Air Quality Permitting
Statement of Basis

July 14, 2006

Permit to Construct No. P-060507

Walters Ready Mix, Inc.
Portable

Facility ID No. 777-00381

Prepared by:

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AIR QUALITY DIVISION

FINAL PERMIT

Table of Contents

Acronyms, Units, and Chemical Nomenclatures

AACC	acceptable ambient concentration for carcinogens
acfm	actual cubic feet per minute
AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
CO	carbon monoxide
cy/hr	cubic yards per hour
cy/day	cubic yards per day
cy/yr	cubic yards per consecutive 12-month period
DEQ	Department of Environmental Quality
EI	emissions inventory
EL	emission level
EPA	U.S. Environmental Protection Agency
HAPs	Hazardous Air Pollutants
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
lb/day	pounds per day
lb/hr	pounds per hour
$\mu g/m^3$	micrograms per cubic meter
MACT	Maximum Achievable Control Technology
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_x	nitrogen oxides
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
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_2	sulfur dioxide
T/yr	tons per year
TAP	toxic air pollutant
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

Walters Ready Mix, Inc. (Walters) operates a portable Johnson TY267 truck mix concrete plant that is normally located at 244 South, 50 West, approximately 2-1/2 miles south of Driggs, Idaho. The plant's maximum capacity is 70 cubic yards of concrete per hour (cy/hr) and—based on maximum operation for eight hours per day for eight months each year—a maximum of 140,000 cubic yards of concrete per year.

Concrete is produced by combining water, cement, sand (fine aggregate) and gravel (coarse aggregate). Supplementary cementing materials, also called mineral admixtures or pozzolan minerals may be added to make the concrete mixtures more economical, reduce permeability, increase strength, or influence other concrete properties. Typical examples are natural pozzolans, fly ash, ground granulated blast-furnace slag, and silica fume, which can be used individually with Portland or blended cement or in different combinations. Chemical admixtures are usually liquid ingredients that are added to concrete to entrain air, reduce the water required to reach a required slump, retard or accelerate the setting rate, to make the concrete more flowable or other more specialized functions.[1]

A portable concrete batch plant consists of storage bins or stockpiles for the sand and gravel, storage silos for the cement and cement supplement, weigh bins that weigh each component, conveyors, a water supply, and a control panel. Sand and gravel are either produced on site or purchased elsewhere. Typically, three or four different sizes of gravel and one or two different sizes of sand are stockpiled for varying job specifications. Cement and supplementary cementing materials are delivered by truck and pneumatically transferred to the appropriate storage silo. A baghouse or dust collector is mounted above each silo to capture cement or cement supplement as air is displaced in the silo. For this source category, the baghouse is considered primarily as process equipment, with a secondary function as air pollution control equipment. Power to run the facility is provided by the local utility.

After all the storage bins are filled, the production process begins when sand and gravel are drop-fed into their respective weigh bins. When a pre-determined amount of each is weighed, the aggregate is heavily wetted for better mixing and to minimize fugitive dust prior to being dropped onto a conveyor, which transfers the mixture into either a truck for in-transit mixing or a truck mix drum for mixing onsite. A predetermined amount of cement and cement supplement is also weighed and drop-fed through a chute into the mixer. The chute provides a measure of dust control. Sometimes a separate baghouse is used to capture dust from the weigh bins. Water is then added to the truck mix or central mix drum.

3. FACILITY / AREA CLASSIFICATION

This Walters portable concrete batch plant is not a major facility as defined in IDAPA 58.01.01.205, nor is it a designated facility as defined in IDAPA 58.01.01.006. The primary Standard Industrial Classification (SIC) code for this facility is 3273.

Table 3.1 shows the potential to emit (PTE) for particulate matter (PM), criteria air pollutants and hazardous air pollutant (HAP) emissions from the concrete batch plant for Aerometric Information Retrieval System (AIRS) facility classification purposes. This portable concrete batch plant is classified

[1] AP-42 Section 11.12, November 29, 2005 draft.

as a minor facility because, as shown in the table, the potential to emit is less than major source thresholds without requiring limits on the PTE. The AIRS classification is therefore "B."

The facility is a portable facility and may locate anywhere in the state of Idaho except in the Sandpoint PM_{10} nonattainment area. A relocation form must be completed and submitted to DEQ prior to any relocation.

The AIRS information provided in Appendix A defines the classification for each regulated air pollutant for this portable concrete batch facility. This required information is entered into the EPA AIRS database.

Table 3.1 EMISSION INVENTORY ESTIMATES – PM AND CRITERIA POLLUTANTS[a]

Emission Source	PM (total) (T/yr)	PM_{10} (T/yr)	HAPs (total) (T/yr)	Any HAP (T/yr)
Major Source Thresholds	250 (PSD)	100 (Tier I)	25 (Tier I)	10 (Tier I)
Truck Mix Concrete Batch Plant Emissions, point sources only	0.12	0.07	0.013	7.1E-04 (Phosphorus)

[a] PTE based on operation at 70 cy/hr x 24 hr/day x 7 days/wk x 40 wks/yr (470,400 cy/yr). The facility is not winterized, and must shut down during the coldest winter months.

4. APPLICATION SCOPE

Walters Ready Mix, Inc. has been operating this Johnson TY267 portable 6-cubic yard concrete batch plant in Driggs, Idaho for a number of years. DEQ determined in 1990 and again in 1995 that the plant was exempt from permitting requirements. The facility is requesting a PTC to reflect an increase in production and modifications to the plant compared to facility operations in 1995. As described in the application and in supplemental information provided by the applicant, the addition of a larger water pump and water lines and a more efficient scale system to the batch equipment increased the maximum capacity of the plant from 40 cy/hr to 70 cy/hr, and the annual production has increased to an estimated maximum of 140,000 cy/yr, based on an average 8-hr day, seven-day production week for eight months each year.

4.1 Application Chronology

March 23, 2006	Receipt of PTC application and $1,000 application fee.
April 21, 2006	Application determined complete.
April 28, 2006	Opportunity for public comment began.
May 16, 2006	Draft permit sent to Idaho Falls Regional Office (IFRO) for review and comment.
May 19, 2006	Receipt of e-mails from IFRO air quality staff stating that they had no comments.
May 24, 2006	Facility Draft permit issued.
May 30, 2006	Opportunity for public comment closed, with no comments received.
June 12, 2006	Receipt of letter from facility stating that they had no comments on the draft permit.
June 15, 2006	DEQ requested additional information from facility, based on internal review comments.
June 26, 2006	Receipt of additional information from facility clarifying the physical changes to the plant.
July 5, 2006	Receipt of $1,000 processing fee.

5. PERMIT ANALYSIS

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

5.1 Equipment Listing

Portable Ready-Mix Plant

Manufacturer:	Johnson-Ross
Model:	TY267
Maximum capacity:	70 cubic yards per hour

Cement Storage Silo Baghouse (Silo Filter Vent)

Manufacturer:	McNeilus
Model No.:	SFV-170
Stack Height:	40 feet
Stack Inside Diameter:	0.65 feet (8-inch x 6-inch exit) – corrected from value of 0.34 ft shown in the application
Exit Air Flow Rate:	650 cfm
Capture Efficiency:	99.6%

Fly Ash Storage Silo No. 2 Dust Collector

Manufacturer:	Stephens Mfg. Co.
Model No.:	SOS-1020 (cartridge-type dust collector)
Stack Height:	40 feet
Stack Inside Diameter:	3 feet
Exit Air Flow Rate:	28 cfm at 0.5" w.g. pressure difference
Capture Efficiency:	99.995%

5.2 Emissions Inventory

The emissions inventory (EI) was estimated by DEQ for all point source emissions from this truck mix concrete batch plant (i.e., the storage silo baghouse and dust collector stacks) based on emission factors from AP-42 Section 11.12 (Rev. 10/01), production data provided in the application, and assumptions and calculations described below. Fugitive emissions are not included in the emission estimates. The detailed EI can be found in Appendix B.

