September 27, 1996

MEMORANDUM

TO: Orville Green, Assistant Administrator
Air & Hazardous Waste

FROM: Martin Bauer, Chief
Air Quality Permitting Bureau

SUBJECT: Issuance of Tier II Operating Permit #777-00177 to
Valley Ready Mix, Inc., Portable Concrete Batch Plant

PURPOSE

The purpose for this memorandum is to satisfy the requirements of IDAPA 16.01.01 Sections 400 through 406 (Rules for the Control of Air Pollution in Idaho) for issuing Operating Permits.

PROJECT DESCRIPTION

This project is for an Operating Permit (OP) for the Valley Ready Mix, Inc., portable concrete batch plant. Emission point sources existing at the facility are as follows: One diesel generator, one silo filter vent, one set of screens, solid material transport, handling, and storage. Fugitive emission sources found at the facility are as follows: solid material storage piles and paved and unpaved roads.

SUMMARY OF EVENTS

On February 12, 1996, the Division of Environmental Quality (DEQ) received the facility's Tier II OP application forms. On April 12, 1996, the application was determined complete. On August 5, 1996, a proposed Tier II OP was issued for public comment. The public comment period was from August 16, 1996, through September 16, 1996. No comments were received.

RECOMMENDATIONS

Based on the review of the OP application and on applicable state and federal regulations concerning the permitting of air pollution sources, the Bureau staff recommends that Valley Ready Mix, Inc., portable concrete batch plant be issued a Tier II OP for the sources that exist at the facility. Staff also recommends that the facility be notified of the Tier II permit fee requirement in writing. This fee will be applicable upon issuance of the permit.

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cc: J. Johnston, EIRO
Source File
COF
OP File Manual

August 5, 1996

MEMORANDUM

TO: Brian R. Monson, Chief
Operating Permits Bureau
Permits and Enforcement

FROM: Yihong Chen, Air Quality Engineer YC
Operating Permits Bureau
Harbi Elshafei, Air Quality Engineer Harbi
Operating Permits Bureau

THROUGH: Susan J. Richards, Air Quality Permits Manager
Operating Permits Bureau

SUBJECT: Technical Analysis for Tier II Operating Permit #777-00177
Valley Ready Mix, Incorporated, Idaho (portable)

PURPOSE

The purpose for this memorandum is to satisfy the requirements of IDAPA 16.01.01 Sections 400 through 406 (Rules for the Control of Air Pollution in Idaho) for issuing Operating Permits.

FACILITY DESCRIPTION

Valley Ready Mix, Inc., is a portable Ready-Mix concrete batch plant. The facility consists of two major processes, sand and gravel screening and Ready-Mix concrete batching. The facility was installed in 1988 without obtaining a Permit to Construct (PTC). The facility is not subject to 40 CFR 60 Subpart OOO according to the definition of nonmetallic mineral processing plant under section 60.671 that "*Nonmetallic mineral processing plant means any combination of equipment that is used to crush or grind any nonmetallic mineral...*". The attachment of 40 CFR 60 Subpart OOO can be found in Appendix A.

The screening process at the plant is described as follows: the material is transferred from the storage pile to the screens feed hopper by front end loader; from the feed hopper the material is fed to the screener by conveyor belt; wet suppression technique is used for screening process (details of this technique can be found in facility's OP application); after this process the rock and sand are transferred to storage piles by conveyor.

The concrete batching process at the plant is described as follows: rock and sand are transported from the storage piles (post-screen aggregates) to a feed hopper by front end loader; from the feed hopper, rock and sand are transferred to elevated aggregate bins in the batch plant by conveyor; the rock and sand are then dropped into a weigh hopper from the elevated bins; this takes place inside the batch plant which is totally enclosed; rock and sand are transferred by conveyor to the concrete mixer from the weigh hopper; cement and fly ash are pumped through a pneumatic hose from a bulker truck to a silo; the emissions from the silo are controlled by a silo filter; cement and fly ash are then dropped into a weigh hopper above the concrete mixer; this is a totally sealed transfer; cement and fly ash are then dropped into the concrete mixer from the weigh hopper.

Emissions of criteria air pollutants are generated at the facility from the solid material transport, handling and storage, sand and aggregates screening, concrete batch processing, fuel burning equipment, storage piles, and road dust fugitive.

PROJECT DESCRIPTION

This project is for an Operating Permit (OP) for the following existing emission points.

Emission Points:

(1) Diesel Generator - Compression ignition (CI) diesel industrial engine with a maximum rated capacity of 200 kilowatts.

Diesel Generator Specifications:

Manufacturer:	Detroit
Model:	8V-92
Max. Hourly Combustion Rate:	9.97 gal/hr
Normal Annual Combustion Rate:	10,527 gal/yr
Fuel:	Diesel

Stack Design Specifications:

Height:	10 feet (above ground level)
Exit Diameter:	0.5 feet
Exit Gas Flow Rate:	1,950 actual cubic feet per minute (acfm, at max. hourly combustion rate, estimated)
Exit Temperature:	200°C - 400°C (at max. hourly combustion rate, estimated)

(2) Silo Filter Vent - the filter is used to control the PM and PM10 emissions from the silo of cement and fly ash.

Silo Filter Vent Specifications:

Manufacturer:	McNeilus Truck and Manufacturing, Inc.
Model Number:	SFV 270
Flow Rate:	650 cubic feet per minute (cfm)
Air/Cloth Ratio:	2.40
Outlet Velocity:	1950 Ft/Min

(3) Screens - with the maximum hourly processing capacity of 200 tons of aggregate per hour.

Screens Specifications:

Manufacturer:	EL-JAY

(4) Solid Material Transport, Handling, and Storage.

Fugitive Sources:

(1) Solid material storage piles.
(2) Paved and unpaved roads.

The control equipment used for screening emission control is the wet suppression technique. The specifications for it is as follows:

Manufacturer:	Eagle Iron Works
Power Supply:	100 horsepower electric motor
Pressure of Water Pipe Opening:	30 psig

A more detailed process description is found in the OP application submittal.

SUMMARY OF EVENTS

On February 12, 1996, the Division of Environmental Quality (DEQ) received the facility's Tier II OP application. On March 1, 1996, DEQ returned the application and requested the facility to re-evaluate its confidential claim and also to separate confidential information from non-confidential one as per IDAPA 16.01.01.126 of the Rules for the Control of Air Pollution in Idaho. On March 14, 1996, DEQ received a revised OP application. All the application materials were reviewed, and it was determined that the application was complete on April 12, 1996.

A public comment period has been scheduled for the proposed permit.

DISCUSSION

1. Emission Estimates

Emission estimates were provided by Valley Ready Mix, Inc., and can be seen in the March 14, 1996, application. DEQ also estimated the PM-10, SO_2, NO_x, CO, and the VOC emissions using emission factors from AP-42, Section 1.3 (Fuel Oil Combustion, 1/95), Section 1.4 (Natural Gas Combustion, 1/95), Section 3.3 (Gasoline and Diesel Industrial Engines, 7/93), Section 11.12 (Concrete Batching, 1/95), and Section 13.2.4 (Aggregated Handling and Storage Piles, 1/95).

PM-10 is the pollutant that triggers the major source status for Valley Ready Mix, Inc. The potential to emit (PTE) is above 100 T/yr which are the sum of PM-10 emissions from pre-screen solid material transferring from hopper to conveyor and conveyor to screener, screening, post-screen solid material transferring from screen to conveyor, silo filter vent, weigh hopper loading which above the mixer, and the generator. The control efficiency of 99.6% for the filter has been included in estimating the PTE because the filter is considered part of process. The calculations of PTE can be found in Appendix B.

