run model. The maximum one-hour impact from the dryer stack was calculated to be 8.66 micrograms per cubic meter (µg/m³) using a one pound-per-hour (lb/hr) unity emission rate input to the model. The maximum one-hour impact from the electrical generator set was calculated to be 66.43 µg/m³, also using a 1 lb/hr unity input. The spreadsheet calculates the ambient impact for each air pollutant (PM, PM₁₀, NO_x, SO₂, and CO) based on the calculated pound-per-hour emission rate, averaging periods, and background concentrations. The spreadsheet solves for the most-limiting pollutant in attainment areas and gives appropriate operational limits, which protects the applicable National Ambient Air Quality Standard (NAAQS) as defined in IDAPA 58.01.01.577. In addition, the spreadsheet also calculates the most-limiting pollutant in nonattainment areas and gives operational limits to protect applicable significant contribution requirements as defined in IDAPA 58.01.01.006.89. All SCREEN modeling output files are presented as Appendix C of this memo.

Spreadsheet impact calculations and results are presented in Appendix B.

For collocated operations in attainment areas, operation of the HMA plant and its generator (if used) are limited as needed so that the modeled impacts will be half of the available allowable ambient impact. Likewise for collocated operations, the modeled impacts of the other portable facility will also be limited to half of the available allowable ambient impact so that the combined emissions of the two collocated sources will remain within the NAAQS. Using the 24-hour NAAQS standard for PM₁₀ (attainment area) as an example, one half of the allowable available impact would be equal to 32 µg/m³, as follows:

$$32 \mu\text{g}/\text{m}^3 = 0.5 \times [150 \mu\text{g}/\text{m}^3 - 86 \mu\text{g}/\text{m}^3],$$

where 150 µg/m³ is the 24-hour average standard and 86 µg/m³ is the conservative state-wide 24-hour average background value. Therefore, operation of the HMA plant and its generator (if used) would be limited as needed, based on the specific ambient impact modeling, so that the modeled 24-hour concentration does not exceed 32 µg/m³ at or beyond the facility's property boundary. This approach is designed to result in acceptable operational limits for most collocation situations. In cases where these limits are too restrictive, a site-specific analysis and permit amendment may be completed. If a generator is used, the modeling estimates are included in Appendix C.

5.4 Regulatory Review

This section describes the regulatory analysis of the applicable air quality rules with respect to this PTC.

IDAPA 58.01.01.201 Permit to Construct Required

This facility does not qualify for a PTC exemption in any Sections 220 through 223 of the Rules. Therefore, a PTC is required.

IDAPA 58.01.01.209.04 Revisions of Permits to Construct

This facility has shown to DEQ's satisfaction that its emissions will not cause or contribute to a violation of any ambient air quality standard. So long as Thompson Paving complies the terms and conditions of the permit, all applicable air quality standards will be met. Revisions to PTCs that do not result in an increase in emissions are not required to be provided for an opportunity for public comment.

IDAPA 58.01.01.224 Permit to Construct Application Fee

A change in the name and ownership is exempt from PTC application fees.

IDAPA 58.01.01.225 Permit to Construct Processing Fee

PTC processing fees are not required for a PTC revision.

40 CFR 60 New Source Performance Standards

This facility is an affected facility and is subject to regulation in accordance with 40 CFR Part 60, Subpart I, "*Standards of Performance for Hot-Mix Asphalt Facilities.*"

40 CFR 61 National Emissions Standards for Hazardous Air Pollutants

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

40 CFR 63 National Emissions Standards for Hazardous Air Pollutants for Source Categories

The facility is not subject to any MACT requirements pursuant to 40 CFR 63.

5.5 Permit Conditions Review

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

Permit Condition 1.2.2

The allowable fuels list was changed to include “distillate oil, propane, or natural gas” which is consistent with the analysis conducted for this facility.

Permit Conditions 1.3.4 and 1.3.5

The Permit Conditions were changed to make the performance testing requirements more clear. Also, the requirement to perform a test at least once every five years was added to be consistent with current permitting practices.