The supplemental information provided by the facility on June 26, 2006, described physical changes to the plant that resulted in increasing the maximum capacity from 40 cy/hr to 70 cy/hr. The change in short-term emissions associated with this PTC was based on increasing concrete production by 30 cy/hr. The concrete production schedule described in the application was based on operating the plant for an average of 8 hours per day. DEQ determined that increasing the permitted daily production rate to 24 hours per day would not substantially change the ambient air impacts and would allow greater flexibility for the day-to-day facility operations. The emissions inventory shown in Tables 5.1 and 5.2, therefore, reflects increasing the production capacity by 30 cy/hr for a 24-hour operating day (720 cy/day).

During a June 14, 2006, telephone conversation, the facility described the actual concrete production rate at about 6,000 cy/yr prior to making the physical changes to the plant. However, there was no permit limit or physical design constraint that would have restricted production to that level. The pre-modification allowable maximum capacity was calculated using the same assumptions used to estimate the PTE for current operations (see Table 3.1), i.e., 24 hours per day, 7 days per week, and—because the facility's current configuration does not allow cold-weather operations—operation for only 40 weeks during each year.

The change in the allowable annual production at the facility was therefore calculated as follows:

Pre-modification (exempt): 40 cy/hr x 24 hr/day x 7 days/week x 40 wk/yr		=	268,800 cy/yr
Post-modification (maximum production requested in the application):		=	140,000 cy/yr
Change in allowable production =	140,000 – 268,800	=	(128,800 cy/yr)

The change in annual emissions of criteria pollutants associated with this PTC was therefore based on a decrease in the annual allowable production of 128,800 cy/yr.

Table 5.1 EMISSION INVENTORY OF CRITERIA POLLUTANTS – CHANGE DUE TO THIS PTC[a]

Pollutant	PM_{10}			Lead		
Source	lb/hr	lb/day	T/yr	lb/hr	lb/month	T/yr
Cement Storage Silo Baghouse	0.003	0.072	-0.0064	8.03E-08	5.84E-05	-3.45E-04
Flyash Storage Silo No. 2 Dust Collector	0.006	0.144	-0.0129	5.69E-07	4.15E-04	-1.64E-02
Total (point sources only)	**0.009**	**0.216**	**-0.0193**	**6.50E-07**	**4.73E-04**	**-1.68E-02**

[a] Increased production by 30 cy/hr, 720 cy/day, and decreased allowable annual production by 128,800 cy/yr.

In accordance with IDAPA 58.01.01.210.02.b, the uncontrolled emissions of toxic air pollutants (TAPs) were calculated using the maximum capacity of the source or modification under its physical and operational design without the effect of any physical or operational limitations. The change in the maximum capacity for noncarcinogenic TAPs, which are subject to 24-hour average standards, was based on increasing the production capacity by 30 cy/hr for a 24-hour operating day (720 cy/day).

The change in the maximum capacity for carcinogenic TAPs, which are subject to annual average standards, for this PTC modification was calculated as follows, based on the assumptions used to estimate the facility's PTE:

Pre-modification:	40 cy/hr x 24 hr/day x 7 days/week x 40 wk/yr	=	268,800 cy/yr
Post-modification:	70 cy/hr x 24 hr/day x 7 days/week x 40 wk/yr	=	470,400 cy/yr
Change in uncontrolled production =	470,400 – 268,800	=	201,600 cy/yr

The change in uncontrolled TAPs emissions associated with this PTC is shown in Table 5.2.

Table 5.2 EMISSION INVENTORY OF TAPS METALS – PTC CHANGE, UNCONTROLLED EMISSIONS

Source	Arsenic lb/hr, annual average	Beryllium lb/hr, annual average	Cadmium lb/hr, annual average	Chromium lb/hr, 24-hr average	Manganese lb/hr, 24-hr average	Nickel lb/hr, annual average	Phosphorus lb/hr, 24-hr average	Selenium lb/hr, 24-hr average
Cement Silo Baghouse + Flyash Silo Dust Collector	5.67E-06	5.13E-07	1.94E-08	9.20E-06	2.75E-06	1.31E-05	1.13E-04	7.93E-08
IDAPA TAPs EL (lb/hr)	1.50E-06	2.80E-05	3.70E-06	3.3E-02	3.33E-01	2.70E-05	7.00E-03	1.30E-02
Exceed TAPs EL?	Yes	No	No	No	No	No	No	No

[a] Per a June 2, 2006, e-mail, Michael Dubois to Michael Simon, et al, "Hex Chrome for Concrete Batch Plants," the TAPs analysis for chromium is based on comparison with the chromium screening level in IDAPA 58.01.01.585 for noncarcinogens.

5.3 Modeling

Based on current DEQ modeling guidance,[2] modeling is required for an increase in PM_{10} emissions of 0.2 pounds per hour or 1 ton per year or greater. As shown in Table 5.1, increasing concrete production by 30 cy/hr over a 24-hour operational day (i.e., an increase of 720 cy of concrete per day), results in increasing the 24-hour average PM_{10} emissions from point sources at the facility by 0.009 pounds per hour and *decreasing* by 0.02 tons per year. Modeling of PM_{10} emissions from the facility was therefore not required.

Lead emissions from point sources at the facility were estimated to increase by 4.7E-04 pounds per month and *decrease* by 0.0168 tons per year, significantly less than the modeling thresholds of increases of 100 pounds per month and 0.6 tons per year. Modeling of lead emissions was therefore not required.

As shown in Table 5.2, except for arsenic, uncontrolled TAPs metals emissions from the plant's point sources are below the applicable screening EL, so modeling was not required for those emissions. Modeling was required, however, for the arsenic emissions. DEQ's SCREEN3 modeling result for the increase in the uncontrolled ambient concentration of arsenic is shown in Table 5.3. Detailed modeling results are included as Appendix C.

Based on these conservative screening level modeling results, the increase in uncontrolled ambient impacts from arsenic emissions associated with this PTC is 59% of the acceptable ambient concentration for carcinogens (AACC).

Table 5.3 AMBIENT IMPACTS FROMTHIS PTC – TAPS – ARSENIC UNCONTROLLED EMISSIONS

Toxic Air Pollutants Carcinogens	Averaging Period	Persistence Factor	Emission Rate lb/hr annual average	SCREEN3 Dispersion Coefficient $\mu g/m^3$ per lb/hr	Maximum Predicted Ambient Impact ($\mu g/m^3$)	AACC ($\mu g/m^3$)	Percent of AACC
Cement Silo Baghouse	Annual	0.0125	2.40E-08	53.6	1.61E-07		
Flyash Silo No 2 Dust Collector	Annual	0.125	5.65E-06	192.3	1.36E-04		
Total					1.36E-04	2.30E-04	59%

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

Walters Ready Mix has requested a PTC to reflect physical changes made to the plant between July 1, 1995, and the present, as described in the supplemental information received on June 26, 2006, to increase the hourly production capacity from 40 cy/hr to 70 cy/hr of concrete, and to authorize a maximum annual concrete production level of 140,000 cy/yr for this batch plant.

IDAPA 58.01.01.203 ..... National Ambient Air Quality Standards (NAAQS)

Estimated emissions of criteria pollutants (in this case, for emissions of PM_{10} and lead) were well below currently published DEQ modeling guidance thresholds. Modeling of PM_{10} and lead ambient air quality impacts was therefore not required to demonstrate compliance with NAAQS, and stack source testing requirements were not imposed. Therefore, specific emission limits on these criteria pollutants were not needed to ensure compliance with air quality standards.

[2] December 31, 2002, "State of Idaho Air Quality Modeling Guideline," DEQ Document ID AQ-011, Revision 1.

The facility has demonstrated compliance, to DEQ's satisfaction, that this project will not cause or significantly contribute to a violation of any ambient air quality standards.

IDAPA 58.01.01.209.05 ..... Permit to Construct Procedures for Tier I Sources

The estimated emissions of PM_{10}, NO_x, SO_2, CO, VOC, and HAPs from this facility do not exceed any major source threshold. Therefore, this is not a Tier I source.

IDAPA 58.01.01.203.3 ..... Toxic Air Pollutants
IDAPA 58.01.01.210 ..... Preconstruction Compliance with Toxics Standards

The facility was operating prior to July 1, 1995, and submitted an application on July 21, 1995, that described a batch plant with a maximum concrete production capacity of 40 cy/hr. The physical changes to the facility that are described in this PTC therefore occurred after July 1, 1995, and the increase in TAPs emissions associated with the modification is subject to the state-only TAPs standards.

