

## **Preliminary Decision**

### **ADDITION OF NEW CRUSHING PLANT, MILLING AND FLOTATION PLANT, AND PASTE TAILINGS PLANT AT MOLYCORP MINERALS, LLC, MOUNTAIN PASS, CALIFORNIA**

#### **A. Introduction**

##### ***1. Application and Setting***

The Mojave Desert Air Quality Management District (District) received the Crushing, Milling and Flotation, and Paste Tailings Plants Permit Application package for new and relocated existing<sup>1</sup> equipment proposed for the Molycorp Minerals, LLC (herein after Molycorp) facility located at Mountain Pass, California in August 2011.<sup>2</sup> The application package is the first of the Project Stage II<sup>3</sup> permit application packages, which constitute mineral recovery process upgrades and which will use the steam and electricity supplied by the recently permitted and currently under construction Project Stage I<sup>4</sup> Combined Heat and power (CHP) Plant. The application proposes the addition of 26 new permit units which collectively comprise the Crushing, Milling and Flotation, and Paste Tailings Plants. The Crushing and Milling and Flotation Plants will mechanically process and separate the raw ore material to prepare it for further chemical beneficiation downstream. The Paste Tailings Plant will process and dispose of ore gangue.<sup>5</sup>

The new and relocated existing equipment will be located at the current Molycorp plant (facility 00364) located at Mountain Pass, California. The Crushing, Milling and Flotation, and Paste Tailings Plants will be located approximately 2750, 2000, and 3500 feet respectively northwest from the location where the CHP Plant is to be built. Emissions from this equipment installation do not constitute a major modification to the Molycorp facility nor do they require offsets because the emissions associated with the CHP plant (Stage I) and process upgrades (Stage II) were previously offset and the facility emissions have been capped based on those offsets.

Pursuant to Rule 1302(D)(1), the District is issuing this preliminary decision/determination on the application. As required by District Rule 1302, this document will review the proposed equipment, evaluating worst-case or maximum air quality impacts and establishing control technology requirements and related air quality permit conditions and will determine required emissions offsets and emissions reductions credits. This document represents the preliminary pre-construction compliance review of the proposed project, to determine whether construction and operation of the proposed project will comply with all applicable District rules and regulations.

##### ***2. Description of Project***

Molycorp proposes to construct and operate the Crushing, Milling and Flotation, and Paste Tailings Plants to mechanically process, separate, and prepare the mine ore for further beneficiation in

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<sup>1</sup> The Feed Hopper, Vibrating Grizzly Feeder, and Primary Jaw Crusher are existing equipment under permit number B000846 but will be relocated to the new Crushing Plant.

<sup>2</sup> Application cover letter from David Weaver, (ENVIRON) to C. Collins (MDAQMD), August 5, 2011.

<sup>3</sup> Previously designated as Phase II.

<sup>4</sup> Previously designated as Phase I.

<sup>5</sup> Ore Gangue is the non-valuable material that surrounds, or is closely mixed with, a wanted mineral in an ore deposit.

downstream processes, as well as to dispose of the ore gangue. The application proposes to use the equipment up to 24 hours per day and 8,760 hours per year; however, the Crushing Plant will not exceed 700,000 tons per year solid material throughput, exclusive of water naturally present in the material or added from water spray dust suppression systems. The Milling and Flotation and Paste Tailings Plants are downstream of the Crushing Plant and are therefore limited by the Crushing Plant throughput.

The proposed permits at the Crushing Plant will include the following:

- One (1) Crushing Plant, including primary, secondary, and tertiary crushing and screening systems, conveyors and feeders, water spray dust suppression systems, and ancillary equipment
- One (1) Baghouse
- Two (2) Fine Ore Storage Bins
- Two (2) Fine Ore Storage Bin Vents

The proposed equipment at the Milling and Flotation Plant will include the following:

- One (1) Ball Mill Circuit
- One (1) Flotation System
- One (1) Concentrate Handling System
- One (1) Lignosulfonate Reagent System
- One (1) Lignosulfonate Dust Collection Blower
- One (1) Lignosulfonate Bin Vent Blower
- One (1) Soda Ash System
- One (1) Soda Ash Scrubber
- One (1) Soda Ash Silo
- One (1) Soda Ash Silo Vent Filter
- One (1) Coagulant Reagent System
- One (1) Saponified Fatty Acid Reagent System
- One (1) Flocculant Reagent System

The proposed equipment at the Paste Tailings Plant will include the following:

- One (1) Paste Tailings Plant
- One (1) Flocculant Reagent System
- One (1) Cement Reagent System
- One (1) Cement Silo
- One (1) Cement Silo Bin Vent
- One (1) Paste Tailings Mixer
- One (1) Paste Tailings Mixer Wet Scrubber

## **B. Criteria and Toxics New Source Review Analysis**

### ***1. Maximum Annual Emissions***

Maximum annual criteria emissions are calculated assuming maximum permitted activity.

Table 1: Maximum Annual Crushing, Milling and Flotation, and Paste Tailings Criteria Emissions

	PM <sub>10</sub> (Tons/Year)
Crushing Plant - Material Handling	3.3
Crushing Plant - Crushing and Screening Operations	0.2
Milling and Flotation Plant	0.6
Paste Tailings Plant	0.6
Total	4.8

Table 2: Maximum Annual Facility Criteria Emissions

	PM <sub>10</sub> (Tons/Year)
Facility-wide Emissions shall be less than	46

The facility emissions for NO<sub>x</sub> and PM<sub>10</sub> are over the major source thresholds pursuant to New Source Review Rules 1301(DD) and 1303(B). The facility is located in a federal ozone attainment area. The federal major facility emissions thresholds for criteria pollutants pursuant to Rule 1201(S)(2) that apply are 100 tons per year of any air pollutant or 10 tons per year of any HAP or 25 tons per year of any combination of HAPs. The facility CO<sub>2</sub> emissions will be at or above the federal major facility threshold once the CHP plant is operational therefore the facility will be required to have a Title V permit within 12 months from that time. The facility emissions of all criteria pollutants, including those from the proposed project are below the threshold for Title V facilities.

The emissions associated with the CHP plant (Project Stage I) and process upgrades (Project Stage II) were previously offset and the facility emissions have been capped based on those offsets for NO<sub>x</sub> and PM<sub>10</sub>. Additionally, the facility emissions have been capped at the offset thresholds of VOC, SO<sub>x</sub> and CO. Emissions from the proposed Crushing, Milling and Flotation, and Paste Tailings Plants do not exceed the facility cap based on a maximum of 700,000 tons per year solid material throughput at the Crushing Plant. The facility is required by permit condition to maintain emissions at or below the specified cap.

Rule 1310(D)(2)(a) specifies the emissions thresholds for federal major modifications. A federal major modification would be a project that has a net emissions increase of a regulated NSR pollutant above the specified number of tons per year specified in the rule. The proposed project does not yield a net emissions increase because the facility emissions cap is in place.

**Please note:** more detailed project and permit unit emissions calculations are presented in the Appendix

## 2. Control Technology Evaluation

Best Available Control Technology (BACT):

Rule 1303(A)(1) “Any new Permit Unit which emits, or has the Potential to Emit, 25 pounds per day or more of any Nonattainment Air Pollutant shall be equipped with BACT.”

Rule 1303(A)(3) “Any new or Modified Facility which emits, or has the Potential to Emit, 25 tons per year or more of any Nonattainment Air Pollutant shall be equipped with BACT for each new Permit Unit.”

Because the facility is a major emissions source of NO<sub>x</sub> and PM<sub>10</sub> which are federal and/or state non-attainment air pollutant within the MDAQMD,<sup>6</sup> the proposed project must employ BACT/Lowest Achievable Emission Rate (LAER).

The MDAQMD defines BACT (Rule 1301(K)(2)) for a major facility as the most stringent emission limitation or control technique that:

- The most stringent emission limit or control technique which has been achieved in practice, for such permit unit class or category of source; or
- Any other emission limitation or control technique, and/or different fuel demonstrated in practice to be technologically feasible and cost-effective by the APCO or by CARB.

The applicant proposes to meet BACT for the proposed emissions units and has submitted a BACT analysis that evaluates the control technology for these pollutants. The MDAQMD has determined that the proposed emission limits meet BACT and are compliant with all applicable air quality regulations.

Each class and category BACT determination is described below, followed by a summary table that outlines the BACT determinations for all proposed permit units.

***BACT for Solid Material Handling Operations (Conveyors, Feeders, Size Reduction and Classification Equipment, and Associated Material Transfer Points)***

BACT for these equipment is based on BAAQMD and SJVAPCD PM<sub>10</sub> BACT determinations for solid material handling operations.<sup>7</sup> The proposed equipment meet the BACT determination, as described below.

BAAQMD determines BACT for dry solid material handling processes to be an emission rate less than 0.01 grains per dry standard cubic foot (gr/dscf). SJVAPCD determines BACT for dry solid material conveying as 1 pound (lb) PM<sub>10</sub> per 100 tons processed. The 0.01 gr/dscf is determined to be the stricter of the two limits and is therefore considered BACT.

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<sup>6</sup> <http://www.arb.ca.gov/desig/adm/adm.htm>

<sup>7</sup> Material handling determinations presented in SCAQMD and EPA RACT/BACT/LAER included the following material classes that are different from the materials Molycorp handles: asphalt, coal, ash, board manufacturing, grain handling, sand, Portland cement, and taconite iron ore. The material handled within the Crushing, Milling and Flotation, and Paste Tailings Plants is of a different class than those for which BACT determinations were found in SCAQMD and EPA RACT/BACT/LAER. Therefore, material handling BACT determinations from SCAQMD and EPA RACT/BACT/LAER are not presented here.

Non-fugitive dry material handling equipment in the Crushing Plant are enclosed and vented to a baghouse which meets the 0.01 gr/dscf BACT emission limit. Non-fugitive emissions from material handling processes in the Crushing Plant that are not vented to a baghouse and all material handling processes within the Milling and Flotation and Paste Tailings Plants are either wet material handling processes or are handled in such a way that they will meet the 0.01 gr/dscf BACT emission limit.

Therefore, the proposed Solid Material Handling Operations equipment meet the material handling BACT determinations.

### ***BACT for Solid Material Storage (Storage Bins and Silos)***

BACT for solid material storage is based on BAAQMD, SCAQMD, and SJVAPCD PM<sub>10</sub> BACT determinations for solid material handling operations. The proposed equipment meet the BACT determination, as described below.

BAAQMD determines achieved in practice BACT for solid material storage as less than 0.01 gr/dscf, and technically feasible BACT as 0.0013 gr/dscf. SCAQMD determines BACT for bulk solid storage operations (specifically for asphalt) as storage silos and water spray. SCAQMD control technologies are equivalent or less stringent than those presented by BAAQMD. SJVAPCD determines BACT for dry material storage as silos enclosed and vented to fabric filters with a 99.7% control efficiency. SJVAPCD determines BACT for dry material handling (storage) as 1 lb PM<sub>10</sub> per 100 tons processed, with storage enclosed and vented to a fabric filter baghouse. SJVAPCD determines BACT for wet material storage to be 0.12 lb PM<sub>10</sub> per ton processed and enclosed storage with sufficient moisture so visible emissions are less than 5% opacity from any single emission point. The 0.01 gr/dscf is determined to be the strictest of these achieved in practice limits and is therefore considered BACT.

All permit units that store solid material will meet this BACT limit. The No. 1 and No. 2 Fine Ore Storage Bins in the Crushing Plant are each equipped with a bin vent which control PM<sub>10</sub> emissions to less than 0.01 gr/dscf and will therefore meet the BACT limit. The dry reagent storage systems in the Milling and Flotation and Paste Tailings Plants include lignosulfonate, soda ash, and cement, which are all stored in silos equipped with vent filters or bin vents which achieve the 0.01 gr/dscf emission limit. All storage bins and silos in the Crushing, Milling and Flotation, and Paste Tailings Plants will be vented to controls which will emit less than 0.01 gr/dscf.

Therefore, the proposed Solid Material Storage equipment meet the material storage BACT determination.

### ***BACT for Crushing Operations***

BAAQMD determines BACT for rock and aggregate processing, size reduction and classification equipment (such as crushers and screens), conveyors, and associated material transfer points to be enclosure and venting to a baghouse with an emission rate less than 0.01 gr/dscf. The proposed equipment meet the BACT determination, as described below.

The secondary and tertiary crushing and screening equipment in the Crushing Plant will be vented to a baghouse which meets the 0.01 gr/dscf BACT emission limit. The primary crushing and screening equipment in the Crushing Plant is existing, but nonetheless will process wet material of moisture content sufficiently high (at least 3% for ore and higher as spray systems wet the material) so that the emissions will be below this emission limit.

Therefore, the proposed crushing equipment will meet the BACT requirement.

### ***BACT for Screening Operations***

SJVAPCD determines BACT for screening operations to be 8.4 grains per ton feed. The screening operations in the Crushing Plant screen wet<sup>8</sup> material with negligible emissions, per MDAQMD emission factors provided in MDAQMD's Mineral Guidance.<sup>9</sup> Therefore, the proposed screening equipment will meet the BACT requirement.

### ***BACT for Ball Mill Operations***

BACT for Ball Mill Operations is based on BAAQMD, and SJVAPCD PM<sub>10</sub> BACT determinations for Ball Mill Operations. The proposed equipment meet the BACT determination, as described below.

BAAQMD determines achieved in practice BACT for ball mill operations as less than 0.01 gr/dscf, and technically feasible BACT as 0.0013 gr/dscf. SJVAPCD determines BACT for dry material handling (milling) as 1 lb PM<sub>10</sub> per 100 tons processed. It is determined that 1 lb PM<sub>10</sub> per 100 tons processed is the strictest achieved in practice determination and is therefore BACT.

The ball mill in the Milling and Flotation Plant has no particulate emissions<sup>10</sup> as it is completely enclosed and handles wet material; therefore it meets this BACT requirement.

### ***BACT for Mixing Operations***

BACT for dry material mixing is 1 lb PM<sub>10</sub> per 100 tons processed based on SJVAPCD BACT determinations. The mixer in the Paste Tailings Plant handles wet material, and is vented to a wet scrubber. Therefore, the mixer in the Paste Tailings Plant meets the 1 lb PM<sub>10</sub> per 100 ton processed emission limit.

### ***BACT for Each Baghouse, Bin Vent, Silo Vent Filter, Unloading Control System, Dust Spray System, and Wet Scrubber***

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<sup>8</sup> AP 42 Chapter 11.24 (Metallic Minerals Processing) defines "high moisture" ore as ore whose moisture content, as measured at the primary crusher inlet or at the mine, is 4 weight percent or greater. AP 42 Chapter 11.19.2 (Crushed Stone Processing and Pulverized Mineral Processing) defines wet material as material containing greater than 1.5 percent water.

<sup>9</sup> MDAQMD. 2000. Emissions Inventory Guidance: Mineral Handling and Processing Industries.

<sup>10</sup> Other equipment in the Milling and Flotation Plant have emissions but are included in other BACT categories such as material handling, as discussed above.

These units are control devices and reduce PM<sub>10</sub> from the solid material handling, crushing and screening operations, and storage emissions whereby the emissions meet the BACT requirements.

**BACT Summary**

Table 3 below summarizes the BACT limits that are applicable to each permit unit, the emissions points within each permit unit, and describes how each permit unit will meet those BACT limits.

Table 3 – BACT limits for permit units.