Permit Conditions 4.1.4

A requirement was added that the facility shall not operate in the Sandpoint PM₁₀ nonattainment area so that this SIP requirement is clear. If the facility needs to be operating in this area, the company will need to submit a PTC application and obtain a new or modified permit first.

6. PERMIT FEES

PTC application fees and processing fees do not apply.

7. PERMIT REVIEW

7.1 Public Comment

An opportunity for public comment was not required in accordance with IDAPA 58.01.01.209.04 because the permitting action is a revision to a PTC and emissions are not increasing.

8. RECOMMENDATION

Based on review of application materials, and all applicable state and federal rules and regulations, staff recommend that Thompson Paving, Inc. be issued a final PTC No. P-050507 for the change in ownership. No public comment period is recommended, no entity has requested a comment period, and the project does not involve PSD requirements.

KH/sd

Permit No. P-050507

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Appendix A

AIRS Information

P-050507

AIRS/AFS^a FACILITY-WIDE CLASSIFICATION^b DATA ENTRY FORM

Facility Name: Thompson Paving, Inc., Rexburg
Facility Location: Portable
AIRS Number: 777-00299

AIR PROGRAM POLLUTANT	SIP	PSD	NSPS (Part 60)	NESHAP (Part 61)	MACT (Part 63)	SM80	TITLE V	AREA CLASSIFICATION A-Attainment U-Unclassified N- Nonattainment
SO ₂	B							
NO _x	B							
CO	B							
PM ₁₀	SM		SM					
PT (Particulate)	B		B					
VOC	B							
THAP (Total HAPs)	B							
			APPLICABLE SUBPART					
			I					

^a Aerometric Information Retrieval System (AIRS) Facility Subsystem (AFS)

^b AIRS/AFS Classification Codes:

- A = Actual or potential emissions of a pollutant are above the applicable major source threshold. For HAPs only, class "A" is applied to each pollutant which is at or above the 10 T/yr threshold, or each pollutant that is below the 10 T/yr threshold, but contributes to a plant total in excess of 25 T/yr of all HAPs.
- SM = Potential emissions fall below applicable major source thresholds if and only if the source complies with federally enforceable regulations or limitations.
- B = Actual and potential emissions below all applicable major source thresholds.
- C = Class is unknown.
- ND = Major source thresholds are not defined (e.g., radionuclides).

Appendix B

Emission Estimates

P-050507

INPUT SECTION - enter info in highlighted areas only

Company: **ASPH Thompson Paving**
 Permit Engineer: **ECM**
 Date: **1/24/02**
 Plant Name: **ASPH PTC Calcals K.H. 8-10-05**

Enter the BMA Plant Type: **B** (A = Batch Mix Hot Mix Asphalt Plant)
 (B = In-Line Mix Hot Mix Asphalt Plant)

Enter the BMA Plant Type: **B** (A = Natural Gas-Fired Dryer)
 (B = Oil-Fired Dryer)

Enter Dryer Stack Flow Rate: **16,000** actual cubic feet per minute (acfm)
 Enter Dryer Stack Temperature: **240** temperature (°F)
 Enter Dryer Stack Moisture: **14.00** moisture wt% (Richard 18 v174)
 Enter Dryer Stack Pressure: **28.00** stack pressure (Richard 28.00 "Hg)
 Calculated Corrected Flow Rate: **16,119** dry standard cubic feet per minute (scfm)

Enter BMA Maximum Capacity: **100** Tons/hr (Asphalt Throughput)

Enter BMA Modelled Concentration: **0.65** µg/m³ (1-hr concentration @ 1 mph)

Is a PM₁₀ performance test required for this BMA plant? **Y** (Y or N based on 48 CFR 60.109 Supplemental)

Does Plant Require a Generator? **Y** or **N**
 Enter Generator Size: **200** kW
 Enter Units: (A = Horsepower or B = Kilowatts)

Calculated Generator Size: **200.14** Horsepower

Enter Generator Fuel Type: **A** (A = Diesel-Fuel Generator)
 (B = Gasoline-Fuel or Fuel-Fuel Generator)

Enter gpm modelled concentration: **66.33** µg/m³ (1-hr concentration @ 1 mph)