The applicant chose to net out of Tier I permitting by limiting the potential to emit of PM-10 to less than 100 T/yr. The applicant can operate the facility at its rated production capacity, 200 tons aggregate * (50,000 cubic yard / 80,000 tons aggregate) = 125 cubic yard per hour (yd^3/hr), or 125 yd^3/hr x 24 hr/day x 30 days/month = 90,000 cubic yards per month, by meeting the following control requirements: 1) Wet Suppression Techniques, a water spray system shall be used for the entire screening operation; 2) silo filter vent with control efficiency 99.6% or more shall be used to control particulate matter (PM) and PM-10 emissions from the silo of cement and fly ash; 3) sand and rock dropping from elevated bins to a weigh hopper shall be operated inside the batch plant which is totally enclosed; 4) weigh hopper loading of cement and flyash shall be a totally sealed transfer; and 5) the operating hours of the generator shall not exceed 3213 hours per year. The calculation of permit emissions can be found in Appendix C.

Screen3 modeling has been run for the generator at the emission rate 1 lb/hr. It can be found in Appendix D. The stack data of the filter vent of cement silo was not provided so the modeling result from a similar source was used. The spreadsheet for concrete batching general permit was used to estimate the NAAQS impact from the facility. The output indicated that, in order to meet the NAAQS, the operating hours of the generator should not exceed 3213 hours per year.

Compliance determination shall be based on the sections, OPERATING REQUIREMENTS and MONITORING AND RECORDKEEPING REQUIREMENTS, in the permit.

2. Area Classification

Valley Ready Mix, Inc., portable Ready-Mixed concrete batching plant is permitted to be operated in areas classified as attainment or unclassifiable for all Federal and State criteria air pollutants (i.e., PM, PM-10, CO, NO_x, and SO_2).

3. Facility Classification

The facility is not a designated facility as defined in IDAPA 16.01.01.25. The facility is classified as an A2 source because the actual emissions of PM is less than 100 tons per year.

4. Regulatory Review

This Tier II OP is subject to the following permitting requirements:

a.	IDAPA 16.01.01.123	Certification of documents
b.	IDAPA 16.01.01.401	Tier II Operating Permit.
c.	IDAPA 16.01.01.403	Permit Requirements for Tier II Sources.
d.	IDAPA 16.01.01.404.01(c)	Opportunity for Public Comment.
e.	IDAPA 16.01.01.404.04	Authority to Revise Operating Permits.
f.	IDAPA 16.01.01.406	Obligation to Comply.
g.	IDAPA 16.01.01.470	Permit Application Fees for Tier II Permits.
h.	IDAPA 16.01.01.500	Registration Procedures and Requirements for Portable Equipment.
i.	IDAPA 16.01.01.625	Visible Emission Limitation.
j.	IDAPA 16.01.01.650	General Rules for the Control of fugitive dust.
k.	IDAPA 16.01.01.728	Distillate Fuel Oil.

5. Modeling

Screen3 modeling has been run for the generator at the emission rate 1 lb/hr (Appendix D). The result was input into concrete batch general permit spreadsheet.

FEES

Fees apply to this facility in accordance with IDAPA 16.01.01.470. The facility is subject to permit application fee for Tier II permits of five hundred dollars ($500.00). IDAPA 16.01.01.470 became effective on March 7, 1995.

RECOMMENDATIONS

Based on the review of the OP application and on applicable state and federal regulations concerning the permitting of air pollution sources, the Bureau staff recommends that Valley Ready Mix, Inc., portable Ready-Mix concrete batch plant be issued a Tier II OP for the sources that exist at the facility. An opportunity for public comment shall be provided as required by IDAPA 16.01.01.404.01. Staff also recommends that the facility be notified of the Tier II permit fee requirement in writing. This fee will be applicable upon issuance of the permit.

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cc: J. Johnston, EIRO
Source File
COF

APPENDIX A

§60.662 other than as provided under §60.663(a), (b), (c) and (d).

[55 FR 26922, June 29, 1990; 55 FR 36932, Sept. 7, 1990]

§60.666 Reconstruction.

For purposes of this subpart "fixed capital cost of the new components," as used in §60.15, includes the fixed capital cost of all depreciable components which are or will be replaced pursuant to all continuous programs of component replacement which are commenced within any 2-year period following December 30, 1983. For purposes of this paragraph, "commenced" means that an owner or operator has undertaken a continuous program of component replacement or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of component replacement.

§60.667 Chemicals affected by subpart NNN.

Chemical name	CAS No.*
Acetaldehyde	75-07-0
Acetaldol	107-89-1
Acetic acid	64-19-7
Acetic anhydride	108-24-7
Acetone	67-64-1
Acetone cyanohydrin	75-86-5
Acetylene	74-86-2
Acrylic acid	79-10-7
Acrylonitrile	107-13-1
Adipic acid	124-04-9
Adiponitrile	111-69-3
Alcohols, C-11 or lower, mixtures	.....
Alcohols, C-12 or higher, mixtures	.....
Allyl chloride	107-05-1
Amylene	513-35-9
Amylenes, mixed	.....
Aniline	62-53-3
Benzene	71-43-2
Benzenesulfonic acid	98-11-3
Benzenesulfonic acid C10-16-alkyl derivatives, sodium salts	68081-81-2
Benzoic acid, tech	65-85-0
Benzyl chloride	100-44-7
Biphenyl	92-52-4
Bisphenol A	80-05-7
Bromobenzene	108-86-1
1,3-Butadiene	106-99-0
Butadiene and butene fractions	.....
n-Butane	106-97-8
1,4-Butanediol	110-63-4
Butenes, mixed	.....
1-Butene	106-98-9
2-Butene	25167-67-3
Butenes, mixed	.....
n-Butyl acetate	123-86-4
Butyl acrylate	141-32-2
n-Butyl alcohol	71-36-3
sec-Butyl alcohol	78-92-2
tert-Butyl alcohol	75-65-0
Butylbenzyl phthalate	85-68-7
Butylene glycol	107-88-0
tert-Butyl hydroperoxide	75-91-2
2-Butyne-1,4-diol	110-65-6
Butyraldehyde	123-72-8
Butyric anhydride	106-31-0
Caprolactam	105-60-2
Carbon disulfide	75-15-0
Carbon tetrabromide	558-13-4
Carbon tetrachloride	56-23-5
Chlorobenzene	108-90-7
2-Chloro-4-(ethylamino)-6-(isopropylamino)-s-triazine	1912-24-9
Chloroform	67-66-3
p-Chloronitrobenzene	100-00-5
Chloroprene	126-99-8
Cinic acid	77-92-9
Crotonaldehyde	4170-30-3
Crotonic acid	3724-65-0
Cumene	98-82-8
Cumene hydroperoxide	80-15-9
Cyanuric chloride	108-77-0
Cyclohexane	110-82-7
Cyclohexene, additive	68512-15-2
Cyclohexanol	108-93-0
Cyclohexanone	108-94-1
Cyclohexanone oxime	100-64-1
Cyclohexene	110-83-8
1,3-Cyclopentadiene	542-92-7
Cyclopropane	75-19-4
Diacetone alcohol	123-42-2
Dibenzylated aromatic concentrate	.....
1,4-Dibutoxybutane	3139-67-6
3,4-Dichloro-1-butene	64037-54-3
Dichlorodifluoromethane	75-71-8
Dichlorodimethylsilane	75-78-5
Dichlorofluoromethane	75-43-4
Dichlorohydrin	96-23-1
Diethanolamine	111-42-2
Diethylbenzene	25340-17-4
Diethylene glycol	111-46-6
Di-n-hepthyl-n-nonyl undecyl phthalate	68515-40-7
Di-isodecyl phthalate	26761-40-0
Diisononyl phthalate	28553-12-0
Dimethylaniline	121-69-7
Dimethyl terephthalate	120-61-6
2,4-Dinitrotoluene	121-14-2
2,6-(and 2,5)-dinitrotoluene	121-14-2
Dioctyl phthalate	606-20-2
Dodecene	117-81-7
Dodecylbenzene	25378-22-7
Dodecylbenzene, non linear	.....
Dodecylbenzenesulfonic acid	27176-87-0
Dodecylbenzenesulfonic acid, sodium salt	25155-30-0
Epichlorohydrin	106-89-8
Ethanol	64-17-5
Ethanolamine	141-43-5
Ethyl acetate	141-78-6
Ethyl acrylate	140-88-5
Ethylbenzene	100-41-4
Ethyl chloride	75-00-3
Ethyl cyanide	107-12-0
Ethylene	74-85-1
Ethylene dibromide	106-93-4
Ethylene dichloride	107-06-2
Ethylene glycol	107-21-1
Ethylene glycol monobutyl	111-76-2
Ethylene glycol monoethyl ether	110-80-5
Ethylene glycol monoethyl ether acetate	111-15-9
Ethylene glycol monomethyl ether	109-86-4
Ethylene oxide	75-21-8
2-Ethylhexanal	26266-68-2
2-Ethylhexyl alcohol	104-76-7
(2-Ethylhexyl) amine	104-75-6
Ethylmethylbenzene	25550-14-5

