ASARCO - RAY MINE

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1. Introduction

This permit ~~revision~~ renewal pertains to an existing integrated copper production facility, owned and operated by ASARCO, LLC a Delaware limited liability company. Permittee, or its predecessors, have mined at this site for about 100 years. The facility, commonly known as ASARCO Ray Mine, lies 8 miles north of Kearny, Arizona, on State Highway 177, upon a parcel also identified by Pinal County Assessor's Parcel number 106-38-0001. This facility is located in an area designated as nonattainment for PM-10.

Permit History

This permit renewal (V20633.000) contains equipment previously missing from the equipment list which has been at the facility since it was permitted. It also revises the "Insignificant Activity" list to include previously left out equipment and activities.

The applicant indicates in the renewal application that their fleet of (37) 240 ton haul trucks will be phased out and replaced by (21) 400 ton haul trucks. Due to the larger capacity of these trucks, less trucks will be needed and therefore less miles will be traveled. Also, the existing shovel and loader in the pit will be replaced by a new diesel-powered four-wheel loader with a larger capacity bucket. The use of this new loader will result in a decrease of PM10 emissions. The changes in the truck fleet and loader are associated with the replacement of the in-pit crusher approved through revision V20600.R04.

This renewal also corrects the number of electrowinning cells at the facility. Even though the 1997 Title V application indicates there are 300 of these cells, the permit mistakenly indicated only 60 cells. This typo has been overlooked through previous revisions, probably due to the minimal emissions from the units.

The secondary crusher unit and all of its requirements have been removed from this permit since it is currently being dismantled, as of the date of the public notice for the permit renewal.

Revision "V20600.R04" allows the construction and operation of a new near-pit crusher (CR4) to replace the current in-pit (CR3a), and the secondary crusher systems. While all three crusher systems will be on site at the same time for a period of 6-9 months, they will never operate simultaneously. The in-pit and secondary crushers will be decommissioned as soon as the new near-pit crusher is performing as required. Uncontrolled emissions from the crusher system alone could potentially trigger New Source Review (NSR), but the level of control required by this permit, limitations on production and netting out emissions reductions from retiring two existing crushers reduces emissions to below applicable thresholds. The planned throughput of CR4 is limited to 22,000,000 tons per year.

This revision also allows the installation of a portable screening plant with a capacity of 1,500,000 tons per year, which will be used to produce the aggregate needed for building haul road base.

Revision "V20600.R03" allows the operation of a landfill cell for regulated asbestos containing materials (RACM). During the processing of this revision, it was found that the current permit does not properly describe the existing waste landfill at the site, a 50 acre area located in Section 10, Township 3S, Range 13E. The operations at this landfill and their emissions have been permitted under operations "Loading" (130), "Watering Roads" (150), "Dozing" (160), "Blading" (170) and "Dumping" (190). The landfill accepts only non-hazardous operational, maintenance and construction waste from the mine, approximately 16,000 cubic yards of waste per year. Types of solid waste which are accepted are:

- Construction and demolition debris (mine timbers and building materials)
- Non-tire rubber products
- Solid waste petroleum-contaminated soil with total petroleum hydrocarbon concentrations of 5,000 ppm or less ~~and not containing volatile organic compounds such as gasoline or other solvents~~.
- Metal and other types of non-hazardous soils and debris which meet the State of Arizona definition of solid waste
- Empty containers.

The RACM cell is a 14 acre area located in T3S, R13E, Section 1, SW 1/4, SE 1/4 of the Hot Tamale Peak Quadrangle. It will accept only asbestos-containing debris resulting from the incidental demolition of building or structures, generated from the ASARCO Ray Mine. This type of activities do not happen on a regular basis. The RACM cell triggers the applicability of a National Emission Standard for Hazardous Air Pollutants (NESHAP) that requires asbestos-containing waste materials be properly identified, documented and handled.

Revision "V20600.R02" clarifies the language that authorizes the facility to conduct periodic abrasive blasting operations. Also, this revision authorizes the Permittee to conduct open burning of clean pallets for instruction and training purposes of the fire brigade.

Revision "V20600.R01" authorizes the facility to paint their heavy duty equipment used in mining operations including, haul trucks, drilling rigs water trucks etc. as a part of their operation and equipment maintenance. ASARCO will implement this operation and maintenance activity as needed. The approximate emissions of Volatile Organic Compounds (VOCs) and Particulate Matter (PM_{10}) from this activity will be 4.0 tons per year and 1.8 tons per year respectively.