The increase in TAPs emissions was based on increasing the production rate by 30 cy/hr (720 cy/day for 24-hour operations) and increasing the uncontrolled maximum production capacity by 201,600 cy/yr. Based on AP-42 emission factors, eight TAP metals may be emitted from this facility.

As shown in Table 5.2, except for arsenic, uncontrolled TAPs metals emissions from the plant's point sources are below the applicable screening EL. In accordance with IDAPA 58.01.01.210.05, no further procedures were required to demonstrate preconstruction compliance for these emissions, and imposition of pollutant-specific emission limits was not required.

As shown in Table 5.3, the modeled uncontrolled ambient concentration of arsenic did not exceed the applicable AACC. In accordance with IDAPA 58.01.01.210.06, no further procedures were required to demonstrate preconstruction compliance for these emissions, and imposition of a pollutant-specific emission limit was not required.

The comparison of the TAPs emissions against the screening ELs, combined with the modeling results, demonstrates to DEQ's satisfaction that the facility would be in compliance with carcinogenic and noncarcinogenic TAPs increments listed in IDAPA 58.01.01.585 and IDAPA 58.01.01.586. In accordance with IDAPA 58.01.01.203.03, this also demonstrates compliance with IDAPA 58.01.01.161.

IDAPA 58.01.01.625 ..... Visible Emissions

This rule has been incorporated as a permit condition to require control of particulate emissions from concrete batch plant point sources.

IDAPA 58.01.01.650-651 ..... Rules for the Control of Fugitive Dust

This rule has been incorporated as a permit condition to require control of fugitive dust from the concrete batch plant.

40 CFR 60 ..... New Source Performance Standards, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants

The provisions of this subpart do not apply to stand-alone screening operations at plants without crushers or grinding mills. The facility is therefore not subject to NSPS.

5.5 *Permit Conditions Review*

This section describes the basis for the conditions that have been included in this permit.

Permit Condition 2.2

This condition requires compliance with the IDAPA 58.01.01.625 20% opacity limit. This condition is applicable only when the facility is operating.

Compliance Assurance

Particulate matter emissions from point sources are controlled by a baghouse or dust collector. In order to assure the baghouse/dust collector are operated as designed, Permit Condition 2.4 requires development and implementation of an Operations and Maintenance (O & M) manual that includes procedures for monthly inspections. Permit Condition 2.8 requires monthly inspections, and requires recordkeeping for the inspection results and any corrective actions prompted by the inspection findings. Permit Condition 2.12 requires that records for the most recent two years be kept onsite and made available upon request.

Permit Condition 2.3

Short-term production limits (e.g., hourly or daily) were not needed to ensure compliance with the short-term NAAQS for PM_{10} or lead. This condition limits the concrete production for the facility on an annual average with a monthly rolling period.

Compliance Assurance

Permit Condition 2.7 requires recording of the monthly and annual concrete production, and Permit Condition 2.12 requires that records for the most recent two years be kept onsite and made available upon request.

Permit Conditions 2.5 and 2.6

These permit conditions require implementation of strategies to control fugitive dust. This condition is applicable even during periods when the facility is not producing concrete.

Compliance Assurance

Permit Condition 2.9 requires monthly facility-wide inspections of potential sources of fugitive dust, and requires recordkeeping for the inspection results and any corrective actions prompted by the inspection findings. Permit Condition 2.12 requires that records for the most recent two years be kept onsite and made available upon request.

Permit Condition 2.10

Permit Condition 2.10 authorizes this facility to relocate and operate in any PM_{10} nonattainment area, except for the Sandpoint PM_{10} nonattainment area (facility-wide modeling would be required to allow operation in Sandpoint). The increase in PM_{10} emissions associated with this PTC was below DEQ modeling thresholds.

Compliance Assurance

Permit Condition 2.10 requires the permittee to contact DEQ for current area status and more specific details about the nonattainment area boundaries. An interactive map showing the boundaries of PM_{10} nonattainment areas can also be accessed on the DEQ website using the following steps to zoom in to map levels showing named streets:

1. Access the DEQ website at http://www.deq.idaho.gov/;
2. Select Maps & Data, Interactive Mapping;

3. Click on the link to the Air Quality Monitoring Website; and
4. Zoom in on the area of interest by selecting the "+" icon and clicking on the interactive map.

Permit Condition 2.7 requires monitoring to ensure that the annual production of concrete is limited, Permit Conditions 2.8 and 2.9 require control of fugitive dust, monthly facility-wide inspections of potential sources of fugitive dust, and recordkeeping for the inspection results and any corrective actions prompted by the inspection findings. Permit Condition 2.12 requires that records for the most recent two years be kept onsite and made available upon request. Permit Condition 2.13 requires submittal of a Portable Equipment Registration and Relocation Form (PERF), including a scaled plot plant, prior to any relocation.

Permit Condition 2.11

This permit condition authorizes this facility to collocate with any facility.

Based on the estimates shown in Table 5.4, the emissions from this concrete batch plant would be at most one-tenth of the levels needed to trigger dispersion modeling for criteria pollutants, and the controlled ambient impacts from TAPs emissions would be less than about six percent for any of the TAPs metals for which emission factors are available. Collocation was therefore authorized with no change in the allowable short-term or long term concrete production compared to stand-alone operations. The emission inventory for this case is included in Appendix B, and the screening modeling results are included in Appendix C.

Table 5.4 ESTIMATED EMISSIONS AND IMPACTS AT PERMITTED PRODUCTION CAPACITY

Criteria Pollutants, Emission Rates	Operation at Permitted Capacity, 70 cy/hr and 140,000 cy/yr	Modeling Threshold or Threshold of Concern	Percent of Threshold
PM_{10}	0.021 lb/hr	0.2 lb/hr	10.5%
PM_{10}	0.021 T/yr	1.0 T/yr	2.1%
Lead	0.001 lb/month	100 lb/month	0.001%
Lead	6.6E-06 T/yr	0.6 T/yr	0.001%
TAPs[a]			
Arsenic (controlled emission)	6.00E-07 lb/hr	1.50E-06 lb/hr (EL)	40%
Arsenic (controlled ambient impact)	1.40E-05 µg/m³	2.30E-04 µg/m³ (AACC)	6.1%
Max for all other TAPs (controlled emission)	1.49E-06 lb/hr, Nickel	2.70E-05 lb/hr (EL)	5.53%
Max for all other TAPs (controlled ambient impact)	3.21E-05 µg/m³, Nickel	4.20E-03 µg/m³ (AACC)	0.76%

[a] State-only TAPs requirements do not apply to facilities that were permitted or operating prior to July 1, 1995. The only TAPs regulated under this PTC are the emissions that resulted from the facility modifications after that date. TAPs emissions at the full permitted production capacity are provided for the collocation discussion only.

Compliance Assurance

Permit Condition 2.7 requires recording of the monthly and annual concrete production, and Permit Condition 2.12 requires that records for the most recent two years be kept onsite and made available upon request.

Remaining Permit Conditions

The permit conditions that have not been discussed in this section are self-explanatory and are not included in this statement of basis.

6. PERMIT FEES

On March 23, 2006, Walters Ready Mix, Inc. paid the $1,000 application fee required by IDAPA 58.01.01 224.

A permit to construct processing fee of $1,000 is required in accordance with IDAPA 58.01.01.225 because the estimated total change in emissions of -0.19 tons per year resulting from the changes associated with this PTC is less than one ton per year. Walters paid the $1,000 processing fee on July 5, 2006. This facility is not a major facility and is not subject to 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	0.0	0	0.0
SO_2	0.0	0	0.0
CO	0.0	0	0.0
PM_{10}		0.0193	-0.0193
VOC	0.0	0	0.0
HAPS		2.30E-05	-2.30E-05
Total:	0.0	-0.19	**-0.19**
Fee Due	**$1,000.00**		

7. PERMIT REVIEW

7.1 Regional Review of Draft Permit

On May 16, 2006, a draft of the permit and statement of basis was provided electronically to the Idaho Falls Regional Office (IFRO) for review. On May 19, two e-mails were received from IFRO air quality staff stating that they had no comments.

7.2 Facility Review of Draft Permit

On May 24, 2006, a draft of the permit and statement of basis was issued to the facility for review. On June 12, 2006, the facility notified DEQ that they had no comments.