Permit Unit	Emission Points	BACT Category	BACT Limit	Calculated Emission Concentration <sup>11</sup>	BACT Determination Methodology <sup>12</sup>	Permit Conditions to Ensure Equipment Meets BACT Limit
Crushing Plant	Feed hopper, Vibrating grizzly feeder	Material Handling	0.01 gr/dscf	0.005 gr/dscf	MDAQMD most complex material handling emission factor.	Moisture Content of 3% or greater, Dust Spray System
	Vibrating Grizzly Feeder	Screening	8.4 gr/ton	0 gr/ton	MDAQMD screening Operations emission factor.	Moisture Content of 3% or greater, Dust Spray System
	Primary jaw crusher	Crushing	0.01 gr/dscf	0.002 gr/dscf	MDAQMD crushing operations emission factor.	Moisture Content of 4% or greater, Dust Spray System
	Horizontal Secondary Screen, Horizontal Tertiary Screen	Screening	8.4 gr/ton	0 gr/ton	MDAQMD screening operations emission factor.	Moisture Content of 4% or greater, Dust Cover, baghouse
	All other uncontrolled emissions points downstream of Primary jaw crusher	Material handling	0.01 gr/dscf	0.007 gr/dscf	MDAQMD most complex material handling emission factor.	Moisture Content of 4% or greater, Dust Spray System
Crushing Plant Baghouse	Crushing Plant Baghouse	Material Handling	0.01 gr/dscf	1.15E-04 gr/dscf	MDAQMD most complex material handling emission factor; baghouse control efficiency.	Baghouse
No. 1 and 2 Fine Ore Storage Bins and Bin Vents	No. 1 Fine Ore Storage Bin	Solid Material Storage	0.01 gr/dscf	1.29E-04 gr/dscf	MDAQMD most complex material handling emission factor, adjusted with the bin vent control efficiency.	Dust Cover Vented to Bin Vent
Ball Mill Circuit	Ball mill	Ball Mill	1 lb/100 tons processed	0 lb/100 ton processed	Completely enclosed and no emissions.	Enclosure, Moisture Content, no visible emissions
	Ball Mill	Material Handling	0.01 gr/dscf	0.0018 gr/dscf	MDAQMD most complex material handling emission	Moisture Content, no visible emissions

<sup>11</sup> For emission point with emissions closest to BACT limit for emissions points listed.

<sup>12</sup> For a gr/dscf BACT determination, the emissions were divided by the likely volume that the emissions would be present in to determine a concentration in gr/dscf. Where known volumetric flowrates were known, they were used. Where emissions were outdoors, the average wind speed flowing through a 1 meter by 1 meter area was used for the volume. Where emissions were indoors, a 1 meter/second wind speed flowing through a 1 meter by 1 meter area was used for the volume.

					factor.	
	All other material handling equipment	Material Handling	0.01 gr/dscf	0 gr/dscf	Negligible emissions.	Moisture Content, no visible emissions
Flotation System	All equipment in Flotation System	Material Handling	0.01 gr/dscf	0 gr/dscf	Negligible emissions.	Moisture Content, no visible emissions
Concentrate Handling System	All equipment	Material Handling	0.01 gr/dscf	0.0002 gr/dscf	MDAQMD most complex material handling emission factor.	Moisture Content, no visible emissions
Lignosulfonate Reagent System	Unloading Hopper and Storage Hopper	Material Handling	0.01 gr/dscf	1.75E-05 gr/dscf	All emission blown to the Lignosulfonate Dust Collector or Lignosulfonate Bin Vent.	Blowers to dust collector or bin vent
	All other material handling	Material Handling	0.01 gr/dscf	0.0009 gr/dscf	MDAQMD most complex material handling emission factor.	Moisture Content, no visible emissions
Lignosulfonate Dust Collection Blower	Lignosulfonate Dust Collection Blower	Material Handling	0.01 gr/dscf	3.92E-06 gr/dscf	MDAQMD most complex material handling emission factor; blower control efficiency.	Vented to cartridge
Lignosulfonate Bin Vent Blower	Lignosulfonate Bin Vent Blower	Solid Material Storage	0.01 gr/dscf	1.75E-05 gr/dscf	MDAQMD most complex material handling emission factor; blower control efficiency.	Vented to cartridge
Soda Ash System and Soda Ash Scrubber	Soda Ash Scrubber	Material Handling	0.01 gr/dscf	3.84E-06 gr/dscf	MDAQMD most complex material handling emission factor; scrubber control efficiency.	Moisture Content, Wet Scrubber
Soda Ash Silo	Upstream of Soda Ash Silo	Solid Material Storage	0.01 gr/dscf	2.20E-06 gr/dscf	Vented to the Soda Ash Vent Filter.	Vent Filter
	Downstream of Soda Ash Silo	Solid Material Storage	0.01 gr/dscf	0.0002 gr/dscf	MDAQMD most complex material handling emission factor.	Covered
Soda Ash Silo Vent Filter	Soda Ash Silo Vent Filter	Solid Material Storage	0.01 gr/dscf	2.20E-06 gr/dscf	MDAQMD most complex material handling emission factor; scrubber control efficiency.	Vent Filter
Coagulant Reagent System	All equipment	Material Handling	0.01 gr/dscf	0 gr/dscf	Negligible emissions.	Moisture Content (Streams in this system contains no solids and have no emissions)
Saponified Fatty Acid Reagent System	All equipment	Material Handling	0.01 gr/dscf	0 gr/dscf	Negligible emissions.	Saponified Fatty Acid is a liquid and has no emissions.
Flocculant Reagent System (Mill and Flotation Plant)	Hopper and Screw Conveyor	Material Handling	0.01 gr/dscf	0.0002 gr/dscf	MDAQMD most complex material handling emission factor.	No control needed. Small fugitive emissions only because material added approximately twice per year and inside a building.
	All equipment after Screw Conveyor	Material Handling	0.01 gr/dscf	0 gr/dscf	Negligible emissions.	Moisture Content, no visible emissions.
Paste Tailings Plant	All equipment	Material Handling	0.01 gr/dscf	0.0009 gr/dscf	MDAQMD most complex material handling emission factor.	Moisture Content, no visible emissions.

Flocculant Reagent System (Paste Tailings Plant)	Hopper and Screw Conveyor	Material Handling	0.01 gr/dscf	6.40E-06 gr/dscf	MDAQMD most complex material handling emission factor.	No control needed. Small fugitive emissions only because material added approximately twice per year and inside a building.
	All equipment after Screw Conveyor	Material Handling	0.01 gr/dscf	0 gr/dscf	Negligible emissions.	Moisture Content, no visible emissions.
Cement Reagent System	Weight Conveyor and Screw Conveyor	Material Handling	0.01 gr/dscf	0.0015 gr/dscf	MDAQMD most complex material handling emission factor.	Enclosure and inside building.
Cement Silo and Bin Vent	Cement Silo and Bin Vent	Solid Material Storage	0.01 gr/dscf	3.87E-05 gr/dscf	MDAQMD most complex material handling emission factor; bin vent control efficiency.	Bin Vent, Covered
Paste Tailings Mixer and Wet Scrubber	Paste Tailings Mixer	Material Handling	0.01 gr/dscf	2.98E-04 gr/dscf	MDAQMD most complex material handling emission factor; scrubber control efficiency.	Moisture Content, Wet Scrubber

### 3. PSD Class I Area Visibility Protection

The Clean Air Act (CAA) established the Prevention of Significant Deterioration (PSD) permit program to prevent areas that currently have clean air from significant deterioration. The PSD permit program limits emissions by requiring permits for major stationary air pollution sources. The program applies to sources that will have the potential to emit "major" and "significant" amounts of air pollution for any criteria pollutant. It also applies to an existing source that plans to modify operations such that the modification leads to increases of air pollution that will be "major" or "significant". In this context "Major" means emitting or having the potential to emit 100 tons per year (tpy) or more of any criteria pollutant for the specific source categories listed in the PSD regulations. There are 28 listed source categories, which include fossil-fuel boilers (or combination thereof) totaling more than 250 million British thermal units per hour heat input. If a source does not fall into one of the listed source categories, then a threshold of 250 tpy applies. In cases where individual equipment falls within a listed source category, but the facility as a whole does not, then major source/major modification status with respect to PSD is determined by comparing emissions from the listed equipment to the 100 tpy threshold and emissions from the facility as a whole to the 250 tpy threshold.

The existing facility does not fall within one of the listed source categories, and is considered an existing non-major source under the PSD program since emissions are below 250 tpy. The proposed equipment does fall into one of the 28 identified source categories, but emissions from the proposed equipment will be below 100 tpy for all criteria pollutants and the facility emissions including those from the proposed project will remain less than 250 tpy. Additionally, there are no class I areas within 100 kilometers (62 miles) of the proposed project site. A Class I area visibility protection analysis is not required for this action.

#### 4. Air Quality Impact Analysis

For the purposes of state and federal air quality planning, the project location within the MDAQMD is in state and federal non-attainment for PM. Because the project is in a non-attainment area, modeling is not required, but offsets have been procured.

#### 5. Toxic Impact Assessment

In accord with District Rule 1320, New Source Review For Toxic Contaminants, at a minimum a State Toxic New Source Review Program Analysis (State T-NSR), including an Emission unit prioritization Score that must be established by the MDAQMD.

Table 4 – Prioritization Scores:

	Cancer	Acute	Chronic	Non-Cancer
Proposed Crushing and Paste Tailings Plants	.038	.002	.116	.116
Proposed Milling and Flotation Plant + Facility	2.477	1.102	1.002	1.598
Total	2.515	1.104	1.118	1.714

The prioritization scores are based on Toxic Air Contaminant (TAC) emissions calculated from PM<sub>10</sub> emissions. Material profiles of each PM<sub>10</sub> emission source were used to determine the concentration of Hazardous Air Pollutants (HAPs) and TACs present in the particulate matter emitted. Particulate matter emissions from material handling, crushing, and screening operations were quantified using MDAQMD emission factors and methodologies presented in MDAQMD's Mineral Guidance.

The score pertaining to cancer risk is 2.515 which categorizes this project as Intermediate Priority pursuant to Rule 1320(C)(12). Pursuant to Rule 1320, Health Risk Assessments (HRA) are required for High Priority facilities with prioritization score of 10 or more. Because all of this project's resulting prioritization scores are less than 10, and because the closest portion of the proposed project is located approximately 0.65 mile (approximately 3,400 feet NE) from the nearest residence and 2,050 feet SW from the nearest facility fence line<sup>13</sup>, a HRA was not required by the District. The maximum non-cancer chronic and acute hazard prioritization scores are both less than the significance level of 10 (1.118 and 1.104, respectively). Facility HAP emissions are limited by permit condition to less than 10 tons per year of every single HAP and 25 tons per year of any combination of HAPs, therefore a health risk assessment is not required for this project (Rule 1320(E)(2)(b)). Federal T-NSR is also applicable to area sources of HAPs subject to a federal regulation such as a MACT standard. There are no Federal T-NSR or MACT standards applicable to the proposed equipment. The State T-NSR requirements of Rule 1320 further require that the District apply any applicable State ATCM to the proposed project. There is no State ATCM which applies to the proposed equipment.

<sup>13</sup> The Paste Tailings Plant is closest to the nearest residence. The Milling and Flotation Plant is closest to the facility fence line.

Please refer to the appendix for detailed HAP/TAC emissions.

## **6. Offsets**

MDAQMD Regulation XIII – *New Source Review* requires offsets for PTE emissions increases of any regulated air pollutant, and their precursors, in an amount greater than or equal to the thresholds outlined in 1303(B)(1). The proposed project will not result in PTE emissions increases and the facility emissions are limited by permit condition with the emissions above the major source threshold having been previously offset. The proposed equipment does not require an emissions offset analysis.

## **7. Rules and Regulations Applicable to Equipment**

Selected MDAQMD Rules and Regulations will apply to the proposed equipment:

Rule 201 – *Permits to Construct*; requires that a person shall not build, erect, install, alter or replace any equipment, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce or control the issuance of air contaminants without first obtaining written authorization for such construction from the Air Pollution Control Officer. The applicant has submitted the required permit applications for all equipment units which are part of the proposed project and which are not exempt pursuant to Rule 219.

Rule 203 – *Permit to Operate*; requires that person shall not operate or use any equipment, the use of which may cause the issuance of air contaminants or the use of which may reduce or control the issuance of air contaminants, without first obtaining a written permit from the Air Pollution Control Officer. Molycorp has submitted the required permit applications.

Rule 212 – *Standards for Approving Permits*; establishes baseline criteria for approving permits by the MDAQMD for proposed projects. In accordance with these criteria, the proposed project satisfies the required emission limits through the Preliminary Decision Document and complying with stringent emission limitations set forth on permits.

Rule 219 – *Equipment Not Requiring a Permit*; describes specific equipment which does not require a permit. Any other equipment, the use of which may cause the issuance of air contaminants or the use of which may reduce or control the issuance of air contaminants requires a valid permit to operate.

Rule 222 – *Limitations on Potential to Emit*; this rule creates federally enforceable limits on the potential to emit for facilities as defined in 1201(M) which would have the potential to emit air contaminants in excess of the threshold for a major facility.

Rule 401 – *Visible Emissions* limits visible emissions opacity to less than 20 percent (or Ringlemann No. 1). In normal operating mode, visible emissions are not expected to exceed 20 percent opacity.

Rule 402 – *Nuisance* prohibits facility emissions that cause a public nuisance. The proposed equipment is not expected to generate a public nuisance due to the applicable opacity limits and the remoteness of the facility.

Rule 403 – *Fugitive Dust* specifies requirements for controlling fugitive dust. The proposed equipment will be required to comply with the requirements of Rule 403.

Rule 403.2 – *Fugitive Dust Control for the Mojave Desert Planning Area* specifies requirements for construction projects. The construction of the proposed project will be required to comply with the requirements of Rule 403.2.

Rule 404 – *Particulate Matter – Concentration* specifies standards of emissions for particulate matter concentrations. The equipment will be required to remain in compliance with Rule 404 through permit condition.

Rule 405 – *Solid Particulate Matter - Weight* limits particulate matter emissions on a mass per unit combusted basis. The proposed equipment are not expected to violate Rule 405.

Rule 406 – *Specific Contaminants* limits emissions of specific contaminants. The proposed equipment will not emit any of these contaminants; therefore, the proposed equipment are not expected to violate Rule 406.

Rule 408 – *Circumvention* prohibits hidden or secondary rule violations. The proposed project is not expected to violate Rule 408.

Rule 409 – *Combustion Contaminants* limits total particulate emissions on a density basis. The proposed equipment will not combust any fuels; therefore, the proposed equipment are not expected to violate Rule 409.

Rule 430 – *Breakdown Provisions* requires the reporting of breakdowns and excess emissions. The proposed project will be required to comply with all District Rules.

Rule 431 – *Sulfur Content in Fuels* limits sulfur content in gaseous, liquid and solid fuels. The proposed equipment will not use any fuels; therefore, the proposed equipment are not expected to violate Rule 431.

Regulation XII contains requirements for sources, which must have a federal operating permit. The facility emissions, including the proposed equipment, do not exceed the emissions thresholds for major facilities pursuant to 1201(S).

Rule 1300 – *General* ensures that Prevention of Significant Deterioration (PSD) requirements apply to all projects. The proposed project does not have the PTE to emit 100 tons per year or more of criteria pollutants and therefore is not a major source of emissions. As this facility is not a major source it is not subject to the PSD requirements Title I, Part C of the Federal Clean Air Act (42 U.S.C. §§7470-7492 which apply to major sources only and therefore is in compliance with the PSD requirements of Rule 1300.

Rule 1302 – *Procedure* requires certification of compliance with the Federal Clean Air Act, applicable implementation plans, and all applicable MDAQMD rules and regulations. The ATC application package for the proposed project includes sufficient documentation to comply with Rule 1302(C). Permit conditions for the proposed project will require compliance with Rule 1302(D)(5).