This source constitutes a "major source" for particulate matter (PM_{10}) within the meaning of CAA §302(j), which does trigger a requirement for an operating permit under CAA §501 *et seq.* The source also constitutes a "major emitting source" for particulate matter (PM_{10}) within the meaning of 40 CFR §51.166, but still enjoys "grand fathered" status with regard to the PSD permitting program.

For additional background information on this permit or the initial Title Vpermit, see the related "Technical Support Documents" .

Appendix A presents a suggested semi-annual reporting form.

Appendix B to this permit also identifies a number of activities designated as "insignificant" for purposes of this permit.

2. Listing of Applicable Requirements *[Mandated by 40 CFR §70.5(c)(4)]*

A. CAA §§608 & 611 (11/15/90); 40 CFR Part 82, Subpart F - Recycling and Emissions Reduction (9/7/95); regulations pertaining to use and handling of ozone-depleting substances.

B. CAA §112®) (11/15/90); 40 CFR Part 68 (1/31/94); accidental release program.

C. Those specific provisions of the Pinal-Gila Counties Air Quality Control District ("PGAQCD") Regulations, as adopted by the Pinal County Board of Supervisors on March 31, 1975, and approved by the Administrator as elements of the Arizona State Implementation Plan ("SIP") at 43 FR 50531, 50532 (11/15/78), and specifically the following rules:

7-3-1.2	Emission Standards - Particulate Emissions - Fugitive Dust
7-3-1.3	Emission Standards - Particulates - Open Burning
7-3-1.7	Particulate Emissions - Fuel Burning Equipment
7-3-1.8	Process Industries (Mass Emission Equation)
7-3-2.2	SO_2 Emissions - Fuel Burning Installations

D. Those specific provisions of the Pinal-Gila Counties Air Quality Control District Regulations, as last amended by the Pinal County Board of Supervisors on June 16, 1980, and approved by the Administrator as elements of the Arizona SIP at 47 FR 15579 (4/12/82), specifically, the following rules:

7-3-1.1	Visible Emissions; General
7-3-1.7.F	Fuel Burning Equipment

E. Those specific provisions of the Pinal County Air Quality Control District Code of Regulations approved by the Administrator as elements of the Arizona SIP at 65 FR 81371 (12/26/00), specifically, the following rules:

5-18-740.B	Storage of Volatile Organic Compounds; Organic Compound Emissions

F. CAA §111 and 40 CFR Part 60, Subpart LL, Standards of Performance for Metallic Mineral Processing Plants and 40 CFR Part 60, Subpart A, General Provisions (1994).

G. 40 CFR Part 64, Compliance Assurance Monitoring, (1997).

H. 40 CFR §61.154 (1/16/91) National Emission Standard for Asbestos, standard for active waste disposal sites.

3. Compliance Certification

A. Compliance Plan **[*Mandated by* 40 CFR §70.(5)(c)(8)]**

As the Permittee is currently in compliance with all applicable requirements, the compliance plan consists of continued adherence to the requirements of this permit and those requirements set forth in applicable regulations and statutes.

B. Compliance Schedule **[*Mandated by* 40 CFR §§ 70.5(c)(8), 70.6(c)(3)]**

As the Permittee is currently in compliance, no compliance schedule to attain compliance is required.

4. Authority to Construct; Major and Minor-NSR Limitations [CAA §110(a)(2)©)); Code §3-1-040.a]

A. Background

Generally, this permit pertains to an existing facility. See the TSD for additional information regarding permit revisions pertaining to earlier facility modifications.

B. Process Hot Water Heaters

Permit V20600.000 constitutes authorization to install four process hot water heaters, described in the equipment list.

~~C. Secondary Crusher ADS Air Pressure and Water Flow Monitoring~~

~~Permit V20600.000 requires installation of monitoring equipment on the secondary crusher agglomerative dust suppression ("ADS") system, including installation of:~~

~~1. An air pressure gauge on the air supply for secondary crusher ADS; and~~

~~2. A "real-time" flow meter on the water supply, with a calibrated range of at least 2 to 10 g.p.m.~~

C. Emissions Cap - PM10 ***[Federally enforceable provision, pursuant to Code §3-1-084 (8/11/94)]*** (Code §3-1-081.A)

1. Emissions Caps

Permittee shall limit PM10 emissions from the new Near-Pit crushing system and portable screening plant authorized by revision V20600.R04, in any twelve-month period, to 23.37 tons.