7.3 Public Comment

An opportunity for public comment period on the PTC application was provided from April 28, 2006, through May 30, 2006, in accordance with IDAPA 58.01.01.209.01.c. During this time, there were no comments on the application and no requests for a public comment period on DEQ's proposed action.

8. RECOMMENDATION

Based on review of application materials, and all applicable state and federal rules and regulations, staff recommends that Walters Ready Mix, Inc., be issued final PTC No. P-060507 for the portable concrete ready-mix plant. No public comment period is recommended, no entity has requested a comment period, and the project does not involve PSD requirements.

CR/bf Permit No. P-060507

Appendix A

AIRS Information

P-060507

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

Facility Name: Walters Ready Mix, Inc., Driggs Johnson TY267 Concrete Batch Plant
Facility Location: Portable
AIRS Number: 777-00381

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								
NO_x								
CO								
PM_{10}	B							U
PT (Particulate)	B							U
VOC								
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).

Appendix B

Emissions Inventory

P-060507

B.1 PM10 EI and PM/PM10 Emissions: FACILITY CLASSIFICATION for Truck Mix Portable Concrete Batch Plant

Facility Information 7/7/08 17:20

Company:	Walters Ready Mix, Inc., Rexburg, Idaho
Facility ID:	777-00381
Permit No.:	P-060507
Source Type:	Truck Mix Portable Concrete Batch Plant
Manufacturer:	Johnson-Ross, Model TY287 (Driggs, ID Portable Unit)

NEW MAXIMUM PRODUCTION TOTALS
70 cy/hr
24 -hr operation day
140,000 cy/yr

NET INCREASE IN Production[1]

Maximum Hourly Production Rate:	70	cy/hr	
Proposed Daily Production Rate:	1,680	cy/day	
Proposed Maximum Annual Production Rate:	140,000	cy/year	
Cement Storage Silo Capacity:		ft³ of aerated cement	
Cement Storage Silo Large Compartment Capacity for cement only:		of the silo capacity	
Cement Storage Silo small Compartment Capacity for cement or ash:		of the silo capacity	

[1] Information from the applicant's submittal received by DEQ on March 28, 2008

Assumptions Implied or Stated in Application:
Requested daily production was based on 8 hour/day @ 70 cy/hr. Emissions inventory is based on 24 hr day to allow deleting permit daily production limits.
Max Annual is based on 7-days/wk operation for 8 months each year, or ~ 2,800 hrs @70 cy/hr = 140,000 cy/hr

Change in PM_{10} Emissions due to this PTC

Emissions Point	PM_{10} Emission Factor[1] (lb/cy)		Emission Rate, Max.	Emission Rate, 24-hour average		Emission Rate, annual average	
	Controlled	Uncontrolled	lb/hr[2]	lb/hr[3]	lb/day[3]	lb/hr[4]	T/hr[4]
Aggregate delivery to ground storage		0.0031	0.22	0.217	5.208	0.050	0.22
Sand delivery to ground storage		0.0007	0.049	0.049	1.176	0.011	0.05
Aggregate transfer to conveyor		0.0031	0.22	0.217	5.208	0.050	0.22
Sand transfer to conveyor		0.0007	0.049	0.049	1.176	0.011	0.05
Aggregate transfer to elevated storage		0.0031	0.22	0.217	5.208	0.050	0.22
Sand transfer to elevated storage		0.0007	0.049	0.049	1.176	0.011	0.05
Cement delivery to silo (Gallatine SFV170)	0.0001		0.007	0.007	0.168	0.0016	0.0070
Cement supplement delivery to Silo (Stephens SOS-1620)	0.0002		0.014	0.014	0.336	0.0032	0.0140
Weight hopper loading (batcher loading)		0.0038	0.27	0.269	6.384	0.061	0.27
Truck mix loading =0.140* (Table 11.12-2 Factor of 1.123)		0.1571	11.00	10.996	263.904	2.510	11.00
Point Sources Total Emissions	0.0003		2.10E-02	2.10E-02	5.04E-01	4.79E-03	2.10E-02
Process Fugitive Emissions		0.17226	12.06	12.06	289.43	2.75	12.06
Facility Wide Total: Point Sources + Process Fugitives (Except for Road Dust and Windblown Dust)		0.1726	12.06	12.06	289.93	2.76	12.06

POTENTIAL TO EMIT - FACILITY CLASSIFICATION[5] at 470,400 cy/yr

Facility Classification Total PM[5]	0.0006				0.13
Facility Classification Total PM10[5]	0.0003				0.07

[1] The EFs are taken from AP-42, Table 11.12-3 (version 10/01)
[2] Max. hourly rate = EF in lb/cy x Max. hourly production rate in cy/hr
[3] Hourly emissions rate, 24-hr average = Max.hourly emissions rate x proposed daily production / max. hour production rate / 24. Daily emissions rate =
[4] Annual average hourly emissions rate = Max hourly rate x proposed annual production rate/max. hourly production rate/8760 hr. Annual emissions rate =
[5] Controlled EFs for PM = 0.0002 (cement silo) + 0.0003 (cement supplement silo) for PM10 = 0.0001 (cement silo) + 0.0002 (supplement silo)
[6] PTE for Facility Classification is based on baghouses as process equipment, 24-hr day, 7 days/wk, 40 wks/yr = 1,680 cy/day, and 470,400 cy/yr

IDAHO DEQ EMISSION INVENTORY WORKSHEET
EIAP42 Table 11.12-4

9.2 Toxic Air Pollutant (TAPs) EI: FACILITY CLASSIFICATION, Truck Mix Portable Concrete Batch Plant - Operations at 78 cy/hr, 1,680 cy/day & 148,000 c 7/7/2006 17:20

* Emissions estimates are based on EFs in AP-42, Table 11.12-3 (version 10/01) and the following assumptions of one yard of concrete:

Coarse aggregate		1955	pounds
Sand		1428	pounds
Cement		491	pounds
Cement supplement		73	pounds
Water		30	gallons
Concrete		4264	pounds

Facility Information

Company:	Walters Ready Mix, Inc., Rexburg, Idaho
Facility ID:	777-00381
Permit No.:	P-060507
Source Type:	Truck Mix Portable Concrete Batch Plant
Manufacturer:	Johnson-Ross, Model TY267 (Driggs, ID Portable Unit)

Increase in Production

...ete Production Rate			78	cy/hr	
...ete Production Rate			1,680	cy/day	
...ual Production Rate			148,680	cy/year	

Increased Uncontrolled Production Rate

1,680 cy/day	24	hrs/day,	
478,400 cy/year	7	days/wk,	
	48	wks/year	

Load emissions

Emissions Point	Lead Emissions Factor* (lb/ton of material loaded)		Emission Rate, Max.	Controlled Emission Rate, quarterly average*		Uncontrolled Emission Rate, max.	Uncontrolled Emission Rate, quarterly average*	
	Controlled with Fabric filter	Uncontrolled	lb/hr	lb/hr	lb/year	lb/hr	lb/hr	lb/year
Cement delivery to silo	1.05E-08	7.38E-07	1.67E-07	1.67E-07	1.39E-04	1.39E-05	1.39E-05	2.76E-02
Cement supplement	5.25E-07	ND	1.33E-05	1.33E-05	5.57E-04	1.33E-05	1.33E-05	2.66E-03
Truck Load (Fugitive)	1.54E-05	3.43E-05	8.68E+00	8.68E+00	6.94E+00	8.68E+00	8.68E+00	6.94E+00
Total			1.03E-05	1.03E-05	1.14E-05	1.03E-05	1.03E-05	1.03E-05
								Tons per year
Total Annual			3.21E-05	lb per day	5.85E-05	TPY		1.28E-01

* The emissions factors are from AP-42, Table 11.12-6 (version 10/01)
* Max. hourly rate = EF x pound of cement/yd³ of concrete x max. hourly concrete production rate(2000 lb/T)
* Max. hourly rate = EF x pound of cement supplement/yd³ of concrete x max. hourly concrete production rate(2000 lb/T)
* Max. hourly rate = EF x pound of (cement + cement supplement)/yd³ of concrete x max. hourly concrete production rate(2000 lb/T)
* Daily avg./qtly rate = Max. hrly rate x (daily rate/24 hrs)/ max. hrly prod. rate/qtrly emissions rate=qtrly avg hrly rate x 24 hrs/day x 91 days/qtr