SPREADSHEET DATA - information used by spreadsheet

Pollutant	Stack With Background Concentration for Critical Air Pollutants			
	1-hr	3-hr	24-hr	Annual
PM ₁₀	11400	5330	86	22.7
CO				40
NO _x				144
SO _x				23.5

Parameters used in the Regulatory Emissions Calculations

Stack Wind Speed (ft) **10** mph
 Maximum Moisture Content (MC) **2.5** %
 Particle Size Multiplier (k) **1.35** dimensionless
 PM₁₀ (40 µm) **0.0020** MDT
 PM_{2.5} (40 µm) **0.0003** MDT
 PM₁₀ **1.07** = 1.07 x 0.0020 x 0.00135 x 1.35 x 10³ = 0.0039 MDT
 Dry-Pond Equivalents, Rating "A" AP-02, 300 EA, p.13.2-3.
 Assumptions: Wind Speed = 10 mph; Moisture = 2.5%; and
 Aggregate = 90% of product.

FACILITY CLASSIFICATION REPORT

Enter Annual Emissions Limit:
 Max 100 Tpy for Title V Facilities
 Max 200 Tpy for PSD Facilities
 For the standard BMA permit, see 100 Tpy.

PERMIT REQUIREMENTS SECTION - enforceable permit limits
AIRS Facility Classification: A2

Non-attainment Area		Attainment Area	
Allowable Emission Limits		Allowable Emission Limits	
HIMA Dryer Stack:	3.5 lb/hr of PM NA T/yr	HIMA Dryer Stack:	3.5 lb/hr of PM NA T/yr
Generator:	4.3 hr/day 1,581.46 hr/yr NA T/yr	Generator:	24.8 hr/day 8,760.00 hr/yr NA T/yr
HIMA Plant Throughput Limits:	433 T/day 158,146 T/yr	HIMA Plant Throughput Limit:	NA 876,000 T/yr

Collocated Attainment Areas		CO 1-hr Standard		O3 3-hr standard		O 8-hr Standard	
Allowable Emissions Limits		lb/hr		hr/3-hr		hr/8-hr	
HIMA Dryer Stack:	3.5 lb/hr of PM NA T/yr	60.0	3.0	3.0	5.0		
Generator:	24.8 hr/day 4,380.00 hr/yr NA T/yr						
HIMA Plant Throughput Limits:	NA T/day 433,000 T/yr						

INPUTS TO PERMIT TO CONSTRUCT (PTC)	Value	Units
Section B.1.1 Facility Throughput Limits: Annual Throughput LI	876,000	T/yr
Section B.1.3 Generator Hours of Operations: Daily Throughput Limit	NA	T/day
Section B.1.3 Generator Hours of Operations: Annual Throughput LI	876,000	T/yr
Section B.1.3 Generator Hours of Operations: Annual Hours of Operation	8,760	hr/yr
Section B.1.3 Generator Hours of Operations: Daily Hours of Operation	24	hr/day
Section C.1.3 Facility Throughput Limits: Annual Throughput LI	438,000	T/yr
Section C.1.3 Facility Throughput Limits: Daily Throughput Limit	NA	T/day
Section C.1.3 Facility Throughput Limits: Annual Throughput LI	438,000	T/yr
Section C.1.3 Facility Throughput Limits: Annual Hours of Operation	4,380	hr/yr
Section C.1.3 Facility Throughput Limits: Daily Hours of Operation	24.8	hr/day
Section D.1.1 Facility Throughput Limits: Annual Throughput LI	158,146	T/yr
Section D.1.1 Facility Throughput Limits: Daily Throughput Limit	433	T/day
Section D.1.1 Facility Throughput Limits: Annual Throughput LI	158,146	T/yr
Section D.1.1 Facility Throughput Limits: Annual Hours of Operation	1,581	hr/yr
Section D.1.1 Facility Throughput Limits: Daily Hours of Operation	4.3	hr/day

DRYER EMISSION RATE CALCULATIONS

Pollutant	DRYER STACK		Emissions Rate (Commodity) Mlb/hr
	Emissions Factor (lb/ton)	Throughput (tons/hr)	
Total PM	19.08	1,908.08	3.47
Total PM-10	9.54	490.08	3.47
CO	0.086	2.69	3.49
NO _x	0.975	7.59	7.59
SO ₂	0.108	10.08	10.08

EMA emissions factors for CO, NO_x, SO₂, and unmetallized PM & PM-10 are from AP-42 Section 11.1. Combustion PM & PM-10 is from the NERS GAA profile.