2. New Near-Pit Crushing System Operational Limitations and Controls

To stay within the preceding emission cap for PM10 emissions, and thereby also avoid triggering NSR, Permittee shall:

a. limit the ore processed in the new Near-Pit Crusher, in any 12 month period, to 22,000,000 tons;

b. except for 50 hours every year, in which Permittee is allowed to operate the crusher without controls, the following controls shall be installed and operated at all times during operation of the crusher:

i. A scrubber system with at least a 95% control efficiency to reduce particulate matter from the bottom of the crusher. The scrubber shall be equipped with a pressure gauge and a flow meter.

ii. A scrubber system with at least a 95% control efficiency to reduce particulate matter from the 40' transfer conveyor (Equip. #397) drop to the overland conveyor. The scrubber shall be equipped with a pressure gauge and a flow meter.

iii. A water spray system to reduce particulate matter from the dump pocket by 70%. The water spray shall be installed with a manual valve for on/off, a cycle timer to set the length of time water is sprayed and a flow meter that will count the volume of water used.

iv. A water spray system to reduce particulate matter from the top of the crusher by 90%. The water spray shall be installed with a flow meter.

v. A water spray system to reduce particulate matter from the overland conveyor drop to the transfer house by 80%. The water spray shall be installed with a flow meter.

c. Permittee shall not operate the CR4 Near-Pit Crusher simultaneously with the existing in-pit crusher.

d. Upon approval of the testing report to be submitted in accordance with §6.A.2 of this permit, Permittee shall decommission the existing in-pit and secondary crushers.

5. Emission Limitations [*Mandated by* 40 CFR §70.6(a)(1)]

A. Applicable Limitations (Code §3-1-082)

Where different standards or limitations apply under this permit, the most stringent combination shall prevail and be enforceable.

B. Allowable Emissions (Code § 3-1-081.A.2.)

Permittee is authorized to discharge or cause to discharge into the atmosphere those emissions of air contaminants as set forth below. Unless exempted under Code §3-1-040.C., or authorized by a separate permit, by this permit or by a revision or operational change allowed under Chapter 3, Article 2 of the Code, Permittee shall not commence construction of, operate or make any modification to this source in a manner which will cause emissions of any regulated air pollutant in excess of the de minimis amount.

C. Generally Applicable ("Generic") Emission Limitations

1. Opacity Limitation

a. SIP Limitation ***[Currently federally enforceable pursuant to PGAQCD Reg. 7-3-1.1 (6/16/80) approved as a SIP element at 47 FR 15579 (4/12/82)]***

The opacity of any plume or effluent shall not be greater than 40 percent as determined by Reference Method 9 in the Arizona Testing Manual (ADEQ, 1992).

b. Locally Enforceable Limitation (Code §2-8-300)

The opacity of any plume or effluent from any point source not subject to a New Source Performance Standard adopted under Chapter 6 of the Code, and not subject to an opacity standard in Chapter 5 of the Code, shall not be greater than 20% as determined in Method 9 in 40 CFR 60, Appendix A. Affected sources include:

i. external combustion units,

ii. the existing Near-Pit Crusher and associated transfer drops,

iii. the dry lime silo storage vent,

iv. any conveyor transfer point not listed as an “affected facility” in subsections D, F and H below,

v. conveyor transfer points associated with the portable screening plant.

Nothing in this limitation shall be interpreted to prevent the discharge or emission of uncontaminated aqueous steam, or uncombined water vapor, to the open air.

2. Particulate Emissions - Control of Fugitive Dust ***[Currently federally enforceable pursuant to PGAQCD Reg. 7-3-1.2 (3/31/75) approved as a SIP element at 43 FR 50531 (11/15/78)]***

Permittee shall not cause, suffer, allow or permit:

a. A building or its appurtenances or open area to be used, constructed, repaired, altered or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Particulate emissions shall be kept to a minimum by such measures as wetting down, covering, landscaping, paving, treating or by other reasonable means.

b. The repair, construction or reconstruction of a roadway or alley without taking reasonable precautions to prevent particulate matter from becoming airborne. Dust and other particulates shall be kept to a minimum by employing temporary paving, dust palliatives, wetting down, detouring or by other reasonable means. Earth or other material shall be removed from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water or by other means.

c. Transportation of material likely to give rise to airborne dust without taking reasonable precautions to prevent particulate matter from becoming airborne.

d. Crushing, screening, handling or conveying of materials or other operations likely to give rise to airborne dust without taking reasonable precautions to prevent particulate matter from becoming airborne such as spray bars and wetting agents.