Rule 1303 – *Requirements* requires BACT for new or modified sources which have the PTE 25 tons/year or more of any non-attainment air pollutant and new permit units which have the PTE to emit more than 25 pounds per day of any non-attainment air pollutant. Because the facility PTE for NO<sub>x</sub> and PM<sub>10</sub> are each over 25 tons/year, BACT is required for equipment in the Crushing, Milling and Flotation, and Paste Tailings Plants. The rule also requires offsets for selected facility modifications. The proposed equipment will not result in emissions increases above what was previously offset and the facility emissions are limited by permit condition with the emissions above the major source threshold having been previously offset. Prior to the commencement of construction the owner/operator must surrender to the District sufficient valid Emission Reduction Credits such that this project complies with Rule 1303(B)(1).

Rule 1304 – *Emissions Calculations*; this rule provides the procedures and formulas to calculate emissions increases and decreases for new or modified Facilities. The procedures set forth in the rule were followed in determining the emissions associated with the proposed equipment.

Rule 1305 – *Emissions Offsets*; this facility does have the PTE 25 tons per year or more of NO<sub>x</sub> and PM<sub>10</sub>. The emissions associated with the CHP plant and Stage II process upgrades were previously offset and the facility emissions have been capped based on those offsets for NO<sub>x</sub> and PM<sub>10</sub> and on offset thresholds for VOC, SO<sub>x</sub> and CO. Emissions from the proposed Crushing, Milling and Flotation, and Paste Tailings Plants do not exceed the facility cap based on 8,760 hours of operation per year and 700,000 tons per year solid material throughput at the Crushing Plant. The facility is required by permit condition to maintain emissions at or below the specified cap.

Rule 1310 *Federal Major Facilities & Federal Major Modifications*; the proposed project results in emissions below thresholds for MDAQMD's definition of federal major modifications for all criteria pollutants. The facility potential to emit including emissions from the proposed equipment are less than 100 tons per year, therefore this project is not a federal major modification and Molycorp is not a federal major facility. Emissions associated with this project are below the thresholds requiring Prevention of Significant Deterioration (PSD).

Rule 1320 *New Source Review for Toxic Air Contaminants*; this rule sets forth the requirements for new and modified sources of Toxic Air Contaminants (TAC). The requirements of Rule 1320 were applied to the proposed project and are discussed in section 5.

## **8. Conclusion**

The MDAQMD has reviewed the proposed project application, and determined that the proposed equipment, after District permit issuance, including the permit conditions as listed below, will comply with all applicable MDAQMD Rules and Regulations. This preliminary decision will be

available for public comment and publicly noticed; final permits (Authorities to Construct) should be released within 30 days following the conclusion of the comment period.

## 9. Permit Conditions

The following permit conditions will be placed on the Permits to Operate for the affected equipment.

Description: One (1) CRUSHING PLANT – This plant is rated at 700,000 tons per year solid material throughput at maximum continuous conditions, exclusive of water naturally present in the ore or added from water spray dust suppression systems.

*Application Number:* 00011937      *Permit Number:* B011335

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This equipment shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles.
3. Materials processed by equipment delineated above shall comply with District rules 401, 402, and 403.
4. Sufficient water and equipment in operable condition shall be maintained on-site and used as necessary to ensure compliance with these rules.
5. Material handling processes (i.e. drops and conveyors) shall not discharge PM<sub>10</sub> in excess of 0.01 grains/dscf.
6. Crushing operations shall not discharge PM<sub>10</sub> in excess of 0.01 grains/dscf.
7. Screening operations shall not discharge PM<sub>10</sub> in excess of 8.4 grains/tons screened.
8. All non-fugitive emissions at the crushing plant shall meet the above required emission limits as follows:
  - a. Ore added to the feed hopper shall have a moisture content of 3% or greater.
  - b. The feed hopper, grizzly feeder, and primary jaw crusher shall be watered such that material entering the primary jaw crusher shall have a moisture content of 4% or greater. This moisture content shall be maintained or exceeded through all downstream processes in the crushing plant.
  - c. All streams from the primary jaw crusher to the first of the two Telestacker Conveyors shall be covered and vented to baghouse C011336.

Items a and b shall be logged monthly, as applicable. The applicable log shall be maintained current, on-site for a minimum of 5 years and provided to District personnel on request.

9. The owner/operator must surrender to the District sufficient valid Emission Reduction Credits for this equipment before the start of construction of any part of the project for which this equipment is intended to be used. In accordance with Regulation XIII the owner/operator shall obtain 46 tons of PM<sub>10</sub> offsets for the new equipment proposed for Stage I and Stage II of the project.
  
10. (a) Mountain Pass Mine Facility Emissions Limits: The total criteria pollutant emissions for the Mountain Pass Mine shall be less than: 42 tons per year of NO<sub>x</sub>, 25 tons per year of VOC, 46 tons per year of PM<sub>10</sub>, 25 tons per year of SO<sub>x</sub>, and 100 tons per year of CO. The total emissions of Hazardous Air Pollutants (HAPs) for the Mountain Pass Mine shall be less than 10 tons per year for any single HAP and 25 tons per year for any combination of HAPs calculated on an annual basis. HAPs are defined in 40 CFR 61.01 and are the chemical compounds listed in section 112(b) of the Clean Air Act (Act).
- (b) Monitoring, Periodic Monitoring & Recordkeeping Conditions. This facility shall demonstrate compliance with the specific facilitywide emission limits through the submission of an approved CEIP and CEIR. The CEIP and CEIR shall be based on actual emissions as determined by source test of the equipment or on district approved methods and emissions factors only. Generic or default emission factors shall not be used without approval from the District. The Comprehensive Emission Inventory Plan (CEIP) shall be due no later than March 31 of the year following the year of the actual emissions to be reported. Emissions will be calculated separately for each emissions source on a monthly basis and used to calculate the 12 month rolling annual total. All emissions sources including all permit units will be summed on a monthly basis and used to calculate the 12 month rolling annual total. The permit unit and facilitywide monthly emissions, 12 month rolling annual emissions total, and approved CEIR shall be kept on site and provided to District personnel upon request.
- (c) A facility wide Comprehensive Emission Inventory (CEIR) must be submitted to the District, in a format approved by the District, for all emitted criteria air pollutant on a yearly basis, and every three years for toxic air pollutants, which is to be received by the District no later than April 30 of the following year.

[40 CFR 70.6 (a)(3)(i)(B) - Periodic Monitoring Requirements]

[Rule 204 - Permit Conditions; Version in SIP = CARB Ex. Order G-73, 40 CFR

52.220(c)(39)(ii)(B) - 11/09/78 43 FR 52237; Current Rule Version = 07/25/77]

[California Clean Air Act, Health and Safety Code §§39607 and §§44300 et seq., and the Federal Clean Air Act, §110(a)(2)(F)(ii), codified in 40 CFR 60]

Description: CRUSHING PLANT BAGHOUSE

*Application Number:* 00011938 *Permit Number:* C011336

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. The owner/operator, o/o, shall operate and maintain this baghouse in strict accord with the recommendations of the manufacturer/supplier and/or sound engineering principles.

3. This baghouse shall operate concurrently with the equipment described as the Crushing Plant under valid District permit *B011335*.
4. The owner/operator, o/o, shall conduct the following minimum program of inspection/maintenance:
  - a. Monthly visible emissions determinations; results logged;
  - b. Weekly readings and recording of the pressure differential across the bags;
  - c. Quarterly inspections of the bags and their suspension systems; inspections, replacements and repairs logged.

Items a, b, and c shall be logged. The log shall be maintained current, on-site for a minimum of 5 years and provided to District personnel on request.

5. This baghouse shall have no visible emissions.
6. The baghouse shall discharge no more than 0.01 grains/dscf at the operating conditions given in the above description (BACT). This equipment does not require a regularly scheduled emission compliance test. However, emission compliance testing may be required at the discretion of the District.
7. The o/o shall maintain, on-site, an inventory of replacement bags sufficient to ensure compliance with applicable rules of District Regulation IV.
8. The owner/operator must surrender to the District sufficient valid Emission Reduction Credits for this equipment before the start of construction of any part of the project for which this equipment is intended to be used. In accordance with Regulation XIII the owner/operator shall obtain 46 tons of PM<sub>10</sub> offsets for the new equipment proposed for Stage I and Stage II of the project.
9. (a) Mountain Pass Mine Facility Emissions Limits: The total criteria pollutant emissions for the Mountain Pass Mine shall be less than: 42 tons per year of NO<sub>x</sub>, 25 tons per year of VOC, 46 tons per year of PM<sub>10</sub>, 25 tons per year of SO<sub>x</sub>, and 100 tons per year of CO. The total emissions of Hazardous Air Pollutants (HAPs) for the Mountain Pass Mine shall be less than 10 tons per year for any single HAP and 25 tons per year for any combination of HAPs calculated on an annual basis. HAPs are defined in 40 CFR 61.01 and are the chemical compounds listed in section 112(b) of the Clean Air Act (Act).
- (b) Monitoring, Periodic Monitoring & Recordkeeping Conditions. This facility shall demonstrate compliance with the specific facilitywide emission limits through the submission of an approved CEIP and CEIR. The CEIP and CEIR shall be based on actual emissions as determined by source test of the equipment or on district approved methods and emissions factors only. Generic or default emission factors shall not be used without approval from the District. The Comprehensive Emission Inventory Plan (CEIP) shall be due no later than March 31 of the year following the year of the actual emissions to be reported. Emissions will be calculated separately for each emissions source on a monthly basis and used to calculate the 12 month rolling annual total. All emissions sources including all permit units will be summed on a monthly basis and used to calculate the 12 month rolling annual total. The permit unit and facilitywide monthly

emissions, 12 month rolling annual emissions total, and approved CEIR shall be kept on site and provided to District personnel upon request.

- (c) A facility wide Comprehensive Emission Inventory (CEIR) must be submitted to the District, in a format approved by the District, for all emitted criteria air pollutant on a yearly basis, and every three years for toxic air pollutants, which is to be received by the District no later than April 30 of the following year.

[40 CFR 70.6 (a)(3)(i)(B) - Periodic Monitoring Requirements]

[Rule 204 - Permit Conditions; Version in SIP = CARB Ex. Order G-73, 40 CFR

52.220(c)(39)(ii)(B) - 11/09/78 43 FR 52237; Current Rule Version = 07/25/77]

[California Clean Air Act, Health and Safety Code §§39607 and §§44300 et seq., and the Federal Clean Air Act, §110(a)(2)(F)(ii), codified in 40 CFR 60]

Description: FINE ORE STORAGE BINS NO.1 and NO.2

*Application Number: 00011939*

*Permit Number: T011337*

*Application Number: 00011941*

*Permit Number: T011338*

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This equipment shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles.
3. Materials processed by equipment delineated above shall comply with District rules 401, 402, and 403.
4. This equipment shall not be operated unless vented to properly functioning bin vent under valid District permit number C011339 (applicable to Fine Ore Storage Bin No. 1, T011337 only); C011340 (applicable to Fine Ore Storage Bine No. 2, T011338 only).
5. The owner/operator must surrender to the District sufficient valid Emission Reduction Credits for this equipment before the start of construction of any part of the project for which this equipment is intended to be used. In accordance with Regulation XIII the owner/operator shall obtain 46 tons of PM<sub>10</sub> offsets for the new equipment proposed for Stage I and Stage II of the project.
6. (a) Mountain Pass Mine Facility Emissions Limits: The total criteria pollutant emissions for the Mountain Pass Mine shall be less than: 42 tons per year of NO<sub>x</sub>, 25 tons per year of VOC, 46 tons per year of PM<sub>10</sub>, 25 tons per year of SO<sub>x</sub>, and 100 tons per year of CO. The total emissions of Hazardous Air Pollutants (HAPs) for the Mountain Pass Mine shall be less than 10 tons per year for any single HAP and 25 tons per year for any combination of HAPs calculated on an annual basis. HAPs are defined in 40 CFR 61.01 and are the chemical compounds listed in section 112(b) of the Clean Air Act (Act).  
(b) Monitoring, Periodic Monitoring & Recordkeeping Conditions. This facility shall demonstrate

compliance with the specific facilitywide emission limits through the submission of an approved CEIP and CEIR. The CEIP and CEIR shall be based on actual emissions as determined by source test of the equipment or on district approved methods and emissions factors only. Generic or default emission factors shall not be used without approval from the District. The Comprehensive Emission Inventory Plan (CEIP) shall be due no later than March 31 of the year following the year of the actual emissions to be reported. Emissions will be calculated separately for each emissions source on a monthly basis and used to calculate the 12 month rolling annual total. All emissions sources including all permit units will be summed on a monthly basis and used to calculate the 12 month rolling annual total. The permit unit and facilitywide monthly emissions, 12 month rolling annual emissions total, and approved CEIR shall be kept on site and provided to District personnel upon request.

- (c) A facility wide Comprehensive Emission Inventory (CEIR) must be submitted to the District, in a format approved by the District, for all emitted criteria air pollutant on a yearly basis, and every three years for toxic air pollutants, which is to be received by the District no later than April 30 of the following year.

[40 CFR 70.6 (a)(3)(i)(B) - Periodic Monitoring Requirements]

[Rule 204 - Permit Conditions; Version in SIP = CARB Ex. Order G-73, 40 CFR

52.220(c)(39)(ii)(B) - 11/09/78 43 FR 52237; Current Rule Version = 07/25/77]

[California Clean Air Act, Health and Safety Code §§39607 and §§44300 et seq., and the Federal Clean Air Act, §110(a)(2)(F)(ii), codified in 40 CFR 60]

Description: Two (2) BIN VENTS – FINE ORE STORAGE BIN VENTS NO.1 and NO.2

*Application Number: 00011940*

*Permit Number: C011339*

*Application Number: 00011942*

*Permit Number: C011340*

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. The owner/operator, o/o, shall operate and maintain this bin vent in strict accord with the recommendations of the manufacturer/supplier and/or sound engineering principles.
3. This bin vent shall operate concurrently with the equipment described as the Fine Ore Storage Bin No.1 under valid District permit T011337(applicable to C011339 only), Fine Ore Storage Bin No.2 under valid District permit T011338 (applicable to C011340 only)
4. The owner/operator, o/o, shall conduct the following minimum program of inspection/maintenance:
  - a. Monthly visible emissions determinations; results logged;
  - b. Weekly readings and recording of the pressure differential across the bags;
  - c. Quarterly inspections of the bags and their suspension systems; inspections, replacements and repairs logged.

Items a, b, and c shall be logged. The log shall be maintained current, on-site for a minimum of 5 years and provided to District personnel on request.

