



Air Quality Permitting Statement of Basis

January 10, 2007

Permit to Construct No. P-060522

**Cooper Ready Mix
Salmon, ID**

Facility ID No. 777-00314

A handwritten signature in black ink, appearing to read "Robert Baldwin".

Prepared by:

**Robert Baldwin, Associate Engineer
AIR QUALITY DIVISION**

FINAL

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Acronyms, Units, and Chemical Nomenclatures

AIRS	Aerometric Information Retrieval System
BMP	best management practices
DEQ	Department of Environmental Quality
EPA	U.S. Environmental Protection Agency
hr/yr	hours per year
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
lb/hr	pound per hour
lb/yd ³	pound per cubic yard
NSPS	New Source Performance Standards
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
SIC	Standard Industrial Classification
T/yr	tons per year
yd ³ /yr	cubic yards per year

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. This PTC replaces permit-by-rule registration P-020911, issued August 29, 2002, and a Tier II operating permit, T2-020512, issued April 2, 2003, the terms and conditions of which no longer apply. The purpose of this permit allows the concrete batch plant and rock crushing and screening operation to be one facility under one permit never operating at two different locations.

2. FACILITY DESCRIPTION

Cooper Ready Mix operates a concrete batch plant and a rock crushing and screening operation at the same location. Cooper Ready Mix request the permit changes to allow the rock crushing and screening operation to operate at the same location beyond 12 months. The power requirements of the operation are supplied by the local utility.

Concrete is produced by combining water, sand and gravel, and Portland cement. A portable concrete batch plant consists of storage bins for the sand and gravel, a storage silo for the cement, weigh bins that weigh each component, a conveyor, a water supply, and a control panel. Sand and gravel are produced on site. Typically, three or four different sizes of gravel and one or two different sizes of sand are stockpiled for varying job specifications. Cement is delivered by truck and pneumatically transferred to its storage silo. A baghouse is mounted above the silo to capture cement as air is displaced in the silo. For this source category, the baghouse is considered process equipment primarily, and air pollution control equipment secondarily.

After all of the storage bins are filled, the production process begins when sand and gravel are drop-fed in to their respective weigh bin. When a pre-determined amount of each is weighed, the sand and gravel are drop-fed onto an incline conveyor, which transfers the mixture into a cement truck. A pre-determined amount of cement is also weighed and drop-fed through a rubber chute into the cement truck. The rubber chute directs the cement and provides a measure of dust control. Water is then added, and the components are mixed in the truck on the way to the job site.

This PTC will allow this concrete batch plant and the rock crushing and screening operation to continue operating while located at the same site beyond the 12 month limitation of the existing PBR.

3. FACILITY / AREA CLASSIFICATION

This facility is classified as a minor facility because the Cooper Ready Mix facility's potential to emit is less than major source thresholds without requiring limits on its potential to emit. Fugitive emissions do not aggregate towards the determination of major facility. This being the case, the Aerometric Information Retrieval System (AIRS) facility classification is "B." The SIC code defining the facility is 3273/1442 which covers the concrete batch plant and the rock crushing operation.

This facility is a portable facility and may locate anywhere in the state of Idaho except the Sandpoint PM₁₀ nonattainment area.

The AIRS information provided in the Appendix defines the classification for each regulated air pollutant. This required information is entered into the EPA AIRs database.

4. APPLICATION SCOPE

Cooper Ready Mix requested a PTC for this existing concrete batch plant and portable rock crushing operation, because they intend to operate the plant at the same location for more than 12 consecutive months. The initial location is in Lemhi County, at 11 Cooper Circle in Salmon. This PTC replaces permit by rule (PBR) registration P-020911, issued August 29, 2002, and the Tier II operating permit, T2-020512 issued April 2, 2003, the terms and conditions of each which no longer apply.

Cooper Ready Mix has indicated while the permit is a portable permit, the facility's intention is to stay at the same site. Cooper Ready Mix is proposing to operate additional equipment at this location compared to the equipment covered under the previous PBR. Table 4.1 lists the equipment covered under the old PBR as well as the equipment proposed to be covered under this "initial" PTC.