3. Particulate Emissions - Process Industries ***[Currently federally enforceable pursuant to PGAQCD Reg. 7-3-1.8 (3/31/75) approved as a SIP element at 43 FR 50531 (11/15/78)]*** (Code §5-5-190)

Permittee shall capture, to the maximum practical extent, all particulate matter resulting from operation of individual equipment comprising the complete process. Permittee not cause, suffer, allow or permit the discharge of particulate matter into the atmosphere in any one hour from any existing process source whatsoever, except fuel-burning equipment, in total quantities in excess of the amount calculated by the whichever of the following equations may be applicable:

a. For any process operating at a production process weight rate ("P") up to 30 tons-per-hour, allowable emissions ("E") shall not exceed:

$$E = 4.10\ P^{0.67} \text{ pounds-per-hour.}$$

b. For any process operating at a production process weight rates ("P") equal to or greater than 30 tons-per-hour, allowable emissions ("E") shall not exceed:

$$E = (55.0\ P^{0.11} - 40.0) \text{ pounds-per-hour.}$$

4. Particulate Emissions - Fuel-Burning Equipment ***[Currently federally enforceable pursuant***

to PGAQCD Reg. 7-3-1.7 (3/31/75) approved as a SIP element at 43 FR 50531 (11/15/78)] (Code §5-21-930)

Permittee shall not cause, allow, or permit the emission of particulate matter, caused by combustion of fuel, in excess of the amount calculated by the following equation:

$$E = 1.02Q^{0.769}$$

where:

E = the maximum allowable particulate emissions rate in pounds-mass per hour.
Q = the total heat input of all operating fuel-burning units in million btu/hour.

5. Sulfur Dioxide Limitation (Code §5-24-1030.A.2.)

Permittee shall not cause or permit the emission of sulfur dioxide at a rate greater than 600 parts per million.

6. Nitrogen Oxides Limitation (Code §5-24-1030.A.3.)

Permittee shall not cause or permit the emission of nitrogen oxides at a rate greater than 500 parts per million.

D. In-Pit Sulfide Ore Crusher System

1. Affected facilities subject to the NSPS opacity limits/control requirements ***[Federally enforceable pursuant to Code §6-1-030.41 and 40 CFR §60.380]***

a. Primary sulfide ore crusher system

I. The dump pocket;
ii. The gyratory crusher inlet and outlet;
iii. The transfer conveyor drop point;
iv. The overland conveyor drop point;
v. Each transfer tower drop point.

~~b. Secondary sulfide ore crusher system;~~

~~I. 96" belt conveyor 110-CV-02 drop;~~
~~ii. 60" belt conveyor 160-CV-12 drop;~~
~~iii. Chute 160-ST-120 drop;~~
~~iv. Bypass diverter 160-ST-137 outlet drop;~~
~~v. Bypass diverter outlet chute 160-ST-121 drop;~~
~~vi. Bypass diverter secondary crusher feed chute 160-ST-122 drop;~~
~~vii. 60" belt conveyor 160-CV-013/chute 160-ST-139 drops; screen feed diverter 160-ST-138 inlet;~~
~~viii. Chute 160-ST-123 drop; 10'x 24' double deck vibrating screen 160-SC-008; screen chute 160-ST-126 drop; screen chute 160-ST-128 drop; screen chute 160-ST-130 drop;~~
~~ix. Chute 160-ST-124 drop; 10'x 24' double deck vibrating screen 160-SC-009; screen chute 160-ST-127 drop; screen chute 160-ST-129 drop; screen chute 160-ST-131 drop;~~

~~x. 42" belt conveyor 160-CV-014/chute 160-ST-132 drops;~~
~~xi. Standard cone crusher 160-CR-005 outlet; crusher outlet chute 160-ST-135 drop;~~
~~xii. 60" belt conveyor 160-CV-015/chute 160-ST-136 drops;~~

2. NSPS Opacity Limits ***[Federally enforceable pursuant to Code §6-1-030.41 and 40 CFR §60.382(b)]***

The opacity of any plume or effluent from any listed affected facility shall not be greater than 10 percent as determined by Reference Method 9 in the Arizona Testing Manual.