5. Each bin vent shall discharge no more 0.01 grains/dscf at the operating conditions given in the above description (BACT). This equipment does not require a regularly scheduled emission compliance test. However, emission compliance testing may be required at the discretion of the District.
6. These bin vents shall have no visible emissions.
7. The o/o shall maintain, on-site, an inventory of replacement bags sufficient to ensure compliance with applicable rules of District Regulation IV.
8. Regular emissions testing for demonstration of compliance with District rules 404 and 405 are not required. The District may require emissions testing at its discretion.
9. The owner/operator must surrender to the District sufficient valid Emission Reduction Credits for this equipment before the start of construction of any part of the project for which this equipment is intended to be used. In accordance with Regulation XIII the owner/operator shall obtain 46 tons of PM<sub>10</sub> offsets for the new equipment proposed for Stage I and Stage II of the project.
10. (a) Mountain Pass Mine Facility Emissions Limits: The total criteria pollutant emissions for the Mountain Pass Mine shall be less than: 42 tons per year of NO<sub>x</sub>, 25 tons per year of VOC, 46 tons per year of PM<sub>10</sub>, 25 tons per year of SO<sub>x</sub>, and 100 tons per year of CO. The total emissions of Hazardous Air Pollutants (HAPs) for the Mountain Pass Mine shall be less than 10 tons per year for any single HAP and 25 tons per year for any combination of HAPs calculated on an annual basis. HAPs are defined in 40 CFR 61.01 and are the chemical compounds listed in section 112(b) of the Clean Air Act (Act).
- (b) Monitoring, Periodic Monitoring & Recordkeeping Conditions. This facility shall demonstrate compliance with the specific facilitywide emission limits through the submission of an approved CEIP and CEIR. The CEIP and CEIR shall be based on actual emissions as determined by source test of the equipment or on district approved methods and emissions factors only. Generic or default emission factors shall not be used without approval from the District. The Comprehensive Emission Inventory Plan (CEIP) shall be due no later than March 31 of the year following the year of the actual emissions to be reported. Emissions will be calculated separately for each emissions source on a monthly basis and used to calculate the 12 month rolling annual total. All emissions sources including all permit units will be summed on a monthly basis and used to calculate the 12 month rolling annual total. The permit unit and facilitywide monthly emissions, 12 month rolling annual emissions total, and approved CEIR shall be kept on site and provided to District personnel upon request.
- (c) A facility wide Comprehensive Emission Inventory (CEIR) must be submitted to the District, in a format approved by the District, for all emitted criteria air pollutant on a yearly basis, and every three years for toxic air pollutants, which is to be received by the District no later than April 30 of the following year.

[40 CFR 70.6 (a)(3)(i)(B) - Periodic Monitoring Requirements]

[Rule 204 - Permit Conditions; Version in SIP = CARB Ex. Order G-73, 40 CFR

52.220(c)(39)(ii)(B) - 11/09/78 43 FR 52237; Current Rule Version = 07/25/77]  
[California Clean Air Act, Health and Safety Code §§39607 and §§44300 et seq., and the Federal  
Clean Air Act, §110(a)(2)(F)(ii), codified in 40 CFR 60]

Description: One (1) BALL MILL CIRCUIT

*Application Number:* 00011943      *Permit Number:* B011341

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This equipment shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles.
3. Materials processed by equipment delineated above shall contain sufficient and/or added moisture to ensure compliance with District rules 401, 402, and 403. Sufficient water and equipment in operable condition shall be maintained on-site and used as necessary to ensure compliance with these rules.
4. Ball milling operations shall be performed in an enclosure and shall not discharge PM<sub>10</sub> in excess of 1 lbs/100 tons processed.
5. Material handling processes (i.e. drops and conveyors) shall not discharge PM<sub>10</sub> in excess of 0.01 grains/dscf.
6. Material shall maintain a moisture content such that there shall be no visible emissions.
7. The owner/operator must surrender to the District sufficient valid Emission Reduction Credits for this equipment before the start of construction of any part of the project for which this equipment is intended to be used. In accordance with Regulation XIII the owner/operator shall obtain 46 tons of PM<sub>10</sub> offsets for the new equipment proposed for Stage I and Stage II of the project.
8. (a) Mountain Pass Mine Facility Emissions Limits: The total criteria pollutant emissions for the Mountain Pass Mine shall be less than: 42 tons per year of NO<sub>x</sub>, 25 tons per year of VOC, 46 tons per year of PM<sub>10</sub>, 25 tons per year of SO<sub>x</sub>, and 100 tons per year of CO. The total emissions of Hazardous Air Pollutants (HAPs) for the Mountain Pass Mine shall be less than 10 tons per year for any single HAP and 25 tons per year for any combination of HAPs calculated on an annual basis. HAPs are defined in 40 CFR 61.01 and are the chemical compounds listed in section 112(b) of the Clean Air Act (Act).  
(b) Monitoring, Periodic Monitoring & Recordkeeping Conditions. This facility shall demonstrate compliance with the specific facilitywide emission limits through the submission of an approved CEIP and CEIR. The CEIP and CEIR shall be based on actual emissions as determined by source test of the equipment or on district approved methods and emissions factors only. Generic or default emission factors shall not be used without approval from the District. The

Comprehensive Emission Inventory Plan (CEIP) shall be due no later than March 31 of the year following the year of the actual emissions to be reported. Emissions will be calculated separately for each emissions source on a monthly basis and used to calculate the 12 month rolling annual total. All emissions sources including all permit units will be summed on a monthly basis and used to calculate the 12 month rolling annual total. The permit unit and facilitywide monthly emissions, 12 month rolling annual emissions total, and approved CEIR shall be kept on site and provided to District personnel upon request.

- (c) A facility wide Comprehensive Emission Inventory (CEIR) must be submitted to the District, in a format approved by the District, for all emitted criteria air pollutant on a yearly basis, and every three years for toxic air pollutants, which is to be received by the District no later than April 30 of the following year.

[40 CFR 70.6 (a)(3)(i)(B) - Periodic Monitoring Requirements]

[Rule 204 - Permit Conditions; Version in SIP = CARB Ex. Order G-73, 40 CFR

52.220(c)(39)(ii)(B) - 11/09/78 43 FR 52237; Current Rule Version = 07/25/77]

[California Clean Air Act, Health and Safety Code §§39607 and §§44300 et seq., and the Federal Clean Air Act, §110(a)(2)(F)(ii), codified in 40 CFR 60]

Description: FLOTATION SYSTEM

*Application Number:* 00011944      *Permit Number:* B011342

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This equipment shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles.
3. The owner/operator must surrender to the District sufficient valid Emission Reduction Credits for this equipment before the start of construction of any part of the project for which this equipment is intended to be used. In accordance with Regulation XIII the owner/operator shall obtain 46 tons of PM<sub>10</sub> offsets for the new equipment proposed for Stage I and Stage II of the project.
4. Material handling processes (i.e. drops and conveyors) shall not discharge PM<sub>10</sub> in excess of 0.01 grains/dscf. Materials processed by this equipment shall contain sufficient and/or added moisture to ensure compliance with this limit.
5. Material shall maintain a moisture content such that there shall be no visible emissions.
6. (a) Mountain Pass Mine Facility Emissions Limits: The total criteria pollutant emissions for the Mountain Pass Mine shall be less than: 42 tons per year of NO<sub>x</sub>, 25 tons per year of VOC, 46 tons per year of PM<sub>10</sub>, 25 tons per year of SO<sub>x</sub>, and 100 tons per year of CO. The total emissions of Hazardous Air Pollutants (HAPs) for the Mountain Pass Mine shall be less than 10 tons per year for any single HAP and 25 tons per year for any combination of HAPs calculated on an

annual basis. HAPs are defined in 40 CFR 61.01 and are the chemical compounds listed in section 112(b) of the Clean Air Act (Act).

- (b) Monitoring, Periodic Monitoring & Recordkeeping Conditions. This facility shall demonstrate compliance with the specific facilitywide emission limits through the submission of an approved CEIP and CEIR. The CEIP and CEIR shall be based on actual emissions as determined by source test of the equipment or on district approved methods and emissions factors only. Generic or default emission factors shall not be used without approval from the District. The Comprehensive Emission Inventory Plan (CEIP) shall be due no later than March 31 of the year following the year of the actual emissions to be reported. Emissions will be calculated separately for each emissions source on a monthly basis and used to calculate the 12 month rolling annual total. All emissions sources including all permit units will be summed on a monthly basis and used to calculate the 12 month rolling annual total. The permit unit and facilitywide monthly emissions, 12 month rolling annual emissions total, and approved CEIR shall be kept on site and provided to District personnel upon request.
- (c) A facility wide Comprehensive Emission Inventory (CEIR) must be submitted to the District, in a format approved by the District, for all emitted criteria air pollutant on a yearly basis, and every three years for toxic air pollutants, which is to be received by the District no later than April 30 of the following year.

[40 CFR 70.6 (a)(3)(i)(B) - Periodic Monitoring Requirements]

[Rule 204 - Permit Conditions; Version in SIP = CARB Ex. Order G-73, 40 CFR

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[California Clean Air Act, Health and Safety Code §§39607 and §§44300 et seq., and the Federal Clean Air Act, §110(a)(2)(F)(ii), codified in 40 CFR 60]

Description: CONCENTRATE HANDLING SYSTEM

*Application Number:* 00011945      *Permit Number:* B011343

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This equipment shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles.
3. Materials processed by equipment delineated above shall contain sufficient and/or added moisture to ensure compliance with District rules 401, 402, and 403. Sufficient water and equipment in operable condition shall be maintained on-site and used as necessary to ensure compliance with these rules.
4. Material handling processes (i.e. drops and conveyors) shall not discharge PM<sub>10</sub> in excess of 0.01 grains/dscf. Materials processed by this equipment shall contain sufficient and/or added moisture to ensure compliance with this limit.
5. Material shall maintain a moisture content such that there shall be no visible emissions.

6. The owner/operator must surrender to the District sufficient valid Emission Reduction Credits for this equipment before the start of construction of any part of the project for which this equipment is intended to be used. In accordance with Regulation XIII the owner/operator shall obtain 46 tons of PM<sub>10</sub> offsets for the new equipment proposed for Stage I and Stage II of the project.
7. (a) Mountain Pass Mine Facility Emissions Limits: The total criteria pollutant emissions for the Mountain Pass Mine shall be less than: 42 tons per year of NO<sub>x</sub>, 25 tons per year of VOC, 46 tons per year of PM<sub>10</sub>, 25 tons per year of SO<sub>x</sub>, and 100 tons per year of CO. The total emissions of Hazardous Air Pollutants (HAPs) for the Mountain Pass Mine shall be less than 10 tons per year for any single HAP and 25 tons per year for any combination of HAPs calculated on an annual basis. HAPs are defined in 40 CFR 61.01 and are the chemical compounds listed in section 112(b) of the Clean Air Act (Act).
- (b) Monitoring, Periodic Monitoring & Recordkeeping Conditions. This facility shall demonstrate compliance with the specific facilitywide emission limits through the submission of an approved CEIP and CEIR. The CEIP and CEIR shall be based on actual emissions as determined by source test of the equipment or on district approved methods and emissions factors only. Generic or default emission factors shall not be used without approval from the District. The Comprehensive Emission Inventory Plan (CEIP) shall be due no later than March 31 of the year following the year of the actual emissions to be reported. Emissions will be calculated separately for each emissions source on a monthly basis and used to calculate the 12 month rolling annual total. All emissions sources including all permit units will be summed on a monthly basis and used to calculate the 12 month rolling annual total. The permit unit and facilitywide monthly emissions, 12 month rolling annual emissions total, and approved CEIR shall be kept on site and provided to District personnel upon request.
- (c) A facility wide Comprehensive Emission Inventory (CEIR) must be submitted to the District, in a format approved by the District, for all emitted criteria air pollutant on a yearly basis, and every three years for toxic air pollutants, which is to be received by the District no later than April 30 of the following year.

[40 CFR 70.6 (a)(3)(i)(B) - Periodic Monitoring Requirements]

[Rule 204 - Permit Conditions; Version in SIP = CARB Ex. Order G-73, 40 CFR

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[California Clean Air Act, Health and Safety Code §§39607 and §§44300 et seq., and the Federal Clean Air Act, §110(a)(2)(F)(ii), codified in 40 CFR 60]

Description: One (1) LIGNOSULFONATE REAGENT SYSTEM

*Application Number:* 00011946      *Permit Number:* B011344

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This equipment shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles.

3. The Lignosulfonate Unloading Hopper shall not be operated unless vented to properly functioning dust collection system under valid District permit number C011365.
4. The Lignosulfonate Storage Hopper shall not be operated unless vented to properly functioning bin vent under valid District permit number C011380.
5. Material handling processes (i.e. drops and conveyors) shall not discharge PM<sub>10</sub> in excess of 0.01 grains/dscf.
6. All non-fugitive emissions in the lignosulfonate reagent system shall meet the above required emission limits as follows:
  - a. The Lignosulfonate Unloading Hopper and Lignosulfonate Storage Hopper shall be controlled by dust collection and bin vent blowers vented to cartridge filter .
  - b. All other materials handled shall maintain a moisture content such that there shall be no visible emissions.
7. The owner/operator must surrender to the District sufficient valid Emission Reduction Credits for this equipment before the start of construction of any part of the project for which this equipment is intended to be used. In accordance with Regulation XIII the owner/operator shall obtain 46 tons of PM<sub>10</sub> offsets for the new equipment proposed for Stage I and Stage II of the project.
8. (a) Mountain Pass Mine Facility Emissions Limits: The total criteria pollutant emissions for the Mountain Pass Mine shall be less than: 42 tons per year of NO<sub>x</sub>, 25 tons per year of VOC, 46 tons per year of PM<sub>10</sub>, 25 tons per year of SO<sub>x</sub>, and 100 tons per year of CO. The total emissions of Hazardous Air Pollutants (HAPs) for the Mountain Pass Mine shall be less than 10 tons per year for any single HAP and 25 tons per year for any combination of HAPs calculated on an annual basis. HAPs are defined in 40 CFR 61.01 and are the chemical compounds listed in section 112(b) of the Clean Air Act (Act).  
(b) Monitoring, Periodic Monitoring & Recordkeeping Conditions. This facility shall demonstrate compliance with the specific facilitywide emission limits through the submission of an approved CEIP and CEIR. The CEIP and CEIR shall be based on actual emissions as determined by source test of the equipment or on district approved methods and emissions factors only. Generic or default emission factors shall not be used without approval from the District. The Comprehensive Emission Inventory Plan (CEIP) shall be due no later than March 31 of the year following the year of the actual emissions to be reported. Emissions will be calculated separately for each emissions source on a monthly basis and used to calculate the 12 month rolling annual total. All emissions sources including all permit units will be summed on a monthly basis and used to calculate the 12 month rolling annual total. The permit unit and facilitywide monthly emissions, 12 month rolling annual emissions total, and approved CEIR shall be kept on site and provided to District personnel upon request.  
(c) A facility wide Comprehensive Emission Inventory (CEIR) must be submitted to the District, in a format approved by the District, for all emitted criteria air pollutant on a yearly basis, and every three years for toxic air pollutants, which is to be received by the District no later than April 30 of the following year.

[40 CFR 70.6 (a)(3)(i)(B) - Periodic Monitoring Requirements]

[Rule 204 - Permit Conditions; Version in SIP = CARB Ex. Order G-73, 40 CFR

52.220(c)(39)(ii)(B) - 11/09/78 43 FR 52237; Current Rule Version = 07/25/77]

[California Clean Air Act, Health and Safety Code §§39607 and §§44300 et seq., and the Federal Clean Air Act, §110(a)(2)(F)(ii), codified in 40 CFR 60]

Description: One (1) LIGNOSULFONATE DUST COLLECTION BLOWER – DUST COLLECTION SYSTEM

*Application Number:* 00011948      *Permit Number:* C011365

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
  2. The owner/operator, o/o, shall operate and maintain this equipment in strict accord with the recommendations of the manufacturer/supplier and/or sound engineering principles.
  3. This control system shall operate concurrently with the equipment described as the Lignosulfonate Unloading Hopper associated with the Lignosulfonate Reagent System under valid District permit B011364.
  4. The control system shall discharge no more than 0.01 grains/dscf at the operating conditions given in the above description (BACT). This equipment does not require a regularly scheduled emission compliance test. However, emission compliance testing may be required at the discretion of the District.
  5. The owner/operator, o/o, shall conduct the following minimum program of inspection/maintenance:
    - a. Monthly visible emissions determinations; results logged;
    - b. Weekly readings and recording of the pressure differential across the cartridge;
    - c. Quarterly inspections of the cartridges; inspections, replacements and repairs logged.
- Items a, b, and c shall be logged. The log shall be maintained current, on-site for a minimum of 5 years and provided to District personnel on request.
6. The dust collection system shall have no visible emissions.
  7. The owner/operator must surrender to the District sufficient valid Emission Reduction Credits for this equipment before the start of construction of any part of the project for which this equipment is intended to be used. In accordance with Regulation XIII the owner/operator shall obtain 46 tons of PM<sub>10</sub> offsets for the new equipment proposed for Stage I and Stage II of the project.
  8. (a) Mountain Pass Mine Facility Emissions Limits: The total criteria pollutant emissions for the Mountain Pass Mine shall be less than: 42 tons per year of NO<sub>x</sub>, 25 tons per year of VOC, 46

tons per year of PM<sub>10</sub>, 25 tons per year of SO<sub>x</sub>, and 100 tons per year of CO. The total emissions of Hazardous Air Pollutants (HAPs) for the Mountain Pass Mine shall be less than 10 tons per year for any single HAP and 25 tons per year for any combination of HAPs calculated on an annual basis. HAPs are defined in 40 CFR 61.01 and are the chemical compounds listed in section 112(b) of the Clean Air Act (Act).