MODELING ANALYSE CALCULATIONS FOR ATTACHMENT AREAS

Pollutant	Normal Emissions		Permitted Emissions		Hours of Operations (hr/year)	Hours of Operations (hr/year)	Emissions Rate (Commodity) Mlb/hr
	Hours of Operations (hr/year)	Other ***	Hours of Operations (hr/year)	Other ***			
PM	N/A	N/A	N/A	N/A	5,760	5,760	3.47
PM-10	24.8	N/A	24.8	N/A	5,760	5,760	3.47
CO	N/A	N/A	N/A	N/A	5,760	5,760	3.49
CO *	N/A	N/A	N/A	N/A	5,760	5,760	3.49
NO _x	N/A	N/A	N/A	N/A	5,760	5,760	7.59
SO ₂	N/A	N/A	N/A	N/A	5,760	5,760	10.08

GENERATOR EMISSION RATE CALCULATIONS

Pollutant	GENERATOR STACK		Emissions Rate (Commodity) Mlb/hr
	Emissions Factor (lb/ton)	Throughput (tons/hr)	
Total PM	0.09	0.09	0.09
Total PM-10	0.09	0.09	0.09
CO	0.01	1.79	1.79
NO _x	0.03	0.31	0.31
SO ₂	0.04	0.35	0.35

Generator emissions factors are from AP-42 Section 3.3 and 3.4.

MODELING ANALYSE CALCULATIONS FOR NONATTACHMENT AREAS

Pollutant	Normal Emissions		Permitted Emissions		Hours of Operations (hr/year)	Hours of Operations (hr/year)	Emissions Rate (Commodity) Mlb/hr
	Hours of Operations (hr/year)	Other ***	Hours of Operations (hr/year)	Other ***			
PM	N/A	N/A	N/A	N/A	5,760	5,760	3.47
PM-10	24.8	N/A	24.8	N/A	5,760	5,760	3.47
CO	N/A	N/A	N/A	N/A	5,760	5,760	3.49
CO *	N/A	N/A	N/A	N/A	5,760	5,760	3.49
NO _x	N/A	N/A	N/A	N/A	5,760	5,760	7.59
SO ₂	N/A	N/A	N/A	N/A	5,760	5,760	10.08

MODELING ANALYSE CALCULATIONS FOR NONATTACHMENT AREAS

Pollutant	Normal Emissions		Permitted Emissions		Hours of Operations (hr/year)	Hours of Operations (hr/year)	Emissions Rate (Commodity) Mlb/hr
	Hours of Operations (hr/year)	Other ***	Hours of Operations (hr/year)	Other ***			
PM	N/A	N/A	N/A	N/A	5,760	5,760	3.47
PM-10	4.3	N/A	4.3	N/A	5,760	5,760	3.47
CO	N/A	N/A	N/A	N/A	5,760	5,760	3.49
CO *	N/A	N/A	N/A	N/A	5,760	5,760	3.49
NO _x	N/A	N/A	N/A	N/A	5,760	5,760	7.59
SO ₂	N/A	N/A	N/A	N/A	5,760	5,760	10.08

FUGITIVE EMISSION CALCULATIONS FOR ATTAINMENT AREAS

	PM	PM _{2.5}
Pre-Boiler Source Emissions (lb/hr)	0.19	0.19
Leakage -> Cold Aggregate Bin	0.19	0.19
Cold Aggregate Bin -> Conveyor	0.19	0.19
Conveyor -> Screen Boiler	0.19	0.19
Total Pre-Boiler Source Emissions	0.76	0.76
Post-Boiler Source Emissions		
Screening Process	0.00	0.00
Screen -> Hot Bin	0.00	0.00
Hot Bin -> Weigh Skipper	0.00	0.00
Weigh Skipper -> Pug Mill	0.00	0.00
Total Post-Boiler Source Emissions	0.00	0.00
Screening Control Efficiency		
Total Uncontrolled Emissions (lb/hr)	0.76	0.76
Total Uncontrolled Emissions (Tpy)	2.70	2.70
Total Controlled Emissions (lb/hr)	0.76	0.76
Total Controlled Emissions (Tpy)	2.70	2.70