TAP Emission Factors from AP-42, Table 11.12-6 (Version 10/01)

Emissions Point	Arsenic EF (lb/ton of material loaded)		Beryllium EF (lb/ton of material loaded)		Cadmium EF (lb/ton of material loaded)		Chromium EF (lb/ton of material loaded)		Manganese EF (lb/ton of material loaded)		Nickel EF (lb/ton of material loaded)		Phosphorus EF (lb/ton of material loaded)		Selenium EF (lb/ton of material loaded)	
	Controlled with Fabric filter	Un-controlled	Controlled with Fabric filter	Un-controlled	Controlled with Fabric filter	Un-controlled	Controlled with Fabric filter	Un-controlled	Controlled with Fabric filter	Un-controlled	Controlled with Fabric filter	Un-controlled	Controlled with Fabric filter	Un-controlled	Controlled with Fabric filter	Un-controlled
Cement delivery to silo (Uncontrolled EFs=13%)	4.34E-09	1.69E-06	4.69E-10	1.71E-08	4.69E-10	2.34E-07	2.59E-08	2.33E-07	1.17E-07	2.63E-04	4.16E-09	1.70E-06	ND	1.16E-05	ND	ND
Cement supplement delivery to silo (Uncontrolled EFs=100%)	1.69E-06	ND	9.84E-08	ND	1.69E-08	ND	1.22E-05	ND	2.59E-07	ND	2.26E-06	ND	3.54E-05	ND	7.24E-08	ND

Uncontrolled TAP Emissions Note: Includes baghouses on process equipment

Emissions Point	Arsenic		Beryllium		Cadmium		Chromium		Manganese		Nickel		Phosphorus		Selenium	
	lb/hr annual avg.	Tpy*	lb/hr annual avg.	Tpy	lb/hr annual avg.	Tpy	lb/hr 24-hr avg.	Tpy*	lb/hr 24-hr avg.	Tpy	lb/hr annual avg.	Tpy	lb/hr 24-hr avg.	Tpy	lb/hr 24-hr avg.	Tpy
Cement delivery to silo (Uncontrolled EFs=13%)*	5.69E-09	2.49E-07	6.41E-09	2.81E-08	6.41E-09	2.81E-08	4.58E-07	1.48E-05	2.81E-08	1.17E-02	5.51E-07	2.41E-05	2.63E-04	6.81E-04	ND	ND
Cement supplement delivery to silo (Uncontrolled EFs=100%)*	1.33E-05	5.77E-05	1.11E-08	5.23E-08	3.69E-08	1.76E-07	2.10E-05	1.69E-05	4.48E-08	2.20E-05	3.91E-05	1.33E-04	6.68E-05	2.84E-05	1.76E-07	6.23E-07
Point Sources Total	1.33E-05	5.82E-05	1.22E-08	5.23E-08	4.62E-08	1.99E-07	2.16E-05	2.69E-05	6.41E-05	1.17E-02	3.68E-05	1.34E-04	2.64E-04	7.13E-04	1.69E-07	6.23E-07
HAPs Remaining (lb, tpy)	1.33E-05		2.69E-08		3.76E-08		3.36E-05		3.33E-01		2.71E-05		7.89E-05		1.36E-02	
SYNTHETIC MIN?	Yes		No		No		No		No		Yes		No		No	

Total Annual HAPs Emissions = 1.28E-01 Tons per year

Controlled TAP Emissions

Emissions Point	Arsenic		Beryllium		Cadmium		Chromium		Manganese		Nickel		Phosphorus		Selenium	
	lb/hr annual avg.	Tpy*	lb/hr annual avg.	Tpy	lb/hr annual avg.	Tpy	lb/hr 24-hr avg.	Tpy*	lb/hr 24-hr avg.	Tpy	lb/hr annual avg.	Tpy	lb/hr 24-hr avg.	Tpy	lb/hr 24-hr avg.	Tpy
Cement delivery to silo (Controlled EFs=13%)*	1.69E-09	7.39E-08	1.91E-09	8.34E-09	1.91E-09	8.36E-09	4.58E-07	4.58E-07	2.81E-08	2.81E-05	1.64E-07	7.16E-07	ND	ND	ND	ND
Cement supplement delivery to silo (Uncontrolled EFs=100%)*	5.69E-07	2.49E-06	5.37E-08	2.31E-07	1.16E-08	5.08E-08	2.16E-06	3.12E-06	4.48E-08	6.84E-07	1.33E-06	5.83E-06	6.68E-08	8.84E-08	1.69E-07	1.69E-07
Point Sources Total	5.69E-07	2.49E-06	5.69E-08	2.56E-07	1.36E-08	5.99E-08	2.16E-06	3.62E-06	6.41E-06	2.86E-05	1.49E-06	6.54E-06	4.68E-08	8.84E-08	1.69E-07	1.69E-07
HAPs Remaining (lb, tpy)	1.33E-05															
Percent of lb, tpy	40.00%		8.33%		0.30%		0.07%		0.0010%		5.50%		0.07%		0.0014%	
SYNTHETIC MIN?	No		No		No		No		No		No		No		No	

* lb/hr, annual average = EF x pound of cement / Yd³ of concrete x annual concrete production rate / 2000lb/Ton / 8760 hr/yr; lb/hr, 24-hr = EF x pound of cement / Yd3 of concrete x daily concrete production rate / 2000lb/Ton / 24 hr/day
* lb/hr, annual average = EF x pound of cement supplement / Yd³ of concrete x annual concrete production rate / 2000lb/Ton / 8760 hr/yr; lb/hr, 24-hr average = EF x pound of cement supplement / Yd3 of concrete x daily concrete production rate / 2000lb/Ton
* lb/hr, annual average = EF x pound of (cement + cement supplement) / Yd³ of concrete x annual concrete production rate / 2000lb/Ton / 8760 hr/yr; lb/hr, 24-hr average = EF x pound of (cement + cement supplement) / Yd3 of concrete x daily concrete production - NOT INCLUDED - FUGITIVES
* Tpy = lb/hr, annual avg. x 8760 hr/yr x (1T/2000 lb
* Tpy = EF x pound of (cement, or cement supplement, or cement + cement supplement) x annual concrete production rate /2000 lb/ton / 2000 lb/ton

B.1 PM10 Emission Inventory and PM/PM10 Emissions for Truck Mix Portable Concrete Batch Plant

Facility Information 7/7/06 17:21

Company:	Walters Ready Mix, Inc., Rexburg, Idaho
Facility ID:	777-00381
Permit No.:	P-060507
Source Type:	Truck Mix Portable Concrete Batch Plant
Manufacturer:	Johnson-Rose, Model TY387 (Driggs, ID Portable Unit)

NEW MAXIMUM PRODUCTION TOTALS
70 cy/hr
24 -hr operation day
140,000 cy/yr

NET INCREASE IN Production[1]

Maximum Hourly Production Rate:	30	cy/hr	
Proposed Daily Production Rate:	720	cy/day	
Proposed Maximum Annual Production Rate:	-128,800	cy/year	
Cement Storage Silo Capacity:		ft³ of aerated cement	
Cement Storage Silo Large Compartment Capacity for cement only:		of the silo capacity	
Cement Storage Silo small Compartment Capacity for cement or ash:		of the silo capacity	

NET INCREASE IN PRODUCTION NOTES:
= 70 cy/hr - 40 cy/hr
based on 24-hr operation per day at delta rate
= 140,000 cy/yr - 268,800 cy/yr

[1] Information from the applicant's submittal received by DEQ on March 23, 2006

Assumptions Implied or Stated in Application:
Requested daily production was based on 8 hour/day @ 70 cy/hr. Emissions inventory is based on 24 hr day to allow deleting permit daily production limits.
Max Annual is based on 7-day/wk operation for 8 months each year, or ~ 2,000 hrs @70 cy/hr = 140,000 cy/hr