- (b) Monitoring, Periodic Monitoring & Recordkeeping Conditions. This facility shall demonstrate compliance with the specific facilitywide emission limits through the submission of an approved CEIP and CEIR. The CEIP and CEIR shall be based on actual emissions as determined by source test of the equipment or on district approved methods and emissions factors only. Generic or default emission factors shall not be used without approval from the District. The Comprehensive Emission Inventory Plan (CEIP) shall be due no later than March 31 of the year following the year of the actual emissions to be reported. Emissions will be calculated separately for each emissions source on a monthly basis and used to calculate the 12 month rolling annual total. All emissions sources including all permit units will be summed on a monthly basis and used to calculate the 12 month rolling annual total. The permit unit and facilitywide monthly emissions, 12 month rolling annual emissions total, and approved CEIR shall be kept on site and provided to District personnel upon request.
- (c) A facility wide Comprehensive Emission Inventory (CEIR) must be submitted to the District, in a format approved by the District, for all emitted criteria air pollutant on a yearly basis, and every three years for toxic air pollutants, which is to be received by the District no later than April 30 of the following year.

[40 CFR 70.6 (a)(3)(i)(B) - Periodic Monitoring Requirements]

[Rule 204 - Permit Conditions; Version in SIP = CARB Ex. Order G-73, 40 CFR

52.220(c)(39)(ii)(B) - 11/09/78 43 FR 52237; Current Rule Version = 07/25/77]

[California Clean Air Act, Health and Safety Code §§39607 and §§44300 et seq., and the Federal Clean Air Act, §110(a)(2)(F)(ii), codified in 40 CFR 60]

Description: One (1) BIN VENT – SERVING THE LIGNOSULFONATE BIN VENT BLOWER

*Application Number:* 00011949      *Permit Number:* C011380

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. The owner/operator, o/o, shall operate and maintain this equipment in strict accord with the recommendations of the manufacturer/supplier and/or sound engineering principles.
3. This control system shall operate concurrently with the equipment described as the Lignosulfonate storage hopper associated with the Reagent System under valid District permit B011344.
4. The control system shall discharge no more than 0.01 grains/dscf at the operating conditions given in the above description (BACT). This equipment does not require a regularly scheduled emission compliance test. However, emission compliance testing may be required at the discretion of the District.

5. The owner/operator, o/o, shall conduct the following minimum program of inspection/maintenance:
  - a. Monthly visible emissions determinations; results logged;
  - b. Weekly readings and recording of the pressure differential across the cartridge;
  - c. Quarterly inspections of the cartridges; inspections, replacements and repairs logged.

Items a, b, and c shall be logged. The log shall be maintained current, on-site for a minimum of 5 years and provided to District personnel on request.

6. The bin vent shall have no visible emissions.
7. The owner/operator must surrender to the District sufficient valid Emission Reduction Credits for this equipment before the start of construction of any part of the project for which this equipment is intended to be used. In accordance with Regulation XIII the owner/operator shall obtain 46 tons of PM<sub>10</sub> offsets for the new equipment proposed for Stage I and Stage II of the project.
8. (a) Mountain Pass Mine Facility Emissions Limits: The total criteria pollutant emissions for the Mountain Pass Mine shall be less than: 42 tons per year of NO<sub>x</sub>, 25 tons per year of VOC, 46 tons per year of PM<sub>10</sub>, 25 tons per year of SO<sub>x</sub>, and 100 tons per year of CO. The total emissions of Hazardous Air Pollutants (HAPs) for the Mountain Pass Mine shall be less than 10 tons per year for any single HAP and 25 tons per year for any combination of HAPs calculated on an annual basis. HAPs are defined in 40 CFR 61.01 and are the chemical compounds listed in section 112(b) of the Clean Air Act (Act).
- (b) Monitoring, Periodic Monitoring & Recordkeeping Conditions. This facility shall demonstrate compliance with the specific facilitywide emission limits through the submission of an approved CEIP and CEIR. The CEIP and CEIR shall be based on actual emissions as determined by source test of the equipment or on district approved methods and emissions factors only. Generic or default emission factors shall not be used without approval from the District. The Comprehensive Emission Inventory Plan (CEIP) shall be due no later than March 31 of the year following the year of the actual emissions to be reported. Emissions will be calculated separately for each emissions source on a monthly basis and used to calculate the 12 month rolling annual total. All emissions sources including all permit units will be summed on a monthly basis and used to calculate the 12 month rolling annual total. The permit unit and facilitywide monthly emissions, 12 month rolling annual emissions total, and approved CEIR shall be kept on site and provided to District personnel upon request.
- (c) A facility wide Comprehensive Emission Inventory (CEIR) must be submitted to the District, in a format approved by the District, for all emitted criteria air pollutant on a yearly basis, and every three years for toxic air pollutants, which is to be received by the District no later than April 30 of the following year.

[40 CFR 70.6 (a)(3)(i)(B) - Periodic Monitoring Requirements]

[Rule 204 - Permit Conditions; Version in SIP = CARB Ex. Order G-73, 40 CFR

52.220(c)(39)(ii)(B) - 11/09/78 43 FR 52237; Current Rule Version = 07/25/77]

[California Clean Air Act, Health and Safety Code §§39607 and §§44300 et seq., and the Federal Clean Air Act, §110(a)(2)(F)(ii), codified in 40 CFR 60]

Description: One (1) SODA ASH SYSTEM

*Application Number:* 00011985      *Permit Number:* B011345

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This equipment shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles.
3. The Soda Ash Mix Tank shall not be operated unless vented to properly functioning scrubber under valid District permit number C011380, unless the materials processed by the Soda Ash Mix Tank contain sufficient and/or added moisture to ensure compliance with District rules 401, 402, and 403. Sufficient water and equipment in operable condition shall be maintained on-site and used as necessary to ensure compliance with these rules.
4. Material handling processes (i.e. drops and conveyors) shall not discharge PM<sub>10</sub> in excess of 0.01 grains/dscf. Materials processed by this equipment shall contain sufficient and/or added moisture to ensure compliance with this limit.
5. The owner/operator, o/o, shall maintain a log current and on-site of all reagent added to this system, including the date added and a running calendar year total (in tons). The log shall be provided to District personnel on request.
6. Material shall maintain a moisture content such that there shall be no visible emissions.
7. The owner/operator must surrender to the District sufficient valid Emission Reduction Credits for this equipment before the start of construction of any part of the project for which this equipment is intended to be used. In accordance with Regulation XIII the owner/operator shall obtain 46 tons of PM<sub>10</sub> offsets for the new equipment proposed for Stage I and Stage II of the project.
8. (a) Mountain Pass Mine Facility Emissions Limits: The total criteria pollutant emissions for the Mountain Pass Mine shall be less than: 42 tons per year of NO<sub>x</sub>, 25 tons per year of VOC, 46 tons per year of PM<sub>10</sub>, 25 tons per year of SO<sub>x</sub>, and 100 tons per year of CO. The total emissions of Hazardous Air Pollutants (HAPs) for the Mountain Pass Mine shall be less than 10 tons per year for any single HAP and 25 tons per year for any combination of HAPs calculated on an annual basis. HAPs are defined in 40 CFR 61.01 and are the chemical compounds listed in section 112(b) of the Clean Air Act (Act).  
(b) Monitoring, Periodic Monitoring & Recordkeeping Conditions. This facility shall demonstrate compliance with the specific facilitywide emission limits through the submission of an approved CEIP and CEIR. The CEIP and CEIR shall be based on actual emissions as determined by source test of the equipment or on district approved methods and emissions factors only. Generic or default emission factors shall not be used without approval from the District. The

Comprehensive Emission Inventory Plan (CEIP) shall be due no later than March 31 of the year following the year of the actual emissions to be reported. Emissions will be calculated separately for each emissions source on a monthly basis and used to calculate the 12 month rolling annual total. All emissions sources including all permit units will be summed on a monthly basis and used to calculate the 12 month rolling annual total. The permit unit and facilitywide monthly emissions, 12 month rolling annual emissions total, and approved CEIR shall be kept on site and provided to District personnel upon request.

- (c) A facility wide Comprehensive Emission Inventory (CEIR) must be submitted to the District, in a format approved by the District, for all emitted criteria air pollutant on a yearly basis, and every three years for toxic air pollutants, which is to be received by the District no later than April 30 of the following year.

[40 CFR 70.6 (a)(3)(i)(B) - Periodic Monitoring Requirements]

[Rule 204 - Permit Conditions; Version in SIP = CARB Ex. Order G-73, 40 CFR

52.220(c)(39)(ii)(B) - 11/09/78 43 FR 52237; Current Rule Version = 07/25/77]

[California Clean Air Act, Health and Safety Code §§39607 and §§44300 et seq., and the Federal Clean Air Act, §110(a)(2)(F)(ii), codified in 40 CFR 60]

Description: One (1) SODA ASH SILO

*Application Number: 00011986*

*Permit Number: T011346*

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This equipment shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles.
3. This equipment shall not be operated unless vented to properly functioning silo vent filter under valid District permit number C011347.
4. The owner/operator must surrender to the District sufficient valid Emission Reduction Credits for this equipment before the start of construction of any part of the project for which this equipment is intended to be used. In accordance with Regulation XIII the owner/operator shall obtain 46 tons of PM<sub>10</sub> offsets for the new equipment proposed for Stage I and Stage II of the project.
5. (a) Mountain Pass Mine Facility Emissions Limits: The total criteria pollutant emissions for the Mountain Pass Mine shall be less than: 42 tons per year of NO<sub>x</sub>, 25 tons per year of VOC, 46 tons per year of PM<sub>10</sub>, 25 tons per year of SO<sub>x</sub>, and 100 tons per year of CO. The total emissions of Hazardous Air Pollutants (HAPs) for the Mountain Pass Mine shall be less than 10 tons per year for any single HAP and 25 tons per year for any combination of HAPs calculated on an annual basis. HAPs are defined in 40 CFR 61.01 and are the chemical compounds listed in section 112(b) of the Clean Air Act (Act).
- (b) Monitoring, Periodic Monitoring & Recordkeeping Conditions. This facility shall demonstrate

compliance with the specific facilitywide emission limits through the submission of an approved CEIP and CEIR. The CEIP and CEIR shall be based on actual emissions as determined by source test of the equipment or on district approved methods and emissions factors only. Generic or default emission factors shall not be used without approval from the District. The Comprehensive Emission Inventory Plan (CEIP) shall be due no later than March 31 of the year following the year of the actual emissions to be reported. Emissions will be calculated separately for each emissions source on a monthly basis and used to calculate the 12 month rolling annual total. All emissions sources including all permit units will be summed on a monthly basis and used to calculate the 12 month rolling annual total. The permit unit and facilitywide monthly emissions, 12 month rolling annual emissions total, and approved CEIR shall be kept on site and provided to District personnel upon request.

- (c) A facility wide Comprehensive Emission Inventory (CEIR) must be submitted to the District, in a format approved by the District, for all emitted criteria air pollutant on a yearly basis, and every three years for toxic air pollutants, which is to be received by the District no later than April 30 of the following year.

[40 CFR 70.6 (a)(3)(i)(B) - Periodic Monitoring Requirements]

[Rule 204 - Permit Conditions; Version in SIP = CARB Ex. Order G-73, 40 CFR

52.220(c)(39)(ii)(B) - 11/09/78 43 FR 52237; Current Rule Version = 07/25/77]

[California Clean Air Act, Health and Safety Code §§39607 and §§44300 et seq., and the Federal Clean Air Act, §110(a)(2)(F)(ii), codified in 40 CFR 60]

Description: One (1) SILO VENT FILTER – SERVING THE SODA ASH SILO

*Application Number:* 00011987

*Permit Number:* C011347

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. The owner/operator, o/o, shall operate and maintain this equipment in strict accord with the recommendations of the manufacturer/supplier and/or sound engineering principles.
3. This silo vent filter shall operate concurrently with the equipment described as the Soda Ash Silo under valid District permit T011346.
4. The owner/operator, o/o, shall conduct the following minimum program of inspection/maintenance:
  - a. Monthly visible emissions determinations; results logged;
  - b. Weekly readings and recording of the pressure differential across the filter;
  - c. Quarterly inspections of the filter; inspections, replacements and repairs logged.

Items a, b, and c shall be logged. The log shall be maintained current, on-site for a minimum of 5 years and provided to District personnel on request.

5. The silo vent filter shall discharge no more than 0.01 grains/dscf at the operating conditions given in the above description (BACT). This equipment does not require a regularly scheduled

emission compliance test. However, emission compliance testing may be required at the discretion of the District.

6. The silo vent filter shall have no visible emissions.
7. Regular emissions testing for demonstration of compliance with District rules 404 and 405 are not required. The District may require emissions testing at its discretion.
8. The owner/operator must surrender to the District sufficient valid Emission Reduction Credits for this equipment before the start of construction of any part of the project for which this equipment is intended to be used. In accordance with Regulation XIII the owner/operator shall obtain 46 tons of PM<sub>10</sub> offsets for the new equipment proposed for Stage I and Stage II of the project.
9. (a) Mountain Pass Mine Facility Emissions Limits: The total criteria pollutant emissions for the Mountain Pass Mine shall be less than: 42 tons per year of NO<sub>x</sub>, 25 tons per year of VOC, 46 tons per year of PM<sub>10</sub>, 25 tons per year of SO<sub>x</sub>, and 100 tons per year of CO. The total emissions of Hazardous Air Pollutants (HAPs) for the Mountain Pass Mine shall be less than 10 tons per year for any single HAP and 25 tons per year for any combination of HAPs calculated on an annual basis. HAPs are defined in 40 CFR 61.01 and are the chemical compounds listed in section 112(b) of the Clean Air Act (Act).
- (b) Monitoring, Periodic Monitoring & Recordkeeping Conditions. This facility shall demonstrate compliance with the specific facilitywide emission limits through the submission of an approved CEIP and CEIR. The CEIP and CEIR shall be based on actual emissions as determined by source test of the equipment or on district approved methods and emissions factors only. Generic or default emission factors shall not be used without approval from the District. The Comprehensive Emission Inventory Plan (CEIP) shall be due no later than March 31 of the year following the year of the actual emissions to be reported. Emissions will be calculated separately for each emissions source on a monthly basis and used to calculate the 12 month rolling annual total. All emissions sources including all permit units will be summed on a monthly basis and used to calculate the 12 month rolling annual total. The permit unit and facilitywide monthly emissions, 12 month rolling annual emissions total, and approved CEIR shall be kept on site and provided to District personnel upon request.
- (c) A facility wide Comprehensive Emission Inventory (CEIR) must be submitted to the District, in a format approved by the District, for all emitted criteria air pollutant on a yearly basis, and every three years for toxic air pollutants, which is to be received by the District no later than April 30 of the following year.