* CD 1-hr Averaging Period
 * CD 8-hr Averaging Period
 * SO_x 3-hr Averaging Period

FUGITIVE EMISSION CALCULATIONS FOR NONATTAINMENT AREAS

	PM	PM _{2.5}
Pre-Boiler Source Emissions (lb/hr)	0.19	0.19
Leakage -> Cold Aggregate Bin	0.19	0.19
Cold Aggregate Bin -> Conveyor	0.19	0.19
Conveyor -> Screen Boiler	0.19	0.19
Total Pre-Boiler Source Emissions	0.76	0.76
Post-Boiler Source Emissions 2		
Screening Process	0.00	0.00
Screen -> Hot Bin	0.00	0.00
Hot Bin -> Weigh Skipper	0.00	0.00
Weigh Skipper -> Pug Mill	0.00	0.00
Total Post-Boiler Source Emissions	0.00	0.00
Screening Control Efficiency		
Total Uncontrolled Emissions (lb/hr)	0.76	0.76
Total Uncontrolled Emissions (Tpy)	2.70	2.70
Total Controlled Emissions (lb/hr)	0.76	0.76
Total Controlled Emissions (Tpy)	2.70	2.70

SPEADSHEET SUMMARY - results of emissions and modeling calculations for all pollutants

ATTAINMENT & UNCLASSIFIABLE AREAS		NONATTAINMENT AREAS	
Uncontrolled	Controlled	Dryer	Controlled
0311.2 T/yr	15.3 T/yr	PM	1981.4 T/yr
1811.4 T/yr	15.3 T/yr	PM-10	348.9 T/yr
15.0 T/yr	15.0 T/yr	CO	2.8 T/yr
32.9 T/yr	32.9 T/yr	NOx	5.9 T/yr
43.8 T/yr	43.8 T/yr	SO ₂	7.9 T/yr
Generator			
2.6 T/yr	2.6 T/yr	PM	6.5 T/yr
2.6 T/yr	2.6 T/yr	PM-10	6.5 T/yr
7.8 T/yr	7.8 T/yr	CO	1.4 T/yr
34.4 T/yr	34.4 T/yr	NOx	6.6 T/yr
2.4 T/yr	2.4 T/yr	SO ₂	6.4 T/yr
Exhausts			
6.6 T/yr	6.6 T/yr	PM	1.2 T/yr
2.5 T/yr	2.5 T/yr	PM-10	0.4 T/yr
Total			
0311.2 T/yr	34.4 T/yr	PM	1981.4 T/yr
1881.5 T/yr	30.3 T/yr	PM-10	348.9 T/yr
21.6 T/yr	31.6 T/yr	CO	4.3 T/yr
69.3 T/yr	69.3 T/yr	NOx	12.5 T/yr
46.3 T/yr	46.3 T/yr	SO ₂	8.3 T/yr
Time V PTE Summary¹			
1881.5 T/yr	69.3 T/yr	Time V PTE	348.9 T/yr
of PM-10	of NOx	Summary ²	of PM-10
0311.2 T/yr	69.3 T/yr	Facility PTE	1981.4 T/yr
of PM	of NOx	Summary	of NOx
Enforceable Limits - Attainment Areas			
24.0 lb/day	5,798 lb/yr	Enforceable Limits - Non-Attainment Areas	4.3 lb/day
Dryer Controlled Emission Rates			
3.5 lb/hr	15.3 T/yr	Dryer Controlled Emission Rates	2.7 T/yr
3.6 lb/hr	15.0 T/yr	CO	2.8 T/yr
7.5 lb/hr	32.9 T/yr	NOx	5.9 T/yr
10.0 lb/hr	43.8 T/yr	SO ₂	7.9 T/yr
Generator Controlled Emission Rates			
6.6 lb/hr	2.6 T/yr	Generator Controlled Emission Rates	6.5 T/yr
1.8 lb/hr	7.8 T/yr	CO	1.4 T/yr
8.3 lb/hr	34.4 T/yr	NOx	6.6 T/yr
6.5 lb/hr	2.4 T/yr	SO ₂	6.4 T/yr

¹ Total in the dryer, generator and exhausts added together for total PTE.
² This V PTE summary does not account for PM, only PM-10.