Change in PM_{10} Emissions due to this PTC

Emissions Point	PM_{10} Emission Factor[1] (lb/cy)		Emission Rate, Max.	Emission Rate, 24-hour average		Emission Rate, annual average	
	Controlled	Uncontrolled	lb/hr[2]	lb/hr[3]	lb/day[3]	lb/hr[4]	T/yr[4]
Aggregate delivery to ground storage		0.0031	0.09	0.093	2.232	-0.046	-0.20
Sand delivery to ground storage		0.0007	0.021	0.021	0.504	-0.010	-0.05
Aggregate transfer to conveyor		0.0031	0.09	0.093	2.232	-0.046	-0.20
Sand transfer to conveyor		0.0007	0.021	0.021	0.504	-0.010	-0.05
Aggregate transfer to elevated storage		0.0031	0.09	0.093	2.232	-0.046	-0.20
Sand transfer to elevated storage		0.0007	0.021	0.021	0.504	-0.010	-0.05
Cement delivery to silo (McKelvey SFV179)	0.0001		0.003	0.003	0.072	-0.0015	-0.0064
Cement supplement delivery to Silo (Stephens SOS-1030)	0.0002		0.006	0.006	0.144	-0.0029	-0.0129
Weight hopper loading (batcher loading)		0.0038	0.11	0.114	2.736	-0.056	-0.24
Truck mix loading =0.140* [Table 11.12-2 Factor or 1.122]		0.1571	4.71	4.712	113.088	-2.310	-10.12
Point Sources Total Emissions	0.0003		9.00E-03	9.00E-03	2.16E-01	-4.41E-03	-1.93E-02
Process Fugitive Emissions		0.17228	5.17	5.17	124.04	-2.53	-11.09
Facility Wide Total: Point Source + Process Fugitives (Except for Road Dust and Windblown Dust)		0.1720	5.18	5.18	124.26	-2.54	-11.11

[1] The EFs are taken from AP-42, Table 11.12-3 (version 10/01)
[2] Max. hourly rate = EF in lb/cy x Max. hourly production rate in cy/hr
[3] Hourly emissions rate, 24-hr average = Max.hourly emissions rate x proposed daily production / max. hour production rate / 24. Daily emissions rate =
[4] Annual average hourly emissions rate = Max hourly rate x proposed annual production rate/max. hourly production rate/8760 hr. Annual emissions rate =
[5] Controlled EFs for PM = 0.0002 (cement silo) + 0.0003 (cement supplement silo) for PM10 = 0.0001 (cement silo) + 0.0002 (supplement silo)

8.2 Toxic Air Pollutant (TAPs) Emissions Inventory for Truck Mix Portable Concrete Batch Plant - Increase of 30 cy/hr, 720 cy/day, & -126,000 cy/yr

7/7/2006 17:21

Facility Information

Company:	Walters Ready Mix, Inc., Rexburg, Idaho
Facility ID:	777-00381
Permit No.:	P-060507
Source Type:	Truck Mix Portable Concrete Batch Plant
Manufacturer:	Johnson-Ross, Model TY287 (Driggs, ID Portable Unit)

* Emissions estimates are based on EFs in AP-42, Table 11.12-3 (version 10/01) and the following composition of one yard of concrete:

Coarse aggregate		1895 pounds
Sand		1420 pounds
Cement		491 pounds
Cement supplement		75 pounds
Water		30 gallons
Concrete		4004 pounds

Change in Production (Controlled)

Hr Production Rate:			30	cy/hr	
Dy Production Rate:			720	cy/day	
Yr Production Rate:			-126,000	cy/year	

Change in Production (Uncontrolled)

720 cy/day		24 hrs/day,	7 days/wk,
301,600 cy/year		48 wks/year	
At 48 cy/yr	24 x 7 x 48 x	48	268800
At 78 cy/yr	24 x 7 x 48 x	78	435456

Load emissions

Emission Point	Load Emission Factor[1] (lb/ton of material loaded)		Controlled Emission Rate, lb/hr	Controlled Emission Rate, quarterly average[2]		Uncontrolled Emission Rate, lb/hr	Uncontrolled Emission Rate, quarterly average[2]	
	Controlled with Fabric filter	Uncontrolled	lb/hr	lb/hr[3]	lb/year[4]	lb/hr	lb/hr[3]	lb/quarter[4]
Cement delivery to silo 2	1.68E-08	7.20E-07	8.03E-09	8.03E-09	3.84E-05	8.43E-09	8.43E-09	1.16E-03
Cement supplement	8.34E-07	ND	5.89E-07	5.89E-07	4.19E-04	5.89E-07	5.89E-07	1.24E-03
Truck Load (Fugitive)	1.54E-05	3.62E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total			6.89E-07	6.89E-07	4.72E-04	6.89E-07	6.89E-07	2.39E-03
								Tons per year
Total Annual			1.48E-03	lb per Qtr.	-1.48E-03	TPY		0.39E-03

[1] The emissions factors are from AP-42, Table 11.12-6 (version 10/01)

[2] Max. hourly rate = EF x pound of cement/yd³ of concrete x max. hourly concrete production rate/(2000 lb/T)

[3] Max. hourly rate = EF x pound of cement supplement/yd³ of concrete x max. hourly concrete production rate/(2000 lb/T)

[4] Max. hourly rate = EF x pound of (cement + cement supplement)/yd³ of concrete x max. hourly concrete production rate/(2000 lb/T)

[5] Qrtly avg./yrly rate = Max.hrly rate x (daily rate/24 hr/y max. hrly prod. rate)qrtly emissions rate=qrtly avg hrly rate x 24 hr/day x 91 days/qtr

TAP Emission Factors from AP-42, Table 11.12-6 (Version 10/01)

Emission Point	Arsenic EF (lb/ton of material loaded)		Beryllium EF (lb/ton of material loaded)		Cadmium EF (lb/ton of material loaded)		Chromium EF (lb/ton of material loaded)		Manganese EF (lb/ton of material loaded)		Nickel EF (lb/ton of material loaded)		Phosphorus EF (lb/ton of material loaded)		Selenium EF (lb/ton of material loaded)	
	Controlled with Fabric filter	Uncontrolled	Controlled with Fabric filter	Uncontrolled	Controlled with Fabric filter	Uncontrolled	Controlled with Fabric filter	Uncontrolled	Controlled with Fabric filter	Uncontrolled	Controlled with Fabric filter	Uncontrolled	Controlled with Fabric filter	Uncontrolled	Controlled with Fabric filter	Uncontrolled
Cement delivery to silo (Maximum EFV-170)	4.34E-08	1.68E-06	4.68E-10	1.70E-08	4.68E-10	2.94E-07	2.59E-08	2.52E-07	1.17E-07	2.68E-04	4.14E-08	1.76E-06	ND	1.16E-06	ND	ND
Cement supplement delivery to silo (Maximum SCS-1000)	1.68E-08	ND	9.04E-08	ND	1.08E-08	ND	1.23E-08	ND	2.58E-07	ND	2.38E-08	ND	3.94E-06	ND	7.24E-08	ND

Uncontrolled TAP Emissions (Note: Includes baghouse as propane equipment.

Emission Point	Arsenic		Beryllium		Cadmium		Chromium		Manganese		Nickel		Phosphorus		Selenium	
	lb/hr annual avg.	Tpy[1]	lb/hr annual avg.	Tpy	lb/hr annual avg.	Tpy	lb/hr 24-hr avg.	Tpy[2]	lb/hr 24-hr avg.	Tpy	lb/hr annual avg.	Tpy	lb/hr 24-hr avg.	Tpy	lb/hr 24-hr avg.	Tpy
Cement delivery to silo (Maximum EFV-170)[3]	2.48E-08	1.68E-07	2.70E-09	1.20E-08	2.70E-08	1.20E-08	2.14E-07	8.34E-08	6.83E-07	5.99E-09	2.38E-07	1.03E-06	6.85E-06	2.88E-04	ND	ND
Cement supplement delivery to silo (Maximum SCS-1000)[3]	3.68E-06	2.47E-06	8.11E-07	2.34E-06	1.68E-08	7.20E-08	9.06E-06	1.48E-06	1.88E-06	9.40E-07	1.23E-05	3.04E-06	2.61E-05	1.30E-05	7.23E-08	2.68E-07
Point Sources Total	3.67E-06	2.48E-06	8.13E-07	2.34E-06	1.04E-08	8.40E-08	9.28E-06	1.57E-06	2.76E-06	3.00E-03	1.31E-05	3.73E-06	1.12E-04	3.88E-04	7.68E-08	2.68E-07
IDAPA Screening EL (lb/hr)	1.50E-05		2.50E-06		3.70E-05		3.33E-02		3.33E-01		2.70E-05		7.69E-05		1.30E-02	
EXCEEDS EL?	Yes		No		No		No		No		No		No		No	