[40 CFR 70.6 (a)(3)(i)(B) - Periodic Monitoring Requirements]

[Rule 204 - Permit Conditions; Version in SIP = CARB Ex. Order G-73, 40 CFR

52.220(c)(39)(ii)(B) - 11/09/78 43 FR 52237; Current Rule Version = 07/25/77]

[California Clean Air Act, Health and Safety Code §§39607 and §§44300 et seq., and the Federal Clean Air Act, §110(a)(2)(F)(ii), codified in 40 CFR 60]

Description: One (1) SCRUBBER – SERVING THE SODA ASH SYSTEM MIX TANK

Application Number: 00011949

Permit Number: C011380

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. The owner/operator, o/o, shall operate and maintain this equipment in strict accord with the recommendations of the manufacturer/supplier and/or sound engineering principles.
3. This wet scrubber shall operate concurrently with the equipment described as the Soda Ash System under valid District permit B011345, unless the materials processed by the Soda Ash associated with the Soda Ash System under permit B011345 contain sufficient and/or added moisture to ensure compliance with District rules 401, 402, and 403.
4. The owner/operator, o/o, shall conduct the following minimum program of inspection/maintenance:
  - a. Monthly visible emissions determinations; results logged;
  - b. Hourly flowrate shall be at least 100 gallons per minute while the soda ash system is being operated, logged once a month if the soda ash system operates that month.Items 'a' and 'b' shall be logged. The log shall be maintained current, on-site for a minimum of 5 years and provided to District personnel on request.
5. The wet scrubber shall discharge no more than 0.01 grains/dscf at the operating conditions given in the above description (BACT). This equipment does not require a regularly scheduled emission compliance test. However, emission compliance testing may be required at the discretion of the District.
6. The wet scrubber shall have no non-water vapor visible emissions.
7. Regular emissions testing for demonstration of compliance with District rules 404 and 405 are not required. The District may require emissions testing at its discretion.
8. The owner/operator must surrender to the District sufficient valid Emission Reduction Credits for this equipment before the start of construction of any part of the project for which this equipment is intended to be used. In accordance with Regulation XIII the owner/operator shall obtain 46 tons of PM<sub>10</sub> offsets for the new equipment proposed for Stage I and Stage II of the project.
9. (a) Mountain Pass Mine Facility Emissions Limits: The total criteria pollutant emissions for the Mountain Pass Mine shall be less than: 42 tons per year of NO<sub>x</sub>, 25 tons per year of VOC, 46 tons per year of PM<sub>10</sub>, 25 tons per year of SO<sub>x</sub>, and 100 tons per year of CO. The total emissions of Hazardous Air Pollutants (HAPs) for the Mountain Pass Mine shall be less than 10 tons per year for any single HAP and 25 tons per year for any combination of HAPs calculated on an annual basis. HAPs are defined in 40 CFR 61.01 and are the chemical compounds listed in section 112(b) of the Clean Air Act (Act).  
(b) Monitoring, Periodic Monitoring & Recordkeeping Conditions. This facility shall demonstrate compliance with the specific facilitywide emission limits through the submission of an approved CEIP and CEIR. The CEIP and CEIR shall be based on actual emissions as determined by

source test of the equipment or on district approved methods and emissions factors only. Generic or default emission factors shall not be used without approval from the District. The Comprehensive Emission Inventory Plan (CEIP) shall be due no later than March 31 of the year following the year of the actual emissions to be reported. Emissions will be calculated separately for each emissions source on a monthly basis and used to calculate the 12 month rolling annual total. All emissions sources including all permit units will be summed on a monthly basis and used to calculate the 12 month rolling annual total. The permit unit and facilitywide monthly emissions, 12 month rolling annual emissions total, and approved CEIR shall be kept on site and provided to District personnel upon request.

- (c) A facility wide Comprehensive Emission Inventory (CEIR) must be submitted to the District, in a format approved by the District, for all emitted criteria air pollutant on a yearly basis, and every three years for toxic air pollutants, which is to be received by the District no later than April 30 of the following year.

[40 CFR 70.6 (a)(3)(i)(B) - Periodic Monitoring Requirements]

[Rule 204 - Permit Conditions; Version in SIP = CARB Ex. Order G-73, 40 CFR

52.220(c)(39)(ii)(B) - 11/09/78 43 FR 52237; Current Rule Version = 07/25/77]

[California Clean Air Act, Health and Safety Code §§39607 and §§44300 et seq., and the Federal Clean Air Act, §110(a)(2)(F)(ii), codified in 40 CFR 60]

Description: One (1) COAGULANT REAGENT SYSTEM

*Application Number:* 00011988      *Permit Number:* B011348

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This equipment shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles.
3. Material handling processes (i.e. drops and conveyors) shall not discharge PM<sub>10</sub> in excess of 0.01 grains/dscf. Materials processed by this equipment shall contain sufficient and/or added moisture to ensure compliance with this limit.
4. All material handled in the coagulant reagent system shall be a wet emulsion. Visual inspections may be conducted at the District's discretion to ensure that the material handled is a wet emulsion.
5. The owner/operator must surrender to the District sufficient valid Emission Reduction Credits for this equipment before the start of construction of any part of the project for which this equipment is intended to be used. In accordance with Regulation XIII the owner/operator shall obtain 46 tons of PM<sub>10</sub> offsets for the new equipment proposed for Stage I and Stage II of the project.
6. (a) Mountain Pass Mine Facility Emissions Limits: The total criteria pollutant emissions for the Mountain Pass Mine shall be less than: 42 tons per year of NO<sub>x</sub>, 25 tons per year of VOC, 46

tons per year of PM<sub>10</sub>, 25 tons per year of SO<sub>x</sub>, and 100 tons per year of CO. The total emissions of Hazardous Air Pollutants (HAPs) for the Mountain Pass Mine shall be less than 10 tons per year for any single HAP and 25 tons per year for any combination of HAPs calculated on an annual basis. HAPs are defined in 40 CFR 61.01 and are the chemical compounds listed in section 112(b) of the Clean Air Act (Act).

- (b) Monitoring, Periodic Monitoring & Recordkeeping Conditions. This facility shall demonstrate compliance with the specific facilitywide emission limits through the submission of an approved CEIP and CEIR. The CEIP and CEIR shall be based on actual emissions as determined by source test of the equipment or on district approved methods and emissions factors only. Generic or default emission factors shall not be used without approval from the District. The Comprehensive Emission Inventory Plan (CEIP) shall be due no later than March 31 of the year following the year of the actual emissions to be reported. Emissions will be calculated separately for each emissions source on a monthly basis and used to calculate the 12 month rolling annual total. All emissions sources including all permit units will be summed on a monthly basis and used to calculate the 12 month rolling annual total. The permit unit and facilitywide monthly emissions, 12 month rolling annual emissions total, and approved CEIR shall be kept on site and provided to District personnel upon request.
- (c) A facility wide Comprehensive Emission Inventory (CEIR) must be submitted to the District, in a format approved by the District, for all emitted criteria air pollutant on a yearly basis, and every three years for toxic air pollutants, which is to be received by the District no later than April 30 of the following year.

[40 CFR 70.6 (a)(3)(i)(B) - Periodic Monitoring Requirements]

[Rule 204 - Permit Conditions; Version in SIP = CARB Ex. Order G-73, 40 CFR

52.220(c)(39)(ii)(B) - 11/09/78 43 FR 52237; Current Rule Version = 07/25/77]

[California Clean Air Act, Health and Safety Code §§39607 and §§44300 et seq., and the Federal Clean Air Act, §110(a)(2)(F)(ii), codified in 40 CFR 60]

Description: One (1) SAPONIFIED FATTY ACID REAGENT SYSTEM

*Application Number:* 00011989      *Permit Number:* B011349

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This equipment shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles.
3. Material handling processes (i.e. drops and conveyors) shall not discharge PM<sub>10</sub> in excess of 0.01 grains/dscf. Materials processed by this equipment shall contain sufficient and/or added moisture to ensure compliance with this limit.
4. This equipment shall handle saponified fatty acid. A saponified fatty acid MSDS shall be kept near this equipment at all times. Visual inspections may be conducted at the District's discretion to ensure that the material handled is liquid and saponified fatty acid.

5. The owner/operator must surrender to the District sufficient valid Emission Reduction Credits for this equipment before the start of construction of any part of the project for which this equipment is intended to be used. In accordance with Regulation XIII the owner/operator shall obtain 46 tons of PM<sub>10</sub> offsets for the new equipment proposed for Stage I and Stage II of the project.
6. (a) Mountain Pass Mine Facility Emissions Limits: The total criteria pollutant emissions for the Mountain Pass Mine shall be less than: 42 tons per year of NO<sub>x</sub>, 25 tons per year of VOC, 46 tons per year of PM<sub>10</sub>, 25 tons per year of SO<sub>x</sub>, and 100 tons per year of CO. The total emissions of Hazardous Air Pollutants (HAPs) for the Mountain Pass Mine shall be less than 10 tons per year for any single HAP and 25 tons per year for any combination of HAPs calculated on an annual basis. HAPs are defined in 40 CFR 61.01 and are the chemical compounds listed in section 112(b) of the Clean Air Act (Act).
- (b) Monitoring, Periodic Monitoring & Recordkeeping Conditions. This facility shall demonstrate compliance with the specific facilitywide emission limits through the submission of an approved CEIP and CEIR. The CEIP and CEIR shall be based on actual emissions as determined by source test of the equipment or on district approved methods and emissions factors only. Generic or default emission factors shall not be used without approval from the District. The Comprehensive Emission Inventory Plan (CEIP) shall be due no later than March 31 of the year following the year of the actual emissions to be reported. Emissions will be calculated separately for each emissions source on a monthly basis and used to calculate the 12 month rolling annual total. All emissions sources including all permit units will be summed on a monthly basis and used to calculate the 12 month rolling annual total. The permit unit and facilitywide monthly emissions, 12 month rolling annual emissions total, and approved CEIR shall be kept on site and provided to District personnel upon request.
- (c) A facility wide Comprehensive Emission Inventory (CEIR) must be submitted to the District, in a format approved by the District, for all emitted criteria air pollutant on a yearly basis, and every three years for toxic air pollutants, which is to be received by the District no later than April 30 of the following year.

[40 CFR 70.6 (a)(3)(i)(B) - Periodic Monitoring Requirements]

[Rule 204 - Permit Conditions; Version in SIP = CARB Ex. Order G-73, 40 CFR

52.220(c)(39)(ii)(B) - 11/09/78 43 FR 52237; Current Rule Version = 07/25/77]

[California Clean Air Act, Health and Safety Code §§39607 and §§44300 et seq., and the Federal Clean Air Act, §110(a)(2)(F)(ii), codified in 40 CFR 60]

Description: One (1) FLOCCULANT REAGENT SYSTEM (MILL AND FLOTATION PLANT)

*Application Number:* 00011985      *Permit Number:* B011350

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This equipment shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles.

3. Material handling processes (i.e. drops and conveyors) shall not discharge PM<sub>10</sub> in excess of 0.01 grains/dscf.
4. When dry material is added to the flocculant reagent system hopper, the amount and date of the material addition shall be logged. This log shall be maintained current and on-site for a minimum of 5 years and provided to District personnel on request.
5. All dry material handling after the initial hopper and screw conveyor shall be enclosed and inside a building. All other material handling shall maintain a moisture content such that there shall be no visible emissions.
6. The owner/operator must surrender to the District sufficient valid Emission Reduction Credits for this equipment before the start of construction of any part of the project for which this equipment is intended to be used. In accordance with Regulation XIII the owner/operator shall obtain 46 tons of PM<sub>10</sub> offsets for the new equipment proposed for Stage I and Stage II of the project.
7. (a) Mountain Pass Mine Facility Emissions Limits: The total criteria pollutant emissions for the Mountain Pass Mine shall be less than: 42 tons per year of NO<sub>x</sub>, 25 tons per year of VOC, 46 tons per year of PM<sub>10</sub>, 25 tons per year of SO<sub>x</sub>, and 100 tons per year of CO. The total emissions of Hazardous Air Pollutants (HAPs) for the Mountain Pass Mine shall be less than 10 tons per year for any single HAP and 25 tons per year for any combination of HAPs calculated on an annual basis. HAPs are defined in 40 CFR 61.01 and are the chemical compounds listed in section 112(b) of the Clean Air Act (Act).
- (b) Monitoring, Periodic Monitoring & Recordkeeping Conditions. This facility shall demonstrate compliance with the specific facilitywide emission limits through the submission of an approved CEIP and CEIR. The CEIP and CEIR shall be based on actual emissions as determined by source test of the equipment or on district approved methods and emissions factors only. Generic or default emission factors shall not be used without approval from the District. The Comprehensive Emission Inventory Plan (CEIP) shall be due no later than March 31 of the year following the year of the actual emissions to be reported. Emissions will be calculated separately for each emissions source on a monthly basis and used to calculate the 12 month rolling annual total. All emissions sources including all permit units will be summed on a monthly basis and used to calculate the 12 month rolling annual total. The permit unit and facilitywide monthly emissions, 12 month rolling annual emissions total, and approved CEIR shall be kept on site and provided to District personnel upon request.
- (c) A facility wide Comprehensive Emission Inventory (CEIR) must be submitted to the District, in a format approved by the District, for all emitted criteria air pollutant on a yearly basis, and every three years for toxic air pollutants, which is to be received by the District no later than April 30 of the following year.

[40 CFR 70.6 (a)(3)(i)(B) - Periodic Monitoring Requirements]

[Rule 204 - Permit Conditions; Version in SIP = CARB Ex. Order G-73, 40 CFR

52.220(c)(39)(ii)(B) - 11/09/78 43 FR 52237; Current Rule Version = 07/25/77]

[California Clean Air Act, Health and Safety Code §§39607 and §§44300 et seq., and the Federal Clean Air Act, §110(a)(2)(F)(ii), codified in 40 CFR 60]

Description: One (1) PASTE TAILINGS PLANT

*Application Number:* 00011993      *Permit Number:* B011353

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This equipment shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles.
3. Materials processed by equipment delineated above shall contain sufficient and/or added moisture to ensure compliance with District rules 401, 402, and 403. Sufficient water and equipment in operable condition shall be maintained on-site and used as necessary to ensure compliance with these rules.
4. Material handling processes (i.e. drops and conveyors) shall not discharge PM<sub>10</sub> in excess of 0.01 grains/dscf. Materials processed by this equipment shall contain sufficient and/or added moisture to ensure compliance with this limit.
5. Material shall maintain a moisture content such that there shall be no visible emissions.
6. The owner/operator must surrender to the District sufficient valid Emission Reduction Credits for this equipment before the start of construction of any part of the project for which this equipment is intended to be used. In accordance with Regulation XIII the owner/operator shall obtain 46 tons of PM<sub>10</sub> offsets for the new equipment proposed for Stage I and Stage II of the project.
7. (a) Mountain Pass Mine Facility Emissions Limits: The total criteria pollutant emissions for the Mountain Pass Mine shall be less than: 42 tons per year of NO<sub>x</sub>, 25 tons per year of VOC, 46 tons per year of PM<sub>10</sub>, 25 tons per year of SO<sub>x</sub>, and 100 tons per year of CO. The total emissions of Hazardous Air Pollutants (HAPs) for the Mountain Pass Mine shall be less than 10 tons per year for any single HAP and 25 tons per year for any combination of HAPs calculated on an annual basis. HAPs are defined in 40 CFR 61.01 and are the chemical compounds listed in section 112(b) of the Clean Air Act (Act).  
(b) Monitoring, Periodic Monitoring & Recordkeeping Conditions. This facility shall demonstrate compliance with the specific facilitywide emission limits through the submission of an approved CEIP and CEIR. The CEIP and CEIR shall be based on actual emissions as determined by source test of the equipment or on district approved methods and emissions factors only. Generic or default emission factors shall not be used without approval from the District. The Comprehensive Emission Inventory Plan (CEIP) shall be due no later than March 31 of the year following the year of the actual emissions to be reported. Emissions will be calculated separately for each emissions source on a monthly basis and used to calculate the 12 month rolling annual total. All emissions sources including all permit units will be summed on a monthly basis and used to calculate the 12 month rolling annual total. The permit unit and facilitywide monthly

emissions, 12 month rolling annual emissions total, and approved CEIR shall be kept on site and provided to District personnel upon request.