Chemical name	CAS No.*
9-Ethyl-1,2,3,4-tetrahydro-9,10-anthracenedione	16547-17-8
Formaldehyde	50-00-0
Glycerol	56-81-5
n-Heptane	142-82-5
Heptenes (mixed)	.....
Hexadecyl chloride	124-08-4
Hexamethylene diamine	3323-53-3
Hexamethylene diamine adipate	100-97-0
Hexamethylenetetramine	110-54-3
Hexene	13042-02-8
1-Hexenedicitrile	1119-85-3
3-Hexenedicitrile	74-90-8
Hydrogen cyanide	75-28-5
Isobutane	75-83-1
Isobutanol	115-11-7
Isobutylene	78-64-2
Isobutyraldehyde	25339-17-7
Isodecyl alcohol	28952-21-8
Isooctyl alcohol	78-78-4
Isoprene	121-91-5
Isophthalic acid	78-78-4
Isopene	87-83-0
Isopropanol	463-51-4
Kelene	.....
Linear alcohols, ethoxylated, mixed	.....
Linear alcohols, ethoxylated, and sulfated, sodium salt, mixed	.....
Linear alcohols, sulfated, sodium salt, mixed	123-01-3
Linear alkylbenzene	142-72-3
Magnesium acetate	106-31-6
Maleic anhydride	108-31-6
Melamine	141-79-7
Mesityl oxide	123-98-7
Methacrylonitrile	67-56-1
Methanol	74-93-5
Methylamine	25376-45-8
n-Methylaniline	74-87-3
Methyl chloride	75-09-2
Methylene chloride	74-83-9
Methyl ethyl ketone	74-93-1
Methyl iodide	108-10-1
Methyl isobutyl ketone	80-62-6
Methyl methacrylate	107-81-5
2-Methylpentane	872-50-4
1-Methyl-2-pyrrolidone	.....
Methyl tert butyl ether	91-20-3
Naphthalene	98-95-3
Nitrobenzene	27215-95-8
2-Nonene	143-08-08
Nonyl alcohol	25154-52-3
Nonylphenol	9016-45-9
Nonylphenol, ethoxylated	26027-83-7
Octane	.....
Oil soluble petroleum sulfonate, calcium salt	115-77-5
Oil soluble petroleum sulfonate, sodium salt	108-68-0
Pentaerythritol	4635-87-4
n-Pentane	109-67-1
1-Pentenecitrile	127-18-4
Pentenes, mixed	109-95-2
Perchloroethylene	3071-32-7
Phenol	103-65-1
1-Phenylethyl hydroperoxide	75-44-5
Phenylpropane	85-44-9
Phosgene	74-98-6
Phthalic anhydride	123-38-6
Propane	79-09-4
Propionaldehyde	71-23-8
Propionic acid	115-07-1
Propyl alcohol	78-89-7
Propylene	57-55-6
Propylene chlorohydrin	75-56-9
Propylene glycol	143-33-9
Propylene oxide	.....
Sodium cyanide	.....
Sorbitol	50-70-4
Styrene	100-42-5
Terephthalic acid	100-21-0
1,1,2,2-Tetrachloroethane	79-34-5
Tetraethyl lead	78-00-2
Tetrahydrofuran	109-99-9
Tetra (methyl-ethyl) lead	.....
Tetramethyl lead	75-74-1
Toluene	108-88-3
Toluene 2,4-diamine	95-80-7
Toluene 2,4-(and 2,6)-diisocyanate (80/20 mixture)	26471-62-5
Tribromomethane	75-25-2
1,1,1-Trichloroethane	71-55-6
1,1,2-Trichloroethane	79-00-5
Trichloroethylene	79-01-6
Trichlorofluoromethane	75-69-4
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1
Triethanolamine	102-71-6
Triethylene glycol	112-27-6
Vinyl acetate	108-05-4
Vinyl chloride	75-01-4
Vinylidene chloride	75-35-4
m-Xylene	108-38-3
o-Xylene	95-47-6
p-Xylene	106-42-3
Xylenes (mixed)	1330-20-7
m-Xylenol	576-26-1

* CAS numbers refer to the Chemical Abstracts Registry numbers assigned to specific chemicals, isomers, or mixtures of chemicals. Some isomers or mixtures that are covered by the standards do not have CAS numbers assigned to them. The standards apply to all of the chemicals listed, whether CAS numbers have been assigned or not.

§60.668 Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under §111(c) of the Act, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authorities which will not be delegated to States: §60.663(e).

Subpart OOO—Standards of Performance for Nonmetallic Mineral Processing Plants

Source: 51 FR 31337, Aug. 1, 1986, unless otherwise noted.

§60.670 Applicability and designation of affected facility.

(a) Except as provided in paragraphs (b), (c) and (d) of this section, the provisions of this subpart are applicable to the following affected facilities in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station.

Appendix A

(b) An affected facility that is subject to the provisions of subpart F or I or that follows in the plant process any facility subject to the provisions of subparts F or I of this part is not subject to the provisions of this subpart.

(c) Facilities at the following plants are not subject to the provisions of this subpart:

(1) Fixed sand and gravel plants and crushed stone plants with capacities, as defined in §60.671, of 23 megagrams per hour (25 tons per hour) or less;

(2) Portable sand and gravel plants and crushed stone plants with capacities, as defined in §60.671, of 136 megagrams per hour (150 tons per hour) or less; and

(3) Common clay plants and pumice plants with capacities, as defined in §60.671, of 9 megagrams per hour (10 tons per hour) or less

(d)(1) When an existing facility is replaced by a piece of equipment of equal or smaller size, as defined in §60.671, having the same function as the existing facility, the new facility is exempt from the provisions of §§60.672, 60.674, and 60.675 except as provided for in paragraph (d)(3) of this section.

(2) An owner or operator seeking to comply with this paragraph shall comply with the reporting requirements of §60.676 (a) and (b).