3. Controls ***[Currently federally enforceable; see ¶5.C.2.d supra]*** (Code §4-2-040.E. & F.)

a. Water spray systems shall be operated by the Permittee to reduce particulate matter to the maximum practical extent from each affected facility in the in-pit primary sulfide ore crusher system.

~~b. An agglomerative dust suppression system, or "fogging system," shall be installed and operated by the Permittee to reduce particulate matter emissions from each identified affected facility in the secondary sulfide ore crushing system, such that the resulting emissions do not exceed the NSPS opacity limitation defined above.~~

E. Near-Pit Sulfide Ore Crusher System ***[Currently federally enforceable; see ¶5.C.2.d and ¶5.C.3 supra.]*** (Code §4-2-040.E.)

1. Affected facilities subject to the following opacity limits/control requirements include:
   a. Near-Pit Sulfide Ore Crusher

2. Opacity Limits ***[Federally enforceable; see ¶5.C.1 supra]***

The opacity of any plume or effluent from any listed affected facility shall not be greater than 40 percent as determined by Reference Method 9 in the Arizona Testing Manual.

3. Controls ***[Currently federally enforceable; see ¶5.C.2.d and ¶5.C.3 supra.]*** (Code §4-2-040.E and F.)

The rotoclone scrubber and air collection system shall be operated by the permittee to reduce particulate matter to the maximum extent practical from the Belt Conveyor. A water spray system shall be operated by the permittee to reduce particulate matter to the maximum extent practical from the load-out tunnel.

F. Concentrator Coarse Ore Handling System

1. Affected facilities subject to the NSPS opacity limits/control requirements ***[Federally enforceable pursuant to Code §6-1-030.41 and 40 CFR §60.380]***
   a. The concentrator stockpile apron feeders;
   b. The SAG mill feed conveyor drop;
   c. The inlet and outlet of the Omni-cone crusher.

2. Opacity Limits ***[Federally enforceable pursuant to Code §6-1-030.41 and 40 CFR §60.382(b)]***

The opacity of any plume or effluent from any listed affected facility shall not be greater than 10 percent as determined by Reference Method 9 in the Arizona Testing Manual.

3. Controls ***[Currently federally enforceable; see ¶5.C.2.d and ¶5.C.3 supra.]*** (Code §4-2-040.E.)

Water spray systems shall be operated by the Permittee to reduce particulate matter to the maximum practical extent from each listed affected facility.

G. Concentrator Lime Receiving, Storage, and Handling Facility - Controls ***[Currently federally enforceable; see ¶5.C.2.d and ¶5.C.3 supra.]*** (Code §4-2-040.E.)

1. Affected facilities subject to the following opacity limits/control requirements include:
   a. The dry lime storage silo vent.

2. Opacity Limits ***[Currently federally enforceable; see ¶5.C.1 supra]***

The opacity of any plume or effluent shall not exceed 40 percent.

3. Controls ***[Currently federally enforceable; see ¶5.C.2.d and ¶5.C.3 supra.]*** (Code §4-2-040.E. & F.)

During any operation transferring lime to the storage silo, Permittee shall operate a baghouse to either reduce particulate matter emissions from the storage silo at a nominal efficiency of ninety-nine (99) percent, or maintain an emission rate that does not exceed 0.015 grains *per cubic foot per minute* when ninety-nine (99) percent efficiency is not achievable to low flow rates.

H. Near-Pit Crushing System (CR4) NSPS (Subpart LL) ***[Federally enforceable pursuant to Code §6-1-030.41 and 40 CFR §§60.380-386]***(§4-2-040)

1. Affected facilities include:

   a. The dump pocket;
   b. The top of the crusher;
   c. The bottom of the crusher;
   d. The 40' conveyor belt transfer points;
   e. The overland conveyor drop point;
   f. Each transfer tower drop point.

2. Particulate Matter Standard

On or after the date on which the performance test required by this permit is completed, Permittee emissions from the scrubbers shall not contain particulate matter in excess of 0.05 grams per dry standard cubic meter (0.02 g/dscm).