- (c) A facility wide Comprehensive Emission Inventory (CEIR) must be submitted to the District, in a format approved by the District, for all emitted criteria air pollutant on a yearly basis, and every three years for toxic air pollutants, which is to be received by the District no later than April 30 of the following year.

[40 CFR 70.6 (a)(3)(i)(B) - Periodic Monitoring Requirements]

[Rule 204 - Permit Conditions; Version in SIP = CARB Ex. Order G-73, 40 CFR

52.220(c)(39)(ii)(B) - 11/09/78 43 FR 52237; Current Rule Version = 07/25/77]

[California Clean Air Act, Health and Safety Code §§39607 and §§44300 et seq., and the Federal Clean Air Act, §110(a)(2)(F)(ii), codified in 40 CFR 60]

Description: One (1) FLOCCULANT REAGENT SYSTEM (PASTE TAILINGS PLANT)

Application Number: 00011994

Permit Number: B011354

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This equipment shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles.
3. Material handling processes (i.e. drops and conveyors) shall not discharge PM<sub>10</sub> in excess of 0.01 grains/dscf.
8. When dry material is added to the flocculant reagent system hopper, the amount and date of the material addition shall be logged. This log shall be maintained current and on-site for a minimum of 5 years and provided to District personnel on request.
9. All dry material handling after the initial hopper and screw conveyor shall be enclosed and inside a building. All other material handling shall maintain a moisture content such that there shall be no visible emissions.
4. The owner/operator must surrender to the District sufficient valid Emission Reduction Credits for this equipment before the start of construction of any part of the project for which this equipment is intended to be used. In accordance with Regulation XIII the owner/operator shall obtain 46 tons of PM<sub>10</sub> offsets for the new equipment proposed for Stage I and Stage II of the project.
5. (a) Mountain Pass Mine Facility Emissions Limits: The total criteria pollutant emissions for the Mountain Pass Mine shall be less than: 42 tons per year of NO<sub>x</sub>, 25 tons per year of VOC, 46 tons per year of PM<sub>10</sub>, 25 tons per year of SO<sub>x</sub>, and 100 tons per year of CO. The total emissions of Hazardous Air Pollutants (HAPs) for the Mountain Pass Mine shall be less than 10 tons per year for any single HAP and 25 tons per year for any combination of HAPs calculated on an

annual basis. HAPs are defined in 40 CFR 61.01 and are the chemical compounds listed in section 112(b) of the Clean Air Act (Act).

- (b) Monitoring, Periodic Monitoring & Recordkeeping Conditions. This facility shall demonstrate compliance with the specific facilitywide emission limits through the submission of an approved CEIP and CEIR. The CEIP and CEIR shall be based on actual emissions as determined by source test of the equipment or on district approved methods and emissions factors only. Generic or default emission factors shall not be used without approval from the District. The Comprehensive Emission Inventory Plan (CEIP) shall be due no later than March 31 of the year following the year of the actual emissions to be reported. Emissions will be calculated separately for each emissions source on a monthly basis and used to calculate the 12 month rolling annual total. All emissions sources including all permit units will be summed on a monthly basis and used to calculate the 12 month rolling annual total. The permit unit and facilitywide monthly emissions, 12 month rolling annual emissions total, and approved CEIR shall be kept on site and provided to District personnel upon request.
- (c) A facility wide Comprehensive Emission Inventory (CEIR) must be submitted to the District, in a format approved by the District, for all emitted criteria air pollutant on a yearly basis, and every three years for toxic air pollutants, which is to be received by the District no later than April 30 of the following year.

[40 CFR 70.6 (a)(3)(i)(B) - Periodic Monitoring Requirements]

[Rule 204 - Permit Conditions; Version in SIP = CARB Ex. Order G-73, 40 CFR

52.220(c)(39)(ii)(B) - 11/09/78 43 FR 52237; Current Rule Version = 07/25/77]

[California Clean Air Act, Health and Safety Code §§39607 and §§44300 et seq., and the Federal Clean Air Act, §110(a)(2)(F)(ii), codified in 40 CFR 60]

Description: One (1) CEMENT (BINDER) REAGENT SYSTEM

*Application Number:* 00011997      *Permit Number:* B011357

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This equipment shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles.
3. Material handling processes (i.e. drops and conveyors) shall not discharge PM<sub>10</sub> in excess of 0.01 grains/dscf.
4. The cement weight conveyor and screw conveyor shall be enclosed. All other material that is handled shall maintain a moisture content such that there shall be no visible emissions.
5. The owner/operator must surrender to the District sufficient valid Emission Reduction Credits for this equipment before the start of construction of any part of the project for which this equipment is intended to be used. In accordance with Regulation XIII the owner/operator shall

obtain 46 tons of PM<sub>10</sub> offsets for the new equipment proposed for Stage I and Stage II of the project.

6. (a) Mountain Pass Mine Facility Emissions Limits: The total criteria pollutant emissions for the Mountain Pass Mine shall be less than: 42 tons per year of NO<sub>x</sub>, 25 tons per year of VOC, 46 tons per year of PM<sub>10</sub>, 25 tons per year of SO<sub>x</sub>, and 100 tons per year of CO. The total emissions of Hazardous Air Pollutants (HAPs) for the Mountain Pass Mine shall be less than 10 tons per year for any single HAP and 25 tons per year for any combination of HAPs calculated on an annual basis. HAPs are defined in 40 CFR 61.01 and are the chemical compounds listed in section 112(b) of the Clean Air Act (Act).
- (b) Monitoring, Periodic Monitoring & Recordkeeping Conditions. This facility shall demonstrate compliance with the specific facilitywide emission limits through the submission of an approved CEIP and CEIR. The CEIP and CEIR shall be based on actual emissions as determined by source test of the equipment or on district approved methods and emissions factors only. Generic or default emission factors shall not be used without approval from the District. The Comprehensive Emission Inventory Plan (CEIP) shall be due no later than March 31 of the year following the year of the actual emissions to be reported. Emissions will be calculated separately for each emissions source on a monthly basis and used to calculate the 12 month rolling annual total. All emissions sources including all permit units will be summed on a monthly basis and used to calculate the 12 month rolling annual total. The permit unit and facilitywide monthly emissions, 12 month rolling annual emissions total, and approved CEIR shall be kept on site and provided to District personnel upon request.
- (c) A facility wide Comprehensive Emission Inventory (CEIR) must be submitted to the District, in a format approved by the District, for all emitted criteria air pollutant on a yearly basis, and every three years for toxic air pollutants, which is to be received by the District no later than April 30 of the following year.

[40 CFR 70.6 (a)(3)(i)(B) - Periodic Monitoring Requirements]

[Rule 204 - Permit Conditions; Version in SIP = CARB Ex. Order G-73, 40 CFR

52.220(c)(39)(ii)(B) - 11/09/78 43 FR 52237; Current Rule Version = 07/25/77]

[California Clean Air Act, Health and Safety Code §§39607 and §§44300 et seq., and the Federal Clean Air Act, §110(a)(2)(F)(ii), codified in 40 CFR 60]

Description: One (1) CEMENT (BINDER) SILO

*Application Number: 00011998*

*Permit Number: T011358*

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This equipment shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles.
3. This equipment shall not be operated unless vented to properly functioning silo bin vent under valid District permit number C011359.

4. The owner/operator must surrender to the District sufficient valid Emission Reduction Credits for this equipment before the start of construction of any part of the project for which this equipment is intended to be used. In accordance with Regulation XIII the owner/operator shall obtain 46 tons of PM<sub>10</sub> offsets for the new equipment proposed for Stage I and Stage II of the project.
5. (a) Mountain Pass Mine Facility Emissions Limits: The total criteria pollutant emissions for the Mountain Pass Mine shall be less than: 42 tons per year of NO<sub>x</sub>, 25 tons per year of VOC, 46 tons per year of PM<sub>10</sub>, 25 tons per year of SO<sub>x</sub>, and 100 tons per year of CO. The total emissions of Hazardous Air Pollutants (HAPs) for the Mountain Pass Mine shall be less than 10 tons per year for any single HAP and 25 tons per year for any combination of HAPs calculated on an annual basis. HAPs are defined in 40 CFR 61.01 and are the chemical compounds listed in section 112(b) of the Clean Air Act (Act).
- (b) Monitoring, Periodic Monitoring & Recordkeeping Conditions. This facility shall demonstrate compliance with the specific facilitywide emission limits through the submission of an approved CEIP and CEIR. The CEIP and CEIR shall be based on actual emissions as determined by source test of the equipment or on district approved methods and emissions factors only. Generic or default emission factors shall not be used without approval from the District. The Comprehensive Emission Inventory Plan (CEIP) shall be due no later than March 31 of the year following the year of the actual emissions to be reported. Emissions will be calculated separately for each emissions source on a monthly basis and used to calculate the 12 month rolling annual total. All emissions sources including all permit units will be summed on a monthly basis and used to calculate the 12 month rolling annual total. The permit unit and facilitywide monthly emissions, 12 month rolling annual emissions total, and approved CEIR shall be kept on site and provided to District personnel upon request.
- (c) A facility wide Comprehensive Emission Inventory (CEIR) must be submitted to the District, in a format approved by the District, for all emitted criteria air pollutant on a yearly basis, and every three years for toxic air pollutants, which is to be received by the District no later than April 30 of the following year.

[40 CFR 70.6 (a)(3)(i)(B) - Periodic Monitoring Requirements]

[Rule 204 - Permit Conditions; Version in SIP = CARB Ex. Order G-73, 40 CFR

52.220(c)(39)(ii)(B) - 11/09/78 43 FR 52237; Current Rule Version = 07/25/77]

[California Clean Air Act, Health and Safety Code §§39607 and §§44300 et seq., and the Federal Clean Air Act, §110(a)(2)(F)(ii), codified in 40 CFR 60]

Description: One (1) BIN VENT – CEMENT (BINDER) SILO

*Application Number:* 00011999

*Permit Number:* C011359

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. The owner/operator, o/o, shall operate and maintain this silo bin vent in strict accord with the recommendations of the manufacturer/supplier and/or sound engineering principles.

3. This silo bin vent shall operate concurrently with the equipment described as the Cement Silo under valid District permit T011358.
4. The owner/operator, o/o, shall conduct the following minimum program of inspection/maintenance:
  - a. Monthly visible emissions determinations; results logged;
  - b. Weekly readings and recording of the pressure differential across the vent;
  - c. Quarterly inspections of the vent bags; inspections, replacements, and repairs logged.

Items a, b, and c shall be logged. The log shall be maintained current, on-site for a minimum of 5 years and provided to District personnel on request.

5. The silo bin vent shall discharge no more than 0.01 grains/dscf at the operating conditions given in the above description (BACT). This equipment does not require a regularly scheduled emission compliance test. However, emission compliance testing may be required at the discretion of the District.
6. The silo bin vent shall have no visible emissions.
7. The o/o shall maintain, on-site, an inventory of replacement bags sufficient to ensure compliance with applicable rules of District Regulation IV.
8. Regular emissions testing for demonstration of compliance with District rules 404 and 405 are not required. The District may require emissions testing at its discretion.
9. The owner/operator must surrender to the District sufficient valid Emission Reduction Credits for this equipment before the start of construction of any part of the project for which this equipment is intended to be used. In accordance with Regulation XIII the owner/operator shall obtain 46 tons of PM<sub>10</sub> offsets for the new equipment proposed for Stage I and Stage II of the project.
10. (a) Mountain Pass Mine Facility Emissions Limits: The total criteria pollutant emissions for the Mountain Pass Mine shall be less than: 42 tons per year of NO<sub>x</sub>, 25 tons per year of VOC, 46 tons per year of PM<sub>10</sub>, 25 tons per year of SO<sub>x</sub>, and 100 tons per year of CO. The total emissions of Hazardous Air Pollutants (HAPs) for the Mountain Pass Mine shall be less than 10 tons per year for any single HAP and 25 tons per year for any combination of HAPs calculated on an annual basis. HAPs are defined in 40 CFR 61.01 and are the chemical compounds listed in section 112(b) of the Clean Air Act (Act).
- (b) Monitoring, Periodic Monitoring & Recordkeeping Conditions. This facility shall demonstrate compliance with the specific facilitywide emission limits through the submission of an approved CEIP and CEIR. The CEIP and CEIR shall be based on actual emissions as determined by source test of the equipment or on district approved methods and emissions factors only. Generic or default emission factors shall not be used without approval from the District. The Comprehensive Emission Inventory Plan (CEIP) shall be due no later than March 31 of the year following the year of the actual emissions to be reported. Emissions will be calculated separately for each emissions source on a monthly basis and used to calculate the 12 month rolling annual

total. All emissions sources including all permit units will be summed on a monthly basis and used to calculate the 12 month rolling annual total. The permit unit and facilitywide monthly emissions, 12 month rolling annual emissions total, and approved CEIR shall be kept on site and provided to District personnel upon request.

- (c) A facility wide Comprehensive Emission Inventory (CEIR) must be submitted to the District, in a format approved by the District, for all emitted criteria air pollutant on a yearly basis, and every three years for toxic air pollutants, which is to be received by the District no later than April 30 of the following year.

[40 CFR 70.6 (a)(3)(i)(B) - Periodic Monitoring Requirements]

[Rule 204 - Permit Conditions; Version in SIP = CARB Ex. Order G-73, 40 CFR

52.220(c)(39)(ii)(B) - 11/09/78 43 FR 52237; Current Rule Version = 07/25/77]

[California Clean Air Act, Health and Safety Code §§39607 and §§44300 et seq., and the Federal Clean Air Act, §110(a)(2)(F)(ii), codified in 40 CFR 60]

Description: One (1) PASTE TAILINGS MIXER

*Application Number:* 00012000      *Permit Number:* B011360

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This equipment shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles.
3. This equipment shall not be operated unless vented to properly functioning wet scrubber under valid District permit number C011361.
7. Material handling processes (i.e. drops and conveyors) shall not discharge PM<sub>10</sub> in excess of 0.01 grains/dscf. Materials processed by this equipment shall contain sufficient and/or added moisture to ensure compliance with this limit.
4. Mixing operations shall not discharge PM<sub>10</sub> in excess of 1 lbs/100 tons mixed. Materials processed by this equipment shall contain sufficient and/or added moisture to ensure compliance with this limit.
5. The owner/operator must surrender to the District sufficient valid Emission Reduction Credits for this equipment before the start of construction of any part of the project for which this equipment is intended to be used. In accordance with Regulation XIII the owner/operator shall obtain 46 tons of PM<sub>10</sub> offsets for the new equipment proposed for Stage I and Stage II of the project.
6. (a) Mountain Pass Mine Facility Emissions Limits: The total criteria pollutant emissions for the Mountain Pass Mine shall be less than: 42 tons per year of NO<sub>x</sub>, 25 tons per year of VOC, 46 tons per year of PM<sub>10</sub>, 25 tons per year of SO<sub>x</sub>, and 100 tons per year of CO. The total emissions of Hazardous Air Pollutants (HAPs) for the Mountain Pass Mine shall be less than 10 tons per

year for any single HAP and 25 tons per year for any combination of HAPs calculated on an annual basis. HAPs are defined in 40 CFR 61.01 and are the chemical compounds listed in section 112(b) of the Clean Air Act (Act).