(3) An owner or operator replacing all existing facilities in a production line with new facilities does not qualify for the exemption described in paragraph (d)(1) of this section and must comply with the provisions of §§60.672, 60.674 and 60.675.

(e) An affected facility under paragraph (a) of this section that commences construction, reconstruction, or modification after August 31, 1983 is subject to the requirements of this part.

§60.671 Definitions.

All terms used in this subpart, but not specifically defined in this section, shall have the meaning given them in the Act and in subpart A of this part.

Bagging operation means the mechanical process by which bags are filled with nonmetallic minerals.

Belt conveyor means a conveying device that transports material from one location to another by means of an endless belt that is carried on a series of idlers and routed around a pulley at each end.

Bucket elevator means a conveying device of nonmetallic minerals consisting of a head and foot assembly which supports and drives an endless single or double strand chain or belt to which buckets are attached.

Building means any frame structure with a roof.

Capacity means the cumulative rated capacity of all initial crushers that are part of the plant.

Capture system means the equipment (including enclosures, hoods, ducts, fans, dampers, etc.) used to capture and transport particulate matter generated by one or more process operations to a control device.

Control device means the air pollution control equipment used to reduce particulate matter emissions released to the atmosphere from one or more process operations at a nonmetallic mineral processing plant.

Conveying system means a device for transporting materials from one piece of equipment or location to another location within a plant. Conveying systems include but are not limited to the following: Feeders, belt conveyors, bucket elevators and pneumatic systems.

Crusher means a machine used to crush any nonmetallic minerals, and includes, but is not limited to, the following types: jaw, gyratory, cone, roll, rod mill, hammermill, and impactor.

Enclosed truck or railcar loading station means that portion of a nonmetallic mineral processing plant where nonmetallic minerals are loaded by an enclosed conveying system into enclosed trucks or railcars.

Fixed plant means any nonmetallic mineral processing plant at which the processing equipment specified in §60.670(a) is attached by a cable, chain, turnbuckle, bolt or other means (except electrical connections) to any anchor, slab, or structure including bedrock.

Fugitive emission means particulate matter that is not collected by a capture system and is released to the atmosphere at the point of generation.

Grinding mill means a machine used for the wet or dry fine crushing of any

nonmetallic mineral. Grinding mills include, but are not limited to, the following types: hammer, roller, rod, pebble and ball, and fluid energy. The grinding mill includes the air conveying system, air separator, or air classifier, where such systems are used.

Initial crusher means any crusher into which nonmetallic minerals can be fed without prior crushing in the plant.

Nonmetallic mineral means any of the following minerals or any mixture of which the majority is any of the following minerals:

(a) Crushed and Broken Stone, including Limestone, Dolomite, Granite, Traprock, Sandstone, Quartz, Quartzite, Marl, Marble, Slate, Shale, Oil Shale, and Shell.

(b) Sand and Gravel.

(c) Clay including Kaolin, Fireclay, Bentonite, Fuller's Earth, Ball Clay, and Common Clay.

(d) Rock Salt.

(e) Gypsum.

(f) Sodium Compounds, including Sodium Carbonate, Sodium Chloride, and Sodium Sulfate.

(g) Pumice.

(h) Gilsonite.

(i) Talc and Pyrophyllite.

(j) Boron, including Borax, Kernite, and Colemanite.

(k) Barite.

(l) Fluorospar.

(m) Feldspar.

(n) Diatomite.

(o) Perlite.

(p) Vermiculite.

(q) Mica.

(r) Kyanite, including Andalusite, Sillimanite, Topaz, and Dumortierite.

Nonmetallic mineral processing plant means any combination of equipment that is used to crush or grind any nonmetallic mineral wherever located, including lime plants, power plants, steel mills, asphalt concrete plants, portland cement plants, or any other facility processing nonmetallic minerals except as provided in §60.670 (b) and (c).

Portable plant means any nonmetallic mineral processing plant that is mounted on any chassis or skids and may be moved by the application of a lifting or pulling force. In addition, there shall be no cable, chain, turnbuckle, bolt or other means (except electrical connections) by which any piece of equipment is attached or clamped to any anchor, slab, or structure, including bedrock that must be removed prior to the application of a lifting or pulling force for the purpose of transporting the unit.

Production line means all affected facilities (crushers, grinding mills, screening operations, bucket elevators, belt conveyors, bagging operations, storage bins, and enclosed truck and railcar loading stations) which are directly connected or are connected together by a conveying system.

Screening operation means a device for separating material according to size by passing undersize material through one or more mesh surfaces (screens) in series, and retaining oversize material on the mesh surfaces (screens).

Size means the rated capacity in tons per hour of a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station; the total surface area of the top screen of a screening operation; the width of a conveyor belt; and the rated capacity in tons of a storage bin.

Stack emission means the particulate matter that is released to the atmosphere from a capture system.

Storage bin means a facility for storage (including surge bins) or nonmetallic minerals prior to further processing or loading.

Transfer point means a point in a conveying operation where the nonmetallic mineral is transferred to or from a belt conveyor except where the nonmetallic mineral is being transferred to a stockpile.

Truck dumping means the unloading of nonmetallic minerals from movable vehicles designed to transport nonmetallic minerals from one location to another. Movable vehicles include but are not limited to: trucks, front end loaders, skip hoists, and railcars.

Vent means an opening through which there is mechanically induced air flow for the purpose of exhausting from a building air carrying particulate matter emissions from one or more affected facilities.

§60.672 Standard for particulate matter.

(a) On and after the date on which the performance test required to be

conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility any stack emissions which:

(1) Contain particulate matter in excess of 0.05 g/dscm; or

(2) Exhibit greater than 7 percent opacity, unless the stack emissions are discharged from an affected facility using a wet scrubbing control device. Facilities using a wet scrubber must comply with the reporting provisions of §60.676 (c), (d), and (e).

(b) On and after the sixtieth day after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility any fugitive emissions which exhibit greater than 10 percent opacity, except as provided in paragraphs (c), (d) and (e) of this section.

(c) On and after the sixtieth day after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup, no owner or operator shall cause to be discharged into the atmosphere from any crusher at which a capture system is not used fugitive emissions which exhibit greater than 15 percent opacity.

(d) Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the requirements of this section.

(e) If any transfer point on a conveyor belt or any other affected facility is enclosed in a building, then each enclosed affected facility must comply with the emission limits in paragraphs (a), (b) and (c) of this section, or the building enclosing the affected facility or facilities must comply with the following emission limits:

(1) No owner or operator shall cause to be discharged into the atmosphere from any building enclosing any transfer point on a conveyor belt or any other affected facility any visible fugitive emissions except emissions from a vent as defined in §60.671.

(2) No owner or operator shall cause to be discharged into the atmosphere from any vent of any building enclosing any transfer point on a conveyor belt or any other affected facility emissions which exceed the stack emissions limits in paragraph (a) of this section.

§60.675 Reconstruction.

(a) The cost of replacement of ore-contact surfaces on processing equipment shall not be considered in calculating either the "fixed capital cost of the new components" or the "fixed capital cost that would be required to construct a comparable new facility" under §60.15. Ore-contact surfaces are crushing surfaces; screen meshes, bars, and plates; conveyor belts; and elevator buckets.

(b) Under §60.15, the "fixed capital cost of the new components" includes the fixed capital cost of all depreciable components (except components specified in paragraph (a) of this section) which are or will be replaced pursuant to all continuous programs of component replacement commenced within any 2-year period following August 31, 1983.

§60.674 Monitoring of operations.