Collection Ambient Air Quality Standards - Calculations						
Pollutant	(1-hr, 3-hr, 8-hr, 24-hr standards are not to be used for collection)				Annual (Mean)	95% Ambient
	1-hr	3-hr	8-hr	24-hr		
PM ₁₀	14149.25203				4.304193648	5.400118263
CO		2337.880332				
NO _x			267.877833			5.312830123
SO _x				61.24571794		23.3348717
TOTC						
Background Concentrations - Ambient/Non-Classifiable Area (ug/m ³)						
Pollutant	1-hr	3-hr	8-hr	24-hr	Annual	
PM ₁₀	11400		5130	86		32.7
CO						48
NO _x			343	144		23.5
SO _x						
TOTC						

Appendix C

Modeling Information

P-050507

01/07/02
11:25:16

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***
Thompson Paving, Rexburg K.H. 8-10-05
~~ASH HMA Plant Pocatello Airport~~

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .126000
STACK HEIGHT (M) = 4.5720
STK INSIDE DIAM (M) = .6096
STK EXIT VELOCITY (M/S) = 29.1063
STK GAS EXIT TEMP (K) = 427.6000
AMBIENT AIR TEMP (K) = 293.0000
RECEPTOR HEIGHT (M) = .0000
URBAN/RURAL OPTION = RURAL
BUILDING HEIGHT (M) = .0000
MIN HORIZ BLDG DIM (M) = .0000
MAX HORIZ BLDG DIM (M) = .0000

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

STACK EXIT VELOCITY WAS CALCULATED FROM
VOLUME FLOW RATE = 18000.000 (ACFM)

BOUY. FLUX = 8.347 M**4/S**3; MOM. FLUX = 53.930 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	.0000	1	1.0	1.0	320.0	109.78	3.06	3.04	NO
100.	6.171	4	20.0	20.0	6400.0	9.78	8.26	4.76	NO
200.	8.092	4	15.0	15.0	4800.0	11.59	15.69	8.73	NO
300.	6.776	4	10.0	10.0	3200.0	15.09	22.81	12.46	NO
400.	5.689	4	8.0	8.0	2560.0	17.72	29.69	15.72	NO
500.	4.709	4	8.0	8.0	2560.0	17.72	36.34	18.68	NO
600.	4.295	4	5.0	5.0	1600.0	25.61	43.14	22.05	NO
700.	3.842	4	4.5	4.5	1440.0	27.95	49.64	24.95	NO
800.	3.472	4	4.0	4.0	1280.0	30.87	56.08	27.82	NO
900.	3.162	4	3.5	3.5	1120.0	34.63	62.48	30.69	NO
1000.	2.917	4	3.5	3.5	1120.0	34.63	68.67	33.22	NO
1100.	2.694	4	3.0	3.0	960.0	39.64	74.98	35.57	NO
1200.	2.515	4	3.0	3.0	960.0	39.64	81.06	37.46	NO
1300.	2.348	4	3.0	3.0	960.0	39.64	87.10	39.30	NO
1400.	2.211	5	1.0	1.0	10000.0	64.86	71.33	31.81	NO
1500.	2.290	5	1.0	1.0	10000.0	64.86	75.68	32.82	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:
 151. 8.662 4 20.0 20.0 6400.0 9.78 12.15 6.82 NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
 DWASH=NO MEANS NO BUILDING DOWNWASH USED
 DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
 DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

 * SUMMARY OF TERRAIN HEIGHTS ENTERED FOR *
 * SIMPLE ELEVATED TERRAIN PROCEDURE *

TERRAIN HT (M)	DISTANCE RANGE (M)	
	MINIMUM	MAXIMUM
0.	1.	1500.

 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	8.662	151.	0.

 ** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