- (b) Monitoring, Periodic Monitoring & Recordkeeping Conditions. This facility shall demonstrate compliance with the specific facilitywide emission limits through the submission of an approved CEIP and CEIR. The CEIP and CEIR shall be based on actual emissions as determined by source test of the equipment or on district approved methods and emissions factors only. Generic or default emission factors shall not be used without approval from the District. The Comprehensive Emission Inventory Plan (CEIP) shall be due no later than March 31 of the year following the year of the actual emissions to be reported. Emissions will be calculated separately for each emissions source on a monthly basis and used to calculate the 12 month rolling annual total. All emissions sources including all permit units will be summed on a monthly basis and used to calculate the 12 month rolling annual total. The permit unit and facilitywide monthly emissions, 12 month rolling annual emissions total, and approved CEIR shall be kept on site and provided to District personnel upon request.
- (c) A facility wide Comprehensive Emission Inventory (CEIR) must be submitted to the District, in a format approved by the District, for all emitted criteria air pollutant on a yearly basis, and every three years for toxic air pollutants, which is to be received by the District no later than April 30 of the following year.

[40 CFR 70.6 (a)(3)(i)(B) - Periodic Monitoring Requirements]

[Rule 204 - Permit Conditions; Version in SIP = CARB Ex. Order G-73, 40 CFR

52.220(c)(39)(ii)(B) - 11/09/78 43 FR 52237; Current Rule Version = 07/25/77]

[California Clean Air Act, Health and Safety Code §§39607 and §§44300 et seq., and the Federal Clean Air Act, §110(a)(2)(F)(ii), codified in 40 CFR 60]

Description: One (1) WET SCRUBBER – PASTE TAILINGS MIXER

*Application Number: 00012001*

*Permit Number: C011361*

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. The owner/operator, o/o, shall operate and maintain this equipment in strict accord with the recommendations of the manufacturer/supplier and/or sound engineering principles.
3. This wet scrubber shall operate concurrently with the equipment described as the Paste Tailings Mixer under valid District permit B011360.
4. The owner/operator, o/o, shall conduct the following minimum program of inspection/maintenance:
  - a. Monthly visible emissions determinations; results logged;
  - b. Flowrate shall be at least 4 gallons per minute while the paste tailings mixer is being operated, logged once a month if the paste tailings mixer operates that month.Items 'a' and 'b' shall be logged. The log shall be maintained current, on-site for a minimum of 5 years and provided to District personnel on request.

5. The wet scrubber shall discharge no more than 0.01 grains/dscf at the operating conditions given in the above description (BACT). This equipment does not require a regularly scheduled emission compliance test. However, emission compliance testing may be required at the discretion of the District.
6. The wet scrubber shall have no non-water vapor visible emissions.
7. Regular emissions testing for demonstration of compliance with District rules 404 and 405 are not required. The District may require emissions testing at its discretion.
8. The owner/operator must surrender to the District sufficient valid Emission Reduction Credits for this equipment before the start of construction of any part of the project for which this equipment is intended to be used. In accordance with Regulation XIII the owner/operator shall obtain 46 tons of PM<sub>10</sub> offsets for the new equipment proposed for Stage I and Stage II of the project.
9. (a) Mountain Pass Mine Facility Emissions Limits: The total criteria pollutant emissions for the Mountain Pass Mine shall be less than: 42 tons per year of NO<sub>x</sub>, 25 tons per year of VOC, 46 tons per year of PM<sub>10</sub>, 25 tons per year of SO<sub>x</sub>, and 100 tons per year of CO. The total emissions of Hazardous Air Pollutants (HAPs) for the Mountain Pass Mine shall be less than 10 tons per year for any single HAP and 25 tons per year for any combination of HAPs calculated on an annual basis. HAPs are defined in 40 CFR 61.01 and are the chemical compounds listed in section 112(b) of the Clean Air Act (Act).
- (b) Monitoring, Periodic Monitoring & Recordkeeping Conditions. This facility shall demonstrate compliance with the specific facilitywide emission limits through the submission of an approved CEIP and CEIR. The CEIP and CEIR shall be based on actual emissions as determined by source test of the equipment or on district approved methods and emissions factors only. Generic or default emission factors shall not be used without approval from the District. The Comprehensive Emission Inventory Plan (CEIP) shall be due no later than March 31 of the year following the year of the actual emissions to be reported. Emissions will be calculated separately for each emissions source on a monthly basis and used to calculate the 12 month rolling annual total. All emissions sources including all permit units will be summed on a monthly basis and used to calculate the 12 month rolling annual total. The permit unit and facilitywide monthly emissions, 12 month rolling annual emissions total, and approved CEIR shall be kept on site and provided to District personnel upon request.
- (c) A facility wide Comprehensive Emission Inventory (CEIR) must be submitted to the District, in a format approved by the District, for all emitted criteria air pollutant on a yearly basis, and every three years for toxic air pollutants, which is to be received by the District no later than April 30 of the following year.

[40 CFR 70.6 (a)(3)(i)(B) - Periodic Monitoring Requirements]

[Rule 204 - Permit Conditions; Version in SIP = CARB Ex. Order G-73, 40 CFR

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[California Clean Air Act, Health and Safety Code §§39607 and §§44300 et seq., and the Federal Clean Air Act, §110(a)(2)(F)(ii), codified in 40 CFR 60]

## **D. Public Comment and Notifications**

### ***1. Public Comment***

This preliminary decision/determination will be released for public comment and publicly noticed on or about December 5, 2011. Written comments will be accepted for 30 days from the date of publication of the public notice. Final permits should be issued within 30 days following the end of the public comment period and concurrent EPA comment period.

Any comments on this Preliminary Decision/Determination shall be forwarded to:

Eldon Heaston, Executive Director  
Mojave Desert Air Quality Management District  
14306 Park Avenue  
Victorville, CA 92392-2310  
Attention: Roseana Navarro-Brasington

### ***2. Notifications***

All correspondence as required by Rule 1302 shall be forwarded to (including written and electronic notification to USEPA of the start of the public comment period):

Director, Office of Air Division  
United States EPA, Region IX  
75 Hawthorne Street  
San Francisco, CA 94105

Chief, Stationary Source Division  
California Air Resources Board  
P.O. Box 2815  
Sacramento, CA 95812

Scott Honan, Director Health, Environment,  
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## Appendix A – Emissions Tables

HAP/TAC Emissions – proposed Crushing, Milling and Flotation, and Paste Tailings Plants based on maximum PTE

Chemical	Crushing Plant			Milling and Flotation Plant			Tailings Plant		
	Hourly Emissions	Annual Emissions		Hourly Emissions	Annual Emissions		Hourly Emissions	Annual Emissions	
	(lbs/hr)	(lbs/yr)	(tons/yr)	(lbs/hr)	(lbs/yr)	(tons/yr)	(lbs/hr)	(lbs/yr)	(tons/yr)
Acrylamide	-	-	-	1.40E-02	1.17E+02	5.85E-02	3.21E-04	2.81E+00	1.41E-03
Antimony	9.87E-06	5.92E-02	2.96E-05	2.36E-06	2.06E-02	1.03E-05	2.93E-06	2.57E-02	1.28E-05
Arsenic	7.90E-05	4.73E-01	2.37E-04	5.38E-06	4.66E-02	2.33E-05	6.51E-06	5.70E-02	2.85E-05
Barium	4.82E-02	2.89E+02	1.44E-01	2.46E-03	2.12E+01	1.06E-02	6.21E-03	5.44E+01	2.72E-02
Beryllium	4.42E-05	2.65E-01	1.33E-04	2.72E-06	2.35E-02	1.18E-05	1.95E-06	1.71E-02	8.55E-06
Cadmium	6.87E-06	4.12E-02	2.06E-05	2.33E-06	2.04E-02	1.02E-05	1.46E-06	1.28E-02	6.41E-06
Chromium	1.82E-04	1.09E+00	5.44E-04	6.43E-06	5.53E-02	2.77E-05	6.68E-05	5.85E-01	2.93E-04
Cobalt	6.00E-05	3.60E-01	1.80E-04	2.88E-06	2.48E-02	1.24E-05	5.92E-06	5.18E-02	2.59E-05
Copper	5.92E-05	3.55E-01	1.77E-04	2.87E-06	2.48E-02	1.24E-05	1.69E-05	1.48E-01	7.39E-05
Lead	9.48E-03	5.68E+01	2.84E-02	6.00E-04	5.19E+00	2.60E-03	7.99E-04	7.00E+00	3.50E-03
Mercury	2.05E-06	1.23E-02	6.15E-06	8.05E-08	6.93E-04	3.46E-07	1.48E-07	1.30E-03	6.48E-07
Nickel	9.48E-05	5.68E-01	2.84E-04	3.23E-06	2.78E-02	1.39E-05	6.50E-05	5.70E-01	2.85E-04
Selenium	1.97E-05	1.18E-01	5.92E-05	2.49E-06	2.16E-02	1.08E-05	1.48E-06	1.30E-02	6.48E-06
Silver	3.95E-06	2.37E-02	1.18E-05	2.30E-06	2.01E-02	1.01E-05	1.46E-06	1.28E-02	6.41E-06
Thallium	1.97E-05	1.18E-01	5.92E-05	6.59E-07	5.66E-03	2.83E-06	2.96E-07	2.59E-03	1.30E-06
Vanadium	2.68E-04	1.61E+00	8.05E-04	5.02E-06	4.25E-02	2.12E-05	7.10E-06	6.22E-02	3.11E-05
Zinc	2.29E-04	1.37E+00	6.86E-04	1.15E-05	9.92E-02	4.96E-05	3.55E-05	3.11E-01	1.56E-04
Silica	1.07E+00	6.39E+03	3.19E+00	1.55E-02	1.301E+02	6.51E-02	8.791E-03	7.701E+01	3.85E-02
<b>Total HAPs</b>			0.030			0.061			0.006
<b>Total TACs</b>			3.37			0.14			0.07
<b>Radionuclides</b>	<b>(mCi/hr)</b>	<b>(Ci/yr)</b>		<b>(mCi/hr)</b>	<b>(Ci/yr)</b>		<b>(mCi/hr)</b>	<b>(Ci/yr)</b>	
U-238	6.27E-05	3.76E-04		5.20E-06	4.52E-05		5.38E-07	4.71E-06	
Th-232	1.12E-04	6.70E-04		2.71E-05	2.36E-04		1.73E-06	1.52E-05	
Ra-226	2.83E-05	1.70E-04		4.85E-06	4.23E-05		9.33E-07	8.17E-06	
Ra-228	1.59E-05	9.53E-05		2.71E-05	2.37E-04		1.74E-05	1.53E-04	

Emissions from proposed Crushing, Milling and Flotation, and Paste Tailings Plants

Plant	Permit	Max Daily PM <sub>10</sub> Emissions [1]	Max Daily PM <sub>10</sub> Emissions [1]	Max Annual PM <sub>10</sub> Emissions [1]	Max Annual PM <sub>10</sub> Emissions [1]
		(lbs/day)	(tons/day)	(lbs/year)	(tons/year)
Crushing Plant	Crushing Plant	7.9E+01	3.9E-02	7.0E+03	3.5E+00
	Crushing Plant Baghouse	4.9E-01	2.4E-04	9.2E+01	4.6E-02
	No. 1 Fine Ore Storage Bin	[2]	[2]	[2]	[2]
	No. 1 Fine Ore Storage Bin Vent	2.7E-02	1.3E-05	7.7E-01	3.9E-04
	No. 2 Fine Ore Storage Bin	[3]	[3]	[3]	[3]
	No. 2 Fine Ore Storage Bin Vent	1.3E-02	6.6E-06	3.9E-01	1.9E-04
Milling & Flotation Plant	Ball Mill Circuit	1.9E+00	9.7E-04	6.7E+02	3.3E-01
	Rougher Scavenger Flotation System	0.0E+00	0.0E+00	0.0E+00	0.0E+00
	Concentrate Handling System	2.8E-01	1.4E-04	9.3E+01	4.7E-02
	Lignosulfonate Reagent System [4]	1.2E+00	6.0E-04	4.0E+02	2.0E-01
	Lignosulfonate Dust Collection Blower	4.0E-04	2.0E-07	1.3E-01	6.7E-05
	Lignosulfonate Bin Vent Blower	4.0E-04	2.0E-07	1.3E-01	6.7E-05
	Soda Ash System [5]	8.8E-02	4.4E-05	2.9E+01	1.5E-02
	Soda Ash Scrubber	8.8E-05	4.4E-08	2.9E-02	1.5E-05
	Soda Ash Silo	[6]	[6]	[6]	[6]
	Soda Ash Silo Vent Filter	9.1E-05	4.5E-08	2.9E-02	1.5E-05
	Coagulant Reagent System	0.0E+00	0.0E+00	0.0E+00	0.0E+00
	Saponified Fatty Acid Reagent System	0.0E+00	0.0E+00	0.0E+00	0.0E+00
	Flocculant Reagent System	2.1E-01	1.1E-04	7.1E+01	3.5E-02
Paste Tailings Plant	Paste Tailings Plant	1.8E+00	9.1E-04	6.7E+02	3.3E-01
	Flocculant Reagent System	8.4E-03	4.2E-06	3.1E+00	1.5E-03
	Binder Reagent System	1.3E+00	6.7E-04	4.9E+02	2.5E-01
	Cement Silo	[7]	[7]	[7]	[7]
	Cement Silo Bin Vent	6.7E-03	3.4E-06	2.5E+00	1.2E-03
	Paste Tailings Mixer	[8]	[8]	[8]	[8]
	Paste Tailings Mixer Wet Scrubber	1.1E-01	5.3E-05	3.9E+01	1.9E-02
<b>Total</b>		<b>8.6E+01</b>	<b>4.3E-02</b>	<b>9.5E+03</b>	<b>4.8E+00</b>

**Abbreviations:**

lb - pound

PM - particulate matter

**Notes:**

[1] PM<sub>10</sub> emissions were quantified using MDAQMD emission factors and methodologies presented in MDAQMD's Mineral Guidance

[2] Emissions are vented to the No.1 Fine Ore Storage Bin Vent.

[3] Emissions are vented to the No.2 Fine Ore Storage Bin Vent.

[4] Portions of the Lignosulfonate Reagent System are vented to the Lignosulfonate Dust Collection Blower and Lignosulfonate Bin Vent Blower. The value shown here represents emissions from equipment which are not vented to those control equipment, but are instead controlled by water spray or are completely covered.

[5] Portions of the Soda Ash System are vented to the Soda Ash Scrubber. The value shown here represents emissions from equipment which are not vented to that control, but are instead controlled by water spray or are completely covered.

[6] Emissions are vented to the Soda Ash Silo Vent Filter.

[7] Emissions are vented to the Milling & Flotation Plant Flocculant Unloading Station Control System.

[8] Emissions are vented to the Paste Tailings Plant Flocculant Unloading Station Control System.

[9] Emissions are vented to the Cement Silo Bin Vent.

[10] Emissions are vented to the Paste Tailings Mixer Wet Scrubber.

**Source:**

MDAQMD. 2000. Emissions Inventory Guidance: Mineral Handling and Processing Industries.