3. Opacity Limits

The opacity of the listed affected facilities shall not be greater than the following percent as determined by 40 CFR Part 60, Appendix A, Method 9 in the Arizona Testing Manual:

a. Dump pocket - 10%
b. Top of the Crusher - 10%
c. The overland conveyor and transfer tower drop points - 10%
d. If controlled by a dry scrubber, the bottom of the crusher and the 40' conveyor belt transfer point - 7%

4. Control Requirements

In order to achieve the limitations of this NSPS, permittee shall install and operate controls in accordance with §4.D.2 of this permit.

I. Other Particulate Control Equipment Operational Requirements (Code §5-5-190.)

1. Fugitive emissions - Transportation ***[Currently federally enforceable; see ¶5.C.2.c. supra]***

All trucks which are owned or operated by the Permittee to haul bulk particulate material on public roadways shall be securely covered whenever the load extends above the level of the top edge of the sides or the top edge of the tailgate of the vehicle bed, whichever is lower.

2. Fugitive emissions - Stockpiles ***[Currently federally enforceable; see ¶5.C.2.a. and .d. supra]***

Permittee shall effect reasonable precautions to prevent particulate matter emissions from stockpiles; illustrative precautions include wetting down, covering, landscaping, paving treating or other reasonable means.

3. Fugitive Emissions - Open Areas, Roadway Construction, Haul Road Operations ***[Currently federally enforceable pursuant to PGAQCD Reg. 7-3-1.2. (3/31/75) approved as a SIP element at 43 FR 50531 (11/15/78)]***

A principal emissions control required under this permit constitutes sprinkling unpaved roads with a water truck as necessary to effectively prevent fugitive dust from becoming airborne. A minimum of 2500 gallons of water shall be sprayed on the roads each day they are used by trucks for hauling product and the roads are not visibly moist due to rainfall.

4. Fugitive Emissions - Landfill ***[Currently federally enforceable pursuant to PGAQCD Reg. 7-3-1.2 (3/31/75) approved as SIP element at 43 FR 50531 (11/15/78)]***

Permittee shall use dust control, such as wetting down or other measures, to minimize fugitive emissions from the landfill site.

J. Particulate Emissions - Process Control Requirements. (Code §5-5-190.C)

Spray bar pollution controls shall be utilized in accord with "EPA Control of Air Emissions from process operations in the Rock Crushing Industry" (EPA 340/1-79-002), "Wet Suppression Systems" (Jan. 1979), with placement of spray bars and nozzles as required to minimize air pollution. ~~Operation of a piece of process equipment while the associated spray bar(s) are not operational shall constitute a period of excess emissions~~. The spray bars required under this subsection need not be operated during periods when entrained moisture already saturates process materials to the extent that process emissions conform to the opacity limitations under this permit, even without the operation of such spray bars. All other times, Operation of a piece of process equipment while the associated spray

bar(s) are not operational shall constitute a period of excess emissions.

K. Process Hot Water Heaters - Fuel Use Limitations [Code §§3-1-081]

1. Primary Fuel

Permittee is allowed to burn natural gas as a primary and propane as a secondary fuel in the process hot water heaters.

2. Other Fuels (Code §§3-1-081.G, 5-23-1010.F)

Permittee shall not use used oil, used oil fuel, hazardous waste, and hazardous waste fuel (as defined in federal, state, or county codes and rules) in the steam generating units and the combustion turbines without first obtaining a separate permit or an appropriate permit revision.

L. Maintenance Hot Water Washers - Fuel Sulfur Limitation [Code §5-24-1030.A.2]

Permittee is allowed to burn diesel fuel in the maintenance hot water washers, provided the diesel fuel has a maximum sulfur content of 18,000 ppm or 1.8% by weight.

M. VOC emissions - Gasoline storage tank [Currently federally enforceable pursuant to PGAQCD Code §5-18-740 (2/22/95) approved as a SIP element at 65 FR 81371 (12/26/00)]

1. A stage I vapor recovery system shall be operated to control emissions of volatile organic compounds (VOCs) from the gasoline storage vessel.

2. Fill tubes shall be used on the gasoline storage vessel and the liquid level of the storage vessel shall not be allowed to drop below the bottom of the fill tube.