The owner or operator of any affected facility subject to the provisions of this subpart which uses a wet scrubber to control emissions shall install, calibrate, maintain and operate the following monitoring devices:

(a) A device for the continuous measurement of the pressure loss of the gas stream through the scrubber. The monitoring device must be certified by the manufacturer to be accurate within 1250 pascals ±1 inch water gauge pressure and must be calibrated on an annual basis in accordance with manufacturer's instructions.

(b) A device for the continuous measurement of the scrubbing liquid flow rate to the wet scrubber. The monitoring device must be certified by the manufacturer to be accurate within ±5 percent of design scrubbing liquid flow rate and must be calibrated on an annual basis in accordance with manufacturer's instructions.

§60.675 Test methods and procedures.

(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b). Acceptable alternative methods and procedures are given in paragraph (e) of this section.

(b) The owner or operator shall determine compliance with the particulate matter standards in §60.272(a) as follows:

(1) Method 5 or Method 17 shall be used to determine the particulate matter concentration. The sample volume shall be at least 1.70 dscm (60 dscf). For Method 5, if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters. If the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121 °C (250 °F), to prevent water condensation on the filter.

(2) Method 9 and the procedures in §60.11 shall be used to determine opacity.

(c) In determining compliance with the particulate matter standards in §60.672 (b) and (c), the owner or operator shall use Method 9 and the procedures in §60.11, with the following additions:

(1) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).

(2) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (e.g., road dust). The required observer position relative to the sun (Method 9, Section 2.1) must be followed.

(3) For affected facilities using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.

(d) In determining compliance with §60.672(e), the owner or operator shall use Method 22 to determine fugitive emissions. The performance test shall be conducted while all affected facilities inside the building are operating. The performance test for each building shall be at least 75 minutes in duration, with each side of the building and the roof being observed for at least 15 minutes.

(e) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(1) For the method and procedure of paragraph (c) of this section, if emissions from two or more facilities continuously interfere so that the opacity of fugitive emissions from an individual affected facility cannot be read, either of the following procedures may be used:

(i) Use for the combined emission stream the highest fugitive opacity standard applicable to any of the individual affected facilities contributing to the emissions stream.

(ii) Separate the emissions so that the opacity of emissions from each affected facility can be read.

(f) To comply with §60.676(d), the owner or operator shall record the measurements as required in §60.676(c) using the monitoring devices in §60.674 (a) and (b) during each particulate matter run and shall determine the averages.

[54 FR 6686, Feb. 14, 1989]

§60.676 Reporting and recordkeeping.

(a) Each owner or operator seeking to comply with §60.670(d) shall submit to the Administrator the following information about the existing facility being replaced and the replacement piece of equipment.

(1) For a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station:

(i) The rated capacity in tons per hour of the existing facility being replaced and

(ii) The rated capacity in tons per hour of the replacement equipment.

(2) For a screening operation:

(i) The total surface area of the top screen of the existing screening operation being replaced and

(ii) The total surface area of the top screen of the replacement screening operation.

(3) For a conveyor belt:

(i) The width of the existing belt being replaced and

(ii) The width of the replacement conveyor belt.

(4) For a storage bin:

(i) The rated capacity in tons of the existing storage bin being replaced and

(ii) The rated capacity in tons of replacement storage bins.

(b) Each owner or operator seeking to comply with § 60.670(d) shall submit the following data to the Director of the Emission Standards and Engineering Division, (MD-13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711.

(1) The information described in § 60.676(a).

(2) A description of the control device used to reduce particulate matter emissions from the existing facility and a list of all other pieces of equipment controlled by the same control device; and

(3) The estimated age of the existing facility.

(c) During the initial performance test of a wet scrubber, and daily thereafter, the owner or operator shall record the measurements of both the change in pressure of the gas stream across the scrubber and the scrubbing liquid flow rate.

(d) After the initial performance test of a wet scrubber, the owner or operator shall submit semiannual reports to the Administrator of occurrences when the measurements of the scrubber pressure loss (or gain) and liquid flow rate differ by more than ±30 percent from the averaged determined during the most recent performance test.

(e) The reports required under paragraph (d) shall be postmarked within 30 days following end of the second and fourth calendar quarters.

(f) The owner or operator of any affected facility shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in § 60.672, including reports of opacity observations made using Method 9 to demonstrate compliance with § 60.672 (b) and (c) and reports of observations using Method 22 to demonstrate compliance with § 60.672(e).

(g) The requirements of this paragraph remain in force until and unless the Agency, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such States. In that event, affected sources within the State will be relieved of the obligation to comply with paragraphs (a), (c), (d), (e), and (f) of this section, provided that they comply with requirements established by the State. Compliance with paragraph (b) of this section will still be required.

[51 FR 31337, Aug. 1, 1986, as amended at 54 FR 6660, Feb. 14, 1989]

Subpart PPP—Standard of Performance for Wool Fiberglass Insulation Manufacturing Plants

Source: 50 FR 7699, Feb. 25, 1985, unless otherwise noted.

§ 60.680 Applicability and designation of affected facility.

(a) The affected facility to which the provisions of this subpart apply is each rotary spin wool fiberglass insulation manufacturing line.

(b) The owner or operator of any facility under paragraph (a) of this section that commences construction, modification, or reconstruction after February 7, 1984, is subject to the requirements of this subpart.

§ 60.681 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

Glass pull rate means the mass of molten glass utilized in the manufacture of wool fiberglass insulation at a single manufacturing line in a specified time period.

Manufacturing line means the manufacturing equipment comprising the forming section, where molten glass is fiberized and a fiberglass mat is formed; the curing section, where the binder resin in the mat is thermally "set;" and the cooling section, where the mat is cooled.

Rotary spin means a process used to produce wool fiberglass insulation by forcing molten glass through numerous small orifices in the side wall of a spinner to form continuous glass fibers that are then broken into discrete lengths by high velocity air flow.

Wool fiberglass insulation means a thermal insulation material composed of glass fibers and made from glass produced or melted at the same facility where the manufacturing line is located.

§ 60.682 Standard for particulate matter.

On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which contain particulate matter in excess of 5.5 kg/Mg (11.0 lb/ton) of glass pulled.

§ 60.683 Monitoring of operations.

(a) An owner or operator subject to the provisions of this subpart who uses a wet scrubbing control device to comply with the mass emission standard shall install, calibrate, maintain, and operate monitoring devices that measure the gas pressure drop across each scrubber and the scrubbing liquid flow rate to each scrubber. The pressure drop monitor is to be certified by its manufacturer to be accurate within ±250 pascals (±1 inch water gauge) over its operating range, and the flow rate monitor is to be certified by its manufacturer to be accurate within ±5 percent over its operating range.

(b) An owner or operator subject to the provisions of this subpart who uses a wet electrostatic precipitator control device to comply with the mass emission standard shall install, calibrate, maintain, and operate monitoring devices that measure the primary and secondary current (amperes) and voltage in each electrical field and the inlet water flow rate. In addition, the owner or operator shall determine the total residue (total solids) content of the water entering the control device once per day using Method 209A, "Total Residue Dried at 103-105 °C," in *Standard Methods for the Examination of Water and Wastewater*, 15th Edition, 1980 (incorporated by reference—see § 60.17). Total residue shall be reported as percent by weight. All monitoring devices required under this paragraph are to be certified by their manufacturers to be accurate within ±5 percent over their operating range.

(c) All monitoring devices required under this section are to be recalibrated quarterly in accordance with procedures under § 60.13(b).

§ 60.684 Recordkeeping and reporting requirements.

(a) At 30-minute intervals during each 2-hour test run of each performance test of a wet scrubber control device and at least once every 4 hours thereafter, the owner or operator shall record the measurements required by § 60.683(a).