Controlled TAP Emissions

Emission Point	Arsenic		Beryllium		Cadmium		Chromium		Manganese		Nickel		Phosphorus		Selenium	
	lb/hr annual avg.	Tpy[1]	lb/hr annual avg.	Tpy	lb/hr annual avg.	Tpy	lb/hr 24-hr avg.	Tpy[2]	lb/hr 24-hr avg.	Tpy	lb/hr annual avg.	Tpy	lb/hr 24-hr avg.	Tpy	lb/hr 24-hr avg.	Tpy
Cement delivery to silo (Maximum EFV-170)[3]	-1.63E-08	-6.76E-08	-1.77E-09	-7.08E-09	-1.77E-09	-7.08E-09	2.14E-07	-4.89E-07	6.83E-07	-1.88E-06	-1.91E-07	-6.61E-07	ND	ND	ND	ND
Cement supplement delivery to silo (Maximum SCS-1000)[3]	-5.37E-07	-2.35E-06	-4.85E-08	-2.13E-07	-1.88E-08	-4.68E-08	9.06E-06	-2.57E-06	1.88E-06	-6.69E-07	-1.23E-06	-5.36E-06	2.61E-05	-8.33E-06	7.23E-08	-1.76E-07
Point Sources Total	-6.63E-07	-2.43E-06	-6.63E-08	-3.35E-07	-1.24E-08	-6.42E-08	9.28E-06	-3.33E-06	2.76E-06	-2.46E-06	-1.33E-06	-6.02E-06	2.61E-05	-8.33E-06	7.23E-08	-1.76E-07
IDAPA Screening EL (lb/hr)	1.50E-05		2.50E-06		3.70E-05		3.33E-02		3.33E-01		2.70E-05		7.69E-05		1.30E-02	
Percent of EL	-10.00%		-0.10%		-0.33%		0.03%		0.001%		-6.69%		0.37%		0.001%	
EXCEEDS EL?	No															

FOR PERCENTAGE FEE CALCULATION

Total Increase in Annual HAPS

-0.39E-06 Tons per year

[1] lb/hr, annual average = EF x pound of cement / Yd³ of concrete x annual concrete production rate / 2000lb/Ton / 8760 hr/yr; lb/hr, 24-hr = EF x pound of cement / Yd3 of concrete x daily concrete production rate / 2000lb/Ton / 24 hr/day

[2] lb/hr, annual average = EF x pound of cement supplement / Yd³ of concrete x annual concrete production rate / 2000lb/Ton / 8760 hr/yr; lb/hr, 24-hr average = EF x pound of cement supplement / Yd3 of concrete x daily concrete production rate / 2000lb/Ton

[3] lb/hr, annual average = EF x pound of (cement + cement supplement) / Yd³ of concrete x annual concrete production rate / 2000lb/Ton / 8760 hr/yr; lb/hr, 24-hr average = EF x pound of (cement + cement supplement) / Yd3 of concrete x daily concrete production - NOT INCLUDED - FUGITIVES

[4] Tpy = lb/hr, annual avg. x 8760 hr/yr x (1T/2000 lb)

[5] Tpy = EF x pound of cement, or cement supplement, or cement + cement supplement x annual concrete production rate (2000 lb/ton / 2000 lb/ton

Appendix C

Modeling Review

P-060507

TABLE C.1 Ambient Impact Analysis for Portable Concrete Batch Truck Mix Plant - "Delta" Ambient Air Impacts

7/7/2006 10:28

Facility Information

Company:	Walters Ready Mix, Inc., Rexburg, Idaho
Facility ID:	777-00381
Permit No.:	P-060507
Source Type:	Truck Mix Portable Concrete Batch Plant
Manufacturer:	Johnson-Ross, Model TY267 (Diego, ID Portable Unit)

Stack Parameters from the Applicant[1]

Point Source	Stack Height	Stack Area (rectangular)	Stack Diameter, A = πd²/4	Air Flowrate[2]		Stack Temperature[3]	Stack Exit configuration, using "X". If check "other" please describe the configuration
	feet(ft)	ft²	ft	acfm		K	
Cement Storage Silo Baghouse- Silo Filter Vent (McNeilus SFV-170)	40	0.33	0.65	650		293	
Fly Ash Storage Silo No. 2 Dust Collector (Stephens SOS-1020)	40		3.00	28		293	

[1] SFV-170 stack equivalent diameter reported in the application was 0.34 ft. Based on the additional description of an 8" x 8" exit, 0.34 ft is the equivalent stack radius.
[2] Air flowrate on specification sheets is given in cfm, presumed to be equal to acfm
[3] Stack temperature not given in application, use ambient temperature.

Modeling Output

Point Source	SCREEN3 Modeling Output @ 1lb/hr or 0.126 g/s[1]				Emission Inventory		Point Source Ambient Impact[2]		PM10 Background Concentration[3]		Total Ambient Concentration[4]		NAAQS (ug/m3)		% of NAAQS	
	Distance to Max. Concentration (m)	Max. Concentration (ug/m³)	24-hour persistence factor	Annual persistence factor, criteria, simple terrain	PM10 Estimated Emission Rate (24-hr average, lb/hr)	PM10 Estimated Emission Rate (annual average, lb/hr)	ug/m³, 24-hour average	ug/m³, annual average	ug/m³, 24-hour average	ug/m³, annual average	ug/m³, 24-hour average	ug/m³, annual average	ug/m³, 24-hour average	ug/m³, annual average	24-hour average	Annual Average
Cement Storage Silo Baghouse- Silo Filter Vent (McNeilus SFV-170)	176															
Fly Ash Storage Silo No. 2 Dust Collector (Stephens SOS-1020)	88															
Point Source PM10 Impacts									73	26			150	50	49%	52%

	Distance to Max. Concentration (m)	Max. Concentration (ug/m³)		Annual persistence factor, carcinogen		Arsenic Emission Rate, lb/hr, uncontrolled annual average		ug/m³, annual average			AACC (ug/m3)	Percent of AACC (Annual Average)	
Cement Storage Silo Baghouse- Silo Filter Vent (McNeilus SFV-170)	176	53.6		0.125		2.40E-08		1.61E-07					
Fly Ash Storage Silo No. 2 Dust Collector (Stephens SOS-1020)	88	192.3		0.125		5.65E-06		1.36E-04					
Point Sources, Arsenic, Uncontrolled Ambient Impact								1.36E-04			2.10E-04		69.12%

[1] Modeled ambient concentration and the distance from the respective emissions point were taken from output files of screen3
[2] SCREEN3 Max Concentration x Persistence Factor x lb/hr
[3] background concentrations from March 14, 2003 memo to Mary Anderson from Rick Hardy and Kevin Schilling, "Background Concentrations for Use in New Source Review Dispersion Modeling"
[4] Add ambient concentration to background concentration to obtain total ambient concentration

TABLE C.1 Ambient Impact Analysis for Portable Concrete Batch Truck Mix Plant Operations at 70 cy/hr, 1,680 cy/day & 140,000 cy/year

7/7/2006 10:09

Facility Information

Company:	Walters Ready Mix, Inc., Rexburg, Idaho
Facility ID:	777-00381
Permit No.:	P-060507
Source Type:	Truck Mix Portable Concrete Batch Plant
Manufacturer:	Johnson-Rose, Model TY287 (Stage, ID Portable Unit)

Stack Parameters from the Applicant[1]

Point Source	Stack Height	Stack Area (rectangular)	Stack Diameter, A = πd²/4	Air Flowrate[2]		Stack Temperature[3]	Stack Exit configuration, using "Y". If check "other" please describe the configuration
	feet(ft)	ft²	ft	cubic		K	
Cement Storage Silo Baghouse- Silo Filter Vent (Stafford SFV-170)	40	0.33	0.65	650		293	
Fly Ash Storage Silo No. 2 Dust Collector (Stephens SCS-1000)	40		3.00	29		293	

[1] SFV-170 stack equivalent diameter reported in the application was 0.34 ft. Based on the additional description of an 8" x 8" exit, 0.34 ft is the equivalent stack radius.
[2] Air flowrate on specification sheets is given in cfm, presumed to be equal to acfm
[3] Stack temperature not given in application, use ambient temperature.