Table 4.1 CHANGE IN CRUSHING FACILITY EQUIPMENT

Permit by Rule Registration PR-020911, August 29, 2002	Proposed Configuration (this PTC)
Diamond Jaw Crusher Serial No.: 2.24.9 Capacity: 80 Tons per hour	Manufacturer: Diamond 24X36 Jaw Crusher Model: unknown Rating (tons/hr): 225 Date of Manufacture: Before 1980s
Eljay RC36 Cone Crusher Serial No.: 5 Capacity: 80 Tons per hour	Manufacturer: Diamond 14X24 Jaw Crusher Model: 2.24.9 Rating (tons/hr): 90 Date of Manufacture: Before 1970s
Kolman 8' x 3' Serial No.: unknown	Manufacturer: Allis-Chalmers Cone Crusher Model: B-57217 Rating (tons/hr): 285 Date of Manufacture: 1977
U.S. Machinery 8' x 4' Serial No.: unknown	Manufacturer: Telsmith Model: 5506 Size (feet): 12 X 4, 2 Decks Date of Manufacture: 1968
	Manufacturer: U. S. Machinery Model: Unknown Size (feet): 8 X 4, 2 Decks Date of Manufacture: Purchased in 1982
	Manufacturer: Kolman Model: Unknown Size (feet): 8 X 3, 3 Decks Date of Manufacture: Purchased in 1982

4.1 Application Chronology

August 30, 2006	Receipt of the PTC application and \$1,000 PTC application fee.
October 2, 2006	Application declared complete.
December 8, 2006	Receipt of additional application information (fax about dates of manufacturing and purchasing).

5. PERMIT ANALYSIS

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

5.1 Equipment Listing

Table 5.1 SUMMARY OF REGULATED SOURCES

Source Description	Emissions Control(s)
<u>Concrete Batch Plant – Truck Mix, or equivalent</u> Manufacturer: Ideal Manufacturing Company Model: FastWay Maximum production capacity: 16 cubic yards of concrete per hour (cy/hr)	<u>Cement Storage Silo Baghouse, or equivalent:</u> Manufacturer: Ideal Manufacturing company Model: 1000 cubic feet, 250 barrel Air flowrate (acfm): 450 Control efficiency: 99.8%
<u>Crusher, or equivalent</u> Manufacturer: Diamond 24X36 Jaw Crusher Model: unknown Rating (tons/hr): 225 Date of Manufacture: Before 1980s	BMP
<u>Crusher, or equivalent</u> Manufacturer: Diamond 14X24 Jaw Crusher Model: 2.24.9 Rating (tons/hr): 90 Date of Manufacture: Before 1970s	BMP
<u>Crusher, or equivalent</u> Manufacturer: Allis-Chalmers Cone Crusher Model: B-57217 Rating (tons/hr): 285 Date of Manufacture: 1977	BMP
<u>Screen</u> Manufacturer: Telsmith Model: 5506 Size (feet): 12 X 4, 2 Decks Date of Manufacture: 1968	BMP
<u>Screen</u> Manufacturer: U. S. Machinery Model: Unknown Size (feet): 8 X 4, 2 Decks Date of Manufacture: Purchased in 1982	BMP
<u>Screen</u> Manufacturer: Kolman Model: Unknown Size (feet): 8 X 3, 3 Decks Date of Manufacture: Purchased in 1982	BMP

5.2 Emissions Inventory

Emissions from the rock crushing and screening operation were considered fugitive emissions. The emissions from the concrete batch plant are considered fugitive emissions except for the emissions from the cement silo baghouse. These emissions were estimated using the emission factors in AP-42, June 2006.

The emission factor for a pneumatically loading of a cement silo with baghouse is 0.00034 pound of pollutant per ton material handled. The cement content for a cubic yard of concrete is approximately 14 percent. The baghouse emissions are 3.19 lbs per year for the permitted limit of 33,280 cubic yards per year.

$$4024 \text{ lb/yd}^3 \times 33,280 \text{ yd}^3/\text{yr} \times 14\% \times 0.00034 \text{ lb PM}_{10}/\text{ton} / 2000 \text{ lb/ton} = 3.19 \text{ lb PM}_{10}/\text{yr} \text{ or } 0.0016 \text{ T PM}_{10}/\text{yr}.$$

Assuming 2080 operating hours per year, the hourly emission is 0.0015 lb/hr.

Table 5.2 SUMMARY OF EMISSIONS ASSOCIATED WITH THIS INITIAL PTC

Criteria Pollutants	Total Emissions	
	Lb/hr	T/yr 2080 hrs/yr
PM ₁₀	0.0015	0.0016

5.3 Modeling

Based on DEQ’s modeling threshold for point source emissions was not required for PM₁₀.