(b) At 30-minute intervals during each 2-hour test run of each performance test of a wet electrostatic precipitator control device and at least once every 4 hours thereafter, the owner or operator shall record the measurements required by § 60.683(b), except that the concentration of total residue in the water shall be recorded once during each performance test and once per day thereafter.

(c) Records of the measurements required in paragraphs (a) and (b) of this section must be retained for at least 2 years.

(d) Each owner or operator shall submit written semiannual reports of exceedances of control device operating parameters required to be monitored by paragraphs (a) and (b) of this section and written documentation of, and a report of corrective maintenance required as a result of, quarterly calibrations of the monitoring devices required in § 60.683(c). For the purpose of these reports, exceedances are defined as any monitoring data that are less than 70 percent of the lowest value or greater than 130 percent of the highest value of each operating parameter recorded during the most recent performance test.

(e) The requirements of this section remain in force until and unless the

APPENDIX B

Appendix B

FACILITY:	Valley Ready Mix, Inc.	Engineer:			Yihong		
CONTACT:	Stacey B. Walters	Date:			18-Jul-96		
ADDRESS:	P.O. Box 390	Operating hour:	8760	hr			
	Rexburg, ID 83440	PTE (PM10)=	131.18	T/yr	29.95	lb/hr	
PHONE:	(800)359-3586	PTE (NOx)=	27.056	T/yr	6.077	lb/hr	
PROJECT:	Calculation of Potential to Emit (PTE), PM10	PTE (SOx)=	4.013	T/yr	0.916	lb/hr	
FILE NAME:	10PTE.WK1	PTE (CO)=	5.848	T/yr	1.314	lb/hr	
		PTE (NMTOC)=	0.030	T/yr	0.001	lb/hr	

REFERENCES (AP-42)	PROCESS	POLLTANT	PRODUCTION Annual (a)	UNIT	PRODUCTIO hourly (unit same as annual)	EF	UNITS	NCONTR EMISSION (TON/YR) (c)	NCONTR MISSIONS (LB/HR) (b)	REMARKS
	PRE-SCREEN MATERIAL HANDLING									
13.2.4(1/95)	Transfer raw material: storage - hopper	PM10	1752000	tons	200	0.003	lbs/ton	2.70	0.62	Equation in Section 13.2.4.3 with k=0.35,U=8,M=1.5
13.2.4(1/95)	Transfer raw material: hopper - conveyor	PM10	1752000	tons	200	0.003	lbs/ton	2.70	0.62	Per application
13.2.4(1/95)	Transfer raw material: conveyor - screen	PM10	1752000	tons	200	0.003	lbs/ton	2.70	0.62	
						sum(I18:I19)=		5.41	1.23	
	SCREENING									
8.19.1(9/85)	Sand and Rock Screening	PM10	1752000	tons	200	0.12	lbs/ton	105.12	24.00	
	POST-SCREEN MATERIAL HANDLING									Mavg =1.5*(120/200)+9*(80/200) = 4.5
13.2.4(1/95)	screened materials - belt conveyors	PM10	1752000	tons	200	0.001	lbs/ton	0.58	0.13	Equation in Section 13.2.4.3 with k=0.35,U=8,M=4.5
13.2.4(1/95)	rock conveyor - storage pile(s)	PM10	1051200	tons	120	0.003	lbs/ton	1.62	0.37	Equation in Section 13.2.4.3 with k=0.35,U=8,M=1.5
13.2.4(1/95)	sand conveyor - storage pile	PM10	700800	tons	80	0.001	lbs/ton	0.25	0.06	Equation in Section 13.2.4.3 with k=0.35,U=8,M=9
						sum(I27)=		0.58	0.13	
	CONCRETE BATCH PROCESSING									
13.2.4(1/95)	rock storage pile(s) - feed hopper	PM10	876000	tons	100	0.003	lbs/ton	1.35	0.31	Equation in Section 13.2.4.3 with k=0.35,U=8,M=1.5
13.2.4(1/95)	sand storage pile - feed hopper	PM10	578160	tons	66	0.001	lbs/ton	0.17	0.04	Equation in Section 13.2.4.3 with k=0.35,U=8,M=5
13.2.4(1/95)	rock feed hopper - fixed conveyor	PM10	876000	tons	100	0.003	lbs/ton	1.35	0.31	Equation in Section 13.2.4.3 with k=0.35,U=8,M=1.5
13.2.4(1/95)	sand feed hopper - fixed conveyor	PM10	578160	tons	66	0.001	lbs/ton	0.17	0.04	Equation in Section 13.2.4.3 with k=0.35,U=8,M=5
11.12(1/95)	fixed conveyor - elevated aggregate bins (rock)	PM10	876000	tons	100	0.029	lbs/ton	11.43	2.61	No EF for PM-10 available. EF for PM is used
	fixed conveyor - elevated aggregate bin (sand)	PM10	578160	tons	66	0.029	lbs/ton	7.54	1.72	No EF for PM-10 available. EF for PM is used
11.12(1/95)	Transfer flyash+cement to silos (pneumatic)	PM10	350400	tons	40	0.27	lbs/ton	0.19	0.04	silo filter has been considered as part of process so 99.6% cont is included.
11.12(1/95)	*Weight hopper loading(bins - hopper, aggregates)	PM10	1445400	tons	165	0.02	lbs/ton	14.45	3.30	similar controlled sources,
11.12(1/95)	*Weight hopper loading(silo - hopper,cement&fly ash)	PM10	350400	tons	40	0.02	lbs/ton	3.50	0.80	similar controlled sources.
11.12(1/95)	*Mixer loading (central mix)	PM10	1795800	tons	205	0.04	lbs/ton	35.92	8.20	loading aggregates, cement and flyash. 40 +165 ton/hr
						sum(I39+I40+I41))		18.15	4.14	
	FUEL BURNING EQUIPMENT	POLLUTANT								
	weight % of sulfur in fuel=	0.5	11781.78	MMB	1.345	MMBtu/hr = 9.97 (gal/hr) * 7.1 (lb/gal) * 0.019 (MMBtu/lb)				
3.3(7/93)	Diesel generator set	PM10				0.31	lb/MMBtu	1.826	0.417	Emissions = fuel used(gal/hr) x fuel weight(lbs/gal) x
	Fuel Used: 10527.0 gals/yr	NOx				4.41	lb/MMBtu	25.979	5.931	heat value(MMBTU/lb) x emission factor(lb/MMBTU)
	Fuel wt: 7.1 lbs/gal	SOx				0.29	lb/MMBtu	1.708	0.390	grain loading limits: 0.015 and 0.050 gr/dscf @3% oxygen
	Heat Val: 0.019 MMBtu/lb	CO				0.95	lb/MMBtu	5.596	1.278	for gas and liquid respectively
	Hourly fuel used: 9.97 gal/hr	TOC								
		exhaust				0.35	lb/MMBtu	2.062	0.471	

Appendix B

continue

		evaporative				0	lb/MMBtu	0.000	0.000	
		crankcase				0.01	lb/MMBtu	0.059	0.013	
		refueling				0	lb/MMBtu	0.000	0.000	
1.3(1/95)	Water heater (diesel, process)	PM10	63948	gal	7.3	2	lb/10^3gal	0.064	0.015	
		NOx				20	lb/10^3gal	0.639	0.146	
		SOx				72	lb/10^3gal	2.302	0.526	
		CO				5	lb/10^3gal	0.160	0.037	
		NMTOC				0.2	lb/10^3gal	0.006	0.001	
1.4(1/95)	Water heater (nature gas, process)	PM10	8760000	cf	1000	7.5	lb/10^6cf	0.033	0.008	condensable PM, EPA method 202
		NOx				100	lb/10^6cf	0.438	0.100	
		SOx				0.6	lb/10^6cf	0.003	0.001	
		CO				21	lb/10^6cf	0.092	0.021	
		NMTOC				5.28	lb/10^6cf	0.023	0.005	
						sum(146+155+160)		1.923	0.439	