3. A vapor tight bulkhead shall be maintained between the gasoline and diesel portions of the storage tank.

N. General Maintenance Obligation (A.R.S. §49-514(J), Code §§3-1-081.E., 8-1-030.A.3)

At all times, including periods of start-up, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate the permitted facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions.

O. Waste Landfill Limits (Code §§3-1-081)

The following materials shall not be accepted into the landfill:

1. Wastes from non ASARCO owned properties

2. Hazardous waste

3. Liquid waste

4. White goods or other appliances

5. Automobiles

6. Tires

7. Batteries

8. Animal carcasses

9. Petroleum Contaminated Soils exceeding Total Hydrocarbon Concentrations of 5000 ppm

10. Medical Waste

11. Polychlorinated biphenyls (PCBs)

12. Waste from asbestos mills

13. Material from operations that convert asbestos-containing wastes into non-asbestos materials.

P. Asbestos NESHAP Emission Standard; Standards for Active Waste Disposal Sites ***[Currently federally enforceable; 40 CFR Part 61, Subpart M]*** (Code §§7-1-030, 7-1-060)

1. Permittee shall comply with Code §§7-1-030.A. and 7-1-060 and 40 CFR Part 61, Subpart M, when conducting any renovation or demolition activities at the facility.

2. Signage requirements

   Permittee shall post and maintain signs identifying the landfill as an asbestos-containing landfill, signs will be placed at all entrances to the landfill area and at intervals of 300 feet or less along the asbestos landfill perimeter. The following threes signs will be posted: (1) *Asbestos Waste Disposal Site*, (2) *Do Not Create Dust*, and (3) *Breathing Asbestos is Hazardous to Your Health.*

3. Records; asbestos-containing waste area definition

   Permittee shall maintain, until facility closure, records of the location, depth, area and quantity (in volume) of asbestos-containing waste material, as well as a map or diagram showing the disposal area.

4. Records; asbestos-containing waste deposition activity.

   For all asbestos containing material from sources covered by 40 CFR §61.150 (demolition, renovation, fabricating and manufacturing) which are transported to the landfill from abatement/demolition sites where travel off of ASARCO Ray Mine owned property or on public roadways is required, receipt, handling and disposal of asbestos containing waste must meet the following standards:

   a. Waste shipment records required

      Asbestos containing waste may only be accepted when the transporter presents a complete waste shipment record, identifying:

I. the name, address, and telephone number of the waste generator;

ii. the name, address and telephone number of the transporter; and

iii. the quantity of asbestos-containing waste material, expressed in cubic yards or cubic meter.

b. Waste shipment receiving requirements

At the time of accepting asbestos containing waste for disposal, the Permittee shall:

I. Record the date of receipt of the material.

ii. Record the presence of improperly enclosed or uncovered waste, or any asbestos-containing waste material not sealed in leak-tight containers.

iii. Inspect the materials, determine whether or not the quantity of asbestos containing waste material differs from the quantity indicated on the waste shipment record, and record any discrepancies. Report discrepancies as outlined in §7.C below.

iv. Inspect the materials to determine the presence, and quantity, of improperly enclosed or uncovered asbestos-containing waste, or any asbestos-containing waste material not sealed in leak-tight containers. Report discrepancies as outlined in subsection c. below.

c. Generator return notification requirement

If asbestos containing waste is accepted from a location off-site, as soon as possible, and within 30 days after receipt of the asbestos containing waste, the Permittee shall send a copy of the signed waste shipment record to the waste generator.

d. Daily cover/suppressant application requirement

At the end of each operating day, or at least once every 24-hour period while the site is in continuous operation, then all asbestos containing waste material that have been deposited at the site during the operating day or previous 24-hour period shall:

I. be covered with at least 6 inches of compacted non-asbestos containing material; or

ii. be covered with a resinous or petroleum based dust suppressant agent that effectively binds dust and controls wind erosion. Such an agent shall be used in the manner and frequency recommended for the particular dust by the dust suppression agent manufacturer to achieve and maintain dust control. Used, spent, or other waste oil may not be used as a dust suppression agent.

5. Asbestos cell re-opening notification requirement.

At least 45 days before excavating or otherwise disturbing any asbestos-containing waste material that has been deposited and covered at the site, Permittee shall notify the Control Officer in writing. The notice shall include:

a. The scheduled starting and completion dates

b. The reason for disturbing the waste

c. The procedures to be used to control emissions during excavation, storage, transport, and ultimate disposal of the excavated asbestos-containing waste material.

d. The location of any temporary storage site and the final disposal site.