Modeling Output

Point Source	SCREEN3 Modeling Output @ 1lb/hr or 0.126 g/s[1]				Emission Inventory		Point Source Ambient Impact[2]		PM10 Background Concentration[3]		Total Ambient Concentration[4]		NAAQS (ug/m3)		% of NAAQS	
	Distance to Max. Concentration (m)	Max Concentration (ug/m³)	24-hour persistence factor	Annual persistence factor, criteria, simple terrain	PM10 Estimated Emission Rate (24-hr average, lb/hr)	PM10 Estimated Emission Rate (annual average, lb/hr)	ug/m³, 24-hour average	ug/m³, annual average	ug/m³, 24-hour average	ug/m³, annual average	ug/m³, 24-hour average	ug/m³, annual average	ug/m³, 24-hour average	ug/m³, annual average	24-hour average	Annual Average
Cement Storage Silo Baghouse- Silo Filter Vent (Stafford SFV-170)	176	5.36	0.4	0.08												
Fly Ash Storage Silo No. 2 Dust Collector (Stephens SCS-1000)	88	192.3	0.4	0.08												
Point Source PM10 Impacts									73	26						

	Distance to Max. Concentration (m)	Max Concentration (ug/m³)		Annual persistence factor, carcinogen		Arsenic Emission Rate, lb/hr, CONTROLLED annual average		ug/m³, annual average			AACC (ug/m3)	Percent of AACC (Annual Average)	
Cement Storage Silo Baghouse- Silo Filter Vent (Stafford SFV-170)	176	5.36		0.125		1.66E-08		1.11E-08					
Fly Ash Storage Silo No. 2 Dust Collector (Stephens SCS-1000)	88	192.3		0.125		8.83E-07		1.48E-06					
Point Sources, Arsenic, Controlled Ambient Impacts								1.48E-06			3.30E-04		0.45%
	Distance to Max. Concentration (m)	Max Concentration (ug/m³)		Annual persistence factor, carcinogen		Nickel Emission Rate, lb/hr, CONTROLLED annual average		ug/m³, annual average			AACC (ug/m3)	Percent of AACC (Annual Average)	
Cement Storage Silo Baghouse- Silo Filter Vent (Stafford SFV-170)	176	5.36		0.125		1.64E-07		1.10E-07					
Fly Ash Storage Silo No. 2 Dust Collector (Stephens SCS-1000)	88	192.3		0.125		1.33E-06		3.20E-06					
Point Sources, Nickel, Controlled Ambient Impacts								3.31E-06			4.20E-02		0.79%

[1] Modeled ambient concentration and the distance from the respective emissions point were taken from output files of screen3
[2] SCREEN3 Max Concentration x Persistence Factor x lb/hr
[3] Background concentrations from March 14, 2003 memo to Mary Anderson from Rick Hardy and Kevin Schilling, "Background Concentrations for Use in New Source Review Dispersion Modeling"
[4] Add ambient concentration to background concentration to obtain total ambient concentration

06/22/06

18:15:05

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 95250 ***

P-060507 WALTERS READY MIX, DRIGGS JOHNSON TY267 TRUCK MIX CONCRETE PLANT
CEMENT SILO BAGHOUSE STACK

SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	POINT	
EMISSION RATE (G/S)	=	.126000	
STACK HEIGHT (M)	=	12.1920	**(40 feet)**
STK INSIDE DIAM (M)	=	.1981	**(0.65 feet)**
STK EXIT VELOCITY (M/S)	=	9.9529	
STK GAS EXIT TEMP (K)	=	293.0000	
AMBIENT AIR TEMP (K)	=	293.0000	
RECEPTOR HEIGHT (M)	=	1.0000	
URBAN/RURAL OPTION	=	RURAL	
BUILDING HEIGHT (M)	=	.0000	
MIN HORIZ BLDG DIM (M)	=	.0000	
MAX HORIZ BLDG DIM (M)	=	.0000	

STACK EXIT VELOCITY WAS CALCULATED FROM
VOLUME FLOW RATE = 650.00000 (ACFM)

BUOY. FLUX = .000 M**4/S**3; MOM. FLUX = .972 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
10.	.2024E-09	1	1.0	1.0	320.0	18.03	3.69	2.19	NO
100.	46.90	2	1.0	1.0	320.0	18.03	19.34	10.73	NO
200.	52.32	3	1.0	1.0	320.0	17.99	23.68	14.13	NO
300.	47.99	4	1.0	1.0	320.0	17.93	22.67	12.20	NO
400.	45.76	5	1.0	1.1	10000.0	17.10	22.06	10.90	NO
500.	44.58	5	1.0	1.1	10000.0	17.10	27.05	12.88	NO
600.	41.21	6	1.0	1.1	10000.0	16.60	21.27	9.77	NO
700.	42.96	6	1.0	1.1	10000.0	16.60	24.49	11.00	NO
800.	41.85	6	1.0	1.1	10000.0	16.60	27.66	12.04	NO
900.	39.88	6	1.0	1.1	10000.0	16.60	30.80	13.04	NO
1000.	37.54	6	1.0	1.1	10000.0	16.60	33.91	14.01	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 10. M:

176.	53.59	3	1.0	1.0	320.0	17.99	21.17	12.65	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

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     *** SUMMARY OF SCREEN MODEL RESULTS ***
     ****************************************

 CALCULATION       MAX CONC    DIST TO   TERRAIN
  PROCEDURE       (UG/M**3)    MAX (M)    HT (M)
-------------   -----------   -------   -------
SIMPLE TERRAIN     53.59          176.        0.   CEMENT SILO BAGHOUSE STACK


**************************************************
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
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06/22/06
18:26:38

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 95250 ***

P-060507 WALTERS READY MIX, DRIGGS JOHNSON TY267 TRUCK MIX CONCRETE PLANT
FLYASH STORAGE SILO NO. 2

SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	POINT	
EMISSION RATE (G/S)	=	.126000	
STACK HEIGHT (M)	=	12.1920	**(40 feet)**
STK INSIDE DIAM (M)	=	.9144	**(3 feet)**
STK EXIT VELOCITY (M/S)	=	.0201	
STK GAS EXIT TEMP (K)	=	293.0000	
AMBIENT AIR TEMP (K)	=	293.0000	
RECEPTOR HEIGHT (M)	=	1.0000	
URBAN/RURAL OPTION	=	RURAL	
BUILDING HEIGHT (M)	=	.0000	
MIN HORIZ BLDG DIM (M)	=	.0000	
MAX HORIZ BLDG DIM (M)	=	.0000	

STACK EXIT VELOCITY WAS CALCULATED FROM
VOLUME FLOW RATE = 28.000000 (ACFM)

BUOY. FLUX = .000 M**4/S**3; MOM. FLUX = .000 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
10.	.1822E-02	1	1.0	1.0	320.0	9.54	3.36	1.58	NO
100.	187.5	3	1.0	1.0	320.0	9.54	12.46	7.44	NO
200.	163.2	5	1.0	1.1	10000.0	9.53	11.63	6.24	NO
300.	139.8	5	1.0	1.1	10000.0	9.53	16.89	8.70	NO
400.	140.9	6	1.0	1.1	10000.0	9.53	14.64	7.05	NO
500.	125.4	6	1.0	1.1	10000.0	9.53	17.97	8.40	NO
600.	107.7	6	1.0	1.1	10000.0	9.53	21.24	9.69	NO
700.	91.90	6	1.0	1.1	10000.0	9.53	24.46	10.93	NO
800.	79.07	6	1.0	1.1	10000.0	9.53	27.63	11.98	NO
900.	68.66	6	1.0	1.1	10000.0	9.53	30.78	12.98	NO
1000.	60.16	6	1.0	1.1	10000.0	9.53	33.88	13.95	NO
MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 10. M:									
88.	192.3	3	1.0	1.0	320.0	9.54	11.19	6.69	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

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     *** SUMMARY OF SCREEN MODEL RESULTS ***
     ***************************************

 CALCULATION       MAX CONC    DIST TO   TERRAIN
  PROCEDURE       (UG/M**3)    MAX (M)    HT (M)
--------------   -----------   -------   -------
SIMPLE TERRAIN     192.3           88.       0.   FLYASH STORAGE SILO NO. 2


**************************************************
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
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