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

The facility’s proposed project does not meet the permit to construct exemption criteria contained in Sections 220 through 223 of the Rules. Therefore, a PTC is required.

IDAPA 58.01.01.203.....Permit Requirements for New and Modified Stationary Sources

The applicant has shown to the satisfaction of DEQ that the facility will comply with all applicable emissions standards, ambient air quality standards, and toxic increments.

IDAPA 58.01.01.224.....Permit to Construct Application Fee

The applicant satisfied the PTC application fee requirement by submitting a fee of \$1,000.00 at the time the original application was submitted, August 30, 2006.

IDAPA 58.01.01.225.....Permit to Construct Processing Fee

The total emissions from the proposed new facility are under 0.0016 T/yr; therefore, the associated processing fee is \$1000.00. No permit to construct can be issued without first paying the required processing fee.

IDAPA 58.01.01.625.....Visible Emissions

Requirements to control visible emissions (opacity) from point sources of emissions apply to all Idaho facilities. This rule has been incorporated as a permit condition to require control of particulate emissions from point sources at the facility.

IDAPA 58.01.01.650-651Rules for the Control of Fugitive Dust

Requirements to take reasonable precautions to control fugitive dust apply to all Idaho facilities. This rule has been incorporated as a permit condition to require control of fugitive dust from facility operations.

40 CFR 60, Subpart OOOStandards of Performance for Nonmetallic Mineral Processing Plants

The documentation from the facility indicates the equipment was either purchased or manufactured before August 31, 1983. Therefore, the regulations of Subpart OOO do not apply to this facility.

5.5 Permit Conditions Review

5.5.1 Permit Conditions 2.2, 3.3, 4.2, and 4.3 limits the visible emissions to 20%.

Compliance is demonstrated through the procedures required in Permit Condition 2.7.

5.5.2 Permit Condition 3.4 restricts the concrete production to 33,280 cubic yards per year.

5.5.3 Compliance is demonstrated with the monitoring required in Permit Condition 3.6.

5.5.4 Permit Condition 4.4 restricts the throughput of the primary crusher to 1800 tons per day and 37,400 tons per year.

Compliance is demonstrated with the monitoring required in Permit Condition 4.5

The remaining permit conditions are self-explanatory.

6. PERMIT FEES

An application fee of \$1,000 is required in accordance with IDAPA 58.01.01 224. The application fee was received by DEQ on August 30, 2006. A permit processing fee of \$1,000.00 is required in accordance with IDAPA 58.01.01 225, because the allowable emissions are less than one ton per year. This facility is not a major facility and is not subject to Tier I operating permit registration fees.

Table 6.1 PTC PROCESSING FEE TABLE

Emissions Inventory			
Pollutant	Annual Emissions Increase (T/yr)	Annual Emissions Reduction (T/yr)	Annual Emissions Change (T/yr)
NO _x	--	0	--
SO ₂	--	0	--
CO	--	0	--
PM ₁₀	--	0.5984	0.5984
VOC	--	0	--
HAPS	--	0	--
Total:	--	0.5984	0.5984
Fee Due	\$1,000.00		

7. PERMIT REVIEW

7.1 Regional Review of Draft Permit

On January 10, 2007, a draft of the permit and statement of basis was provided electronically to the Idaho Falls Regional Office for review. No comments were received.

7.2 Facility Review of Draft Permit

On January 10, 2007, a draft of the permit and statement of basis was issued for facility review. No comments were received.

7.3 Public Comment

An opportunity for public comment period on the PTC application was provided from October 13, 2006, through November 13, 2006, in accordance with IDAPA 58.01.01.209.01.c. No comments or requests for a public comment period were received.

8. RECOMMENDATION

Based on review of application materials, and all applicable state and federal rules and regulations, staff recommends that Cooper Ready Mix be issued PTC No. P-060522 for the combined concrete batch plant and rock crushing and screening operation. No public comment period is recommended, no entity has requested a comment period, and the project does not involve PSD requirements.

REB/bf Permit No. P-060522

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APPENDIX A

AIRS Information

P-060522

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

Facility Name: Cooper Ready Mix, Concrete Batch Plant and Crushing Operation
Facility Location: Portable
AIRS Number: 777-00314

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							U
NO _x	B							U
CO	B							U
PM ₁₀	B							U
PT (Particulate)	B							U
VOC	B							U
THAP (Total HAPs)	B							
APPLICABLE SUBPART								

^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).