Note:

(a) Annual Production (T/yr) = Hourly Rate (T/hr)* Operating Hour (hr/yr)*coefficient

(b) Short Term Emission (lb/hr) = EF(emission factor, lb/ton) * Hourly Process Rate (ton/hr)

(c) Long Term Emission (ton/yr) = EF(emission factor, lb/ton) *(1/2000 ton/lb) * Anual Process Rate (ton/yr)

(*) "Technical Guidance For Control of Industrial Process fugitive Particulate Emissions", EPQ-450/3-77-010, U.S. environmental protection Agency, Research Triangle park, NC, March 1977

APPENDIX C

Appendix C-1

FACILITY:	Valley Ready Mix, Inc.	Engineer:	Yihong
CONTACT:	Stacey B. Walters	Date:	29-Jul-96
ADDRESS:	P.O. Box 390		
	Rexburg, ID 83440		
PHONE:	(800)359-3586		
PROJECT:	Tier II OP (synthetic minor)		
FILE NAME:	10totper.wk1		

Permitted limits for PM-10 and other corresponding emissions

	PM		PM-10		CO		NOx		SOx		VOC	
SOURCE	lb/hr	Ton/yr	lb/hr	Ton/yr	lb/hr	Ton/yr	lb/hr	Ton/yr	lb/hr	Ton/yr	lb/hr	Ton/yr
Pre-screen Material Handling	3.53	15.45	1.23	5.41	---	---	---	---	---	---	---	---
Screening	9.60	42.05	7.20	31.54	---	---	---	---	---	---	---	---
Post-screen Material Handling	0.38	1.66	0.13	0.58	---	---	---	---	---	---	---	---
Cement Silo Filter Vent	0.04	0.19	0.04	0.19	---	---	---	---	---	---	---	---
Weigh Hopper Loading	0.33	1.45	0.33	1.45	---	---	---	---	---	---	---	---
Generator	0.42	0.41	0.42	0.41	1.28	2.05	5.93	9.53	0.39	0.63	0.48	0.78
Sum	14.30	61.20	9.36	39.57	1.28	2.05	5.93	9.53	0.39	0.63	0.48	0.78

Appendix C-2

FACILITY: Valley Ready Mix, Inc.
CONTACT: Stacey B. Walters
ADDRESS: P.O. Box 390
Rexburg, ID 83440
PHONE: (800)359-3586
PROJECT: Calculating Permitted Limits, PM10
FILE NAME: 10PER.WK1

Operating hrs (except for Generator):	8760 hr	Engineer:	Yihong
Operating hrs for Generator:	3213 hr	Date:	29-Jul-96
PER (PM10)=	39.83 T/yr	coefficient(e)=	1
		9.36 lb/hr	

REFERENCES (AP-42)	PROCESS	POLLU-TANT	RODUCTION Annual (a)	UNIT	TRODUCTIO hourly (unit mme as annual)	EF	UNITS	NCONTR EMISSION (TON/YR) (c)	NCONTR MISSION (LB/HR) (b)	CONTI EFF	CONTRL MISSION (TON/YR) (d)	CONTRL EMISSIONS (LB/HR)	REMARKS
	PRE-SCREEN MATERIAL HANDLING												
13.2.4(1/95)	Transfer raw material: storage - hopper	PM10	1752000	tons	200	0.003	lbs/ton	2.704	0.617	0	2.704	0.617	Equation in Section 13.2.4.3 with k=0.35,U=8,M=1.5
13.2.4(1/95)	Transfer raw material: hopper - conveyor	PM10	1752000	tons	200	0.003	lbs/ton	2.704	0.617	0	2.704	0.617	Per application
13.2.4(1/95)	Transfer raw material: conveyor - screen	PM10	1752000	tons	200	0.003	lbs/ton	2.704	0.617	0	2.704	0.617	
						sum(I16+I17)=		5.408	1.235		5.408	1.235	
	SCREENING												
8.19.4(9/85)	Sand and Rock Screening	PM10	1752000	tons	200	0.12	lbs/ton	105.120	24.000	0.7	31.536	7.200	
	POST-SCREEN MATERIAL HANDLING												Mavg =1.5*(120/200)+9*(80/200) = 4.5
13.2.4(1/95)	screened materials - belt conveyors	PM10	1752000	tons	200	0.001	lbs/ton	0.581	0.133	0	0.581	0.133	Equation in Section 13.2.4.3 with k=0.35,U=8,M=4.5
13.2.4(1/95)	rock conveyor - storage pile(s)	PM10	1051200	tons	120	0.003	lbs/ton	1.622	0.370	0	1.622	0.370	Equation in Section 13.2.4.3 with k=0.35,U=8,M=1.5
13.2.4(1/95)	sand conveyor - storage pile	PM10	700800	tons	80	0.001	lbs/ton	0.252	0.057	0	0.252	0.057	Equation in Section 13.2.4.3 with k=0.35,U=8,M=9
						sum(I25)=		0.581	0.133		0.581	0.133	
	CONCRETE BATCHING PROCESSING												
13.2.4(1/95)	rock storage pile(s) - feed hopper	PM10	876000	tons	100	0.003	lbs/ton	1.352	0.309	0	1.352	0.309	Equation in Section 13.2.4.3 with k=0.35,U=8,Mavg=1.5
13.2.4(1/95)	sand storage pile - feed hopper	PM10	578160	tons	66	0.001	lbs/ton	0.165	0.038	0	0.165	0.038	Equation in Section 13.2.4.3 with k=0.35,U=8,Mavg=5
13.2.4(1/95)	rock feed hopper - fixed conveyor	PM10	876000	tons	100	0.003	lbs/ton	1.352	0.309	0	1.352	0.309	Equation in Section 13.2.4.3 with k=0.35,U=8,Mavg=1.5
13.2.4(1/95)	sand feed hopper - fixed conveyor	PM10	578160	tons	66	0.001	lbs/ton	0.165	0.038	0	0.165	0.038	Equation in Section 13.2.4.3 with k=0.35,U=8,Mavg=5
11.12(1/95)	fixed conveyor - elevated aggregate bins (rock)	PM10	876000	tons	100	0.029	lbs/ton	11.432	2.610	0	11.432	2.610	No EF for PM-10 available. EF for PM is used
	fixed conveyor - elevated aggregate bin (sand)	PM10	578160	tons	66	0.029	lbs/ton	7.545	1.723	0	7.545	1.723	No EF for PM-10 available. EF for PM is used
11.12(1/95)	Transfer flyash+cement to silos (pneumatic)	PM10	350400	tons	40	0.27	lbs/ton	47.304	10.800	0.996	0.189	0.043	No EF for PM-10 available. EF for PM is used
11.12(1/95)	*Weight hopper loading(bins - hopper, aggregates)	PM10	1445400	tons	165	0.02	lbs/ton	14.454	3.300	0.9	1.445	0.330	inside the batch plant, per OP app.
11.12(1/95)	*Weight hopper loading(silo-hopper,cement&fly ash)	PM10	350400	tons	40	0.02	lbs/ton	3.504	0.800	1	0.000	0.000	totally sealed transfer, per OP app.
11.12(1/95)	*Mixer loading (central mix)	PM10	1795800	tons	205	0.04	lbs/ton	35.916	8.200	0	35.916	8.200	similar controlled sources,aggregates, cement & fly ash. 40 +165 ton/hr
						sum(I37+I38+I39))		65.262	14.900		1.635	0.373	
	FUEL BURNING EQUIPMENT	POLLUTANT											
	weight % of sulfur in fuel=	0.5	4321.33	MMB	1.345	MMBtu/hr = 9.97 (gal/hr) * 7.1 (lb/gal) * 0.019 (MMBtu/lb)							
3.3(7/93)	Diesel generator set	PM10				0.31	lb/MMBtu	0.670	0.417	0	0.670	0.417	Emissions = fuel used(gal/hr) x fuel weight(lbs/gal) x
	Fuel Used: 10527.0 gals/yr	NOx				4.41	lb/MMBtu	9.529	5.931	0	9.529	5.931	heat value(MMBTU/lb) x emission factor(lb/MMBTU)
	Fuel wt: 7.1 lbs/gal	SOx				0.29	lb/MMBtu	0.627	0.390	0	0.627	0.390	
	Heat Val: 0.019 MMBtu/lb	CO				0.95	lb/MMBtu	2.053	1.278	0	2.053	1.278	
	Hourly fuel used: 9.97 gal/hr	TOC				sum(I50+I51+I52)/		0.778	0.484		0.778	0.484	
		exhaust				0.35	lb/MMBtu	0.756	0.471	0	0.756	0.471	
		evaporative				0	lb/MMBtu	0.000	0.000	0	0.000	0.000	
		crankcase				0.01	lb/MMBtu	0.022	0.013	0	0.022	0.013	

refueling	0	lb/MMBtu	0.000	0.000	0	0.000	0.000

Note:

(a) Annual Production (T/yr) = Hourly Rate (T/hr)* Operating Hour (hr/yr)*coefficient

(b) Short Term Emission (lb/hr) = EF(emission factor, lb/ton) * Hourly Process Rate (ton/hr)

(c) Long Term Emission (ton/yr) = EF(emission factor, lb/ton) *(1/2000 ton/lb) * Annul Process Rate (ton/yr)

(d) Controlled Emission (lb/hr or ton/yr) = Uncontrolled Emission * (1-Control Efficiency)

(e) coefficient=(2*19200)/(200*8760)

(*) "Technical Guidance For Control of Industrial Process fugitive Particulate Emissions", EPQ-450/3-77-010, U.S. environmental protection Agency, Research Triangle park, NC, March 1977

APPENDIX D

Appendix D

07/29/96

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

Valley Ready Mix, Inc. Generator

 SIMPLE TERRAIN INPUTS:
    SOURCE TYPE            =        POINT
    EMISSION RATE (G/S)    =      .610000
    STACK HEIGHT (M)       =       3.0000
    STK INSIDE DIAM (M)    =        .1500
    STK EXIT VELOCITY (M/S)=      52.0782
    STK GAS EXIT TEMP (K)  =     573.0000
    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

    STACK EXIT VELOCITY WAS CALCULATED FROM
    VOLUME FLOW RATE =   1950.0000     (ACFM)

 BUOY. FLUX =    1.404 M**4/S**3;  MOM. FLUX =    7.801 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
72.	243.7	4	10.0	10.0	3200.0	5.76	6.10	3.58	NO
100.	246.0	4	8.0	8.0	2560.0	6.45	8.26	4.75	NO
200.	186.2	4	3.5	3.5	1120.0	10.89	15.73	8.79	NO
300.	144.7	4	2.5	2.5	800.0	14.05	22.83	12.50	NO
400.	117.3	4	2.0	2.0	640.0	16.82	29.72	15.77	NO
500.	98.85	4	1.5	1.5	480.0	21.42	36.53	19.04	NO
600.	85.13	4	1.5	1.5	480.0	21.42	43.04	21.85	NO
700.	74.03	4	1.0	1.0	320.0	30.63	49.82	25.30	NO

```
MAXIMUM 1-HR CONCENTRATION AT OR BEYOND    72. M:
   100.   246.0        4     8.0    8.0  2560.0    6.45    8.26    4.75    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 SCREEN MODEL RESULTS ***
     ****************************************
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CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	246.0	100.	0.

APPENDIX E

Appendix E

Company Name:	Valley Ready Mix, Inc.	Engineer:	Yihong
Project:	Tier II	Date:	29-Jul-96
	P.O Box 390	File:	general.wk1
	Rexburg, ID 83440		

Ton per Year Emission Limit:	100	[=] Tons/yr
Concrete Batch Plant Information		
Facility Production Capacity:	125	[=] yd▲u3▼/hr
	Note: 200 tons aggregate/hr * 50,000 Yd^3 / 80,000 tons aggregate	
Maximum Annual Hours of Operatio	8,760	[=] hr/yr
Cement Silo:		
Modeled 1-hr Concentration:	120	[=] µg/m▲u3▼, at emission rate of 1 lb/hr
Baghouse Control Effcy.	99.60%	%
Cement Hopper:		
Modeled 1-hr Concentration:	N/A	[=] µg/m▲u3▼, at emission rate of 1 lb/hr
Baghouse Control Effcy.	N/A	%

Background Concentrations	1-hr	3-hr	8-hr	24-hr	Annual
PM▲d10▼				86	32.7
CO	11400		5130		
NO▲dx▼					40
SO▲dx▼		543		144	23.5
TOC					

Generator				
Enforceable Limits:				
Production	125	yd▲u3▼/hr	200	tons aggregate/hr
Operational	24.0	hr/day	3,213	hr/year

Generator Set Information		
Generator? (Y/N)	Y	
Generator Size:	200	[=] kW
Units:	B	(A = Horsepower) (B = Kilowatts)
Fuel Type:	A	(A = Diesel-Fired Generator) (B = Gasoline-Fired or Dual-Fired Generator)
	9.97	[=] gal/hr
		Conversion Factor 268.14
Modeled 1-hr Concentration:	246	[=] µg/m▲u3▼, at emission rate of 1 lb/hr

DIVISION OF ENVIRONMENTAL QUALITY

PORTABLE EQUIPMENT REGISTRATION AND RELOCATION FORM

COMPANY NAME: _____ PHONE #: _____

COMPANY MAILING ADDRESS: _____

_____

PLANT TYPE (i.e. mfr. name, model #, etc.): _____

_____

PLANT PERMIT # (if applicable): _____

CURRENT PLANT LOCATION: _____

NEW PLANT LOCATION: _____

ESTIMATED DATES OF OPERATION AT NEW LOCATION (Month/Day/Year)

Start-up: _____ End: _____

FUEL TYPE: _____

Have any major components of the plant or it's air pollution control equipment been replaced or modified since the plant last operated?

No: _____ Yes: _____ (If yes, explain below)

_____

_____

NAME OF CONTACT PERSON: _____

Phone # (if different than above): _____

Signature: _____ Date: _____

If plant will be operated in conjunction with a contract with the State of Idaho, please specify:

Contract #: _____

State of Idaho Contact Person: _____ Phone #: _____

THIS FORM MUST BE SUBMITTED 10 DAYS BEFORE PLANT IS RELOCATED.

A SCALED PLOT PLAN IDENTIFYING THE PROPERTY BOUNDARY OF THE NEW SITE MUST BE INCLUDED WITH THIS FORM.

Mail to: Division of Environmental Quality
Permits and Enforcement
1410 North Hilton, Third Floor
Boise, Idaho 83706