If the excavation will begin on a date other than the one contained in the original notice, notice of the new start date must be provided to the Control Officer at least 10 working days before excavation begins and in no event shall excavation begin earlier than the date specified in the original notification.

Q. Stratospheric Ozone and Climate Protection ***[Currently federally enforceable; 40 CFR Part 82 Subpart F]***

The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, Recycling and Emissions Reduction.

R. Supplemental Operating Scenarios ***[Allowed by 40 CFR §70.6(a)(9)]*** (Code §3-1-081.)

Provided each of the following activities conforms at all times to the generic emission limitations set forth in this permit (*e.g.* the 40% opacity limitation), and Permittee maintains a written maintenance log documenting compliance with the following limitations, Permittee may perform any or all of the following within the limitations set forth and without need for additional notice or a permit revision:

1. Abrasive Blasting for Maintenance Purposes (Code §§5-4-140 through 5-4-175)

Permittee may conduct abrasive blasting operations, provided the cumulative dry weight of the abrasive media consumed during a 3 consecutive month period does not exceed ten (10) tons in quantity, and Permittee uses at least one of the following control measures: confined blasting; wet abrasive blasting; ~~or~~ hydro blasting or a control measure that is determined by the Control Officer to be equally effective to control particulate matter emissions.

2. Solvent Use ***[Currently federally enforceable; Code 3-1-150 - SIP Approved at 61 FR 15717 (4/9/96)]***

Permittee may use solvent materials (Including paint, thinners and solvents, collectively designated "Solvent Containing Product(s)"), whether for purposes of painting, general maintenance or otherwise, provided Permittee maintains a maintenance log, and includes therein copies of a current material safety data sheet ("MSDS") or certified product data sheet ("CPDS") for each such Solvent Containing Product used at the site, as well as a dated record of the quantity of such material used at the site.

3. Spray Paint and Surface Coating Operations ***[Code §5-13-390]***

To limit emissions of volatile organic compounds, no person shall conduct any spray paint operation except ~~Non-~~architectural coating, as defined in §5-12-370, without utilizing an enclosed area designed to contain not less ~~painting operations must be conducted in a spray booth configured to capture at least~~ 96% by weight of ~~particulate~~ the overspray. For purposes of this rule an enclosed area means a 3-sided structure with walls a minimum of 8 feet high.

4. Maintenance Painting ***[Code §5-12-370]***

I. Product Formulation

Permittee may conduct open-air architectural maintenance painting operations, but neither the coating product nor any solvent used to thin or dilute the coating product may contain a photochemically reactive solvent, which for these purposes means a solvent with an aggregate of more than 20 percent of its total volume composed of the chemical compounds classified below or which exceeds any of the following individual percentage composition limitations, referred to the total volume of solvent:

a. A combination of hydrocarbons, alcohols, aldehydes, esters, ethers, or ketones having an olefinic or cycloolefinic type of unsaturation: 5 percent;

b. A combination of aromatic compounds with eight or more carbon atoms to the molecule except ethyl benzene: 8 percent;

c. A combination of ethyl benzene, ketones having branched hydrocarbon structures, trichloroethylene or toluene: 20 percent.

d. Whenever any organic solvent or any constituent of an organic solvent may be classified from its chemical structure into more than one of the above groups or organic compounds, it shall be considered as a member of the most reactive chemical group, that is, that group having the least allowable percent of the total volume of solvents.

ii. Disposal Limitation

No person shall, during any one day, dispose of a total of more than one and one-half gallons of any photochemically reactive solvent or of any material containing more than one and one-half gallons of any such photochemically reactive solvent by any means which will permit the evaporation of such solvent into the atmosphere.

5. General Mechanical and Electrical Maintenance

Provided Permittee complies with the foregoing limitations pertaining to the use of Solvent Containing Products, Permittee is authorized to conduct regular inspection, maintenance and repair of the equipment covered by this permit, without notice to the District, provided further that this provision shall not relieve the Permittee from the obligation to provide any notice or application required under the Code or this permit, including a change notice under Code §3-2-180.D, a revision application under §§3-2-190 or 3-2-195, or any notice of deviation, upset or emergency.

6. Open Burning

Permittee may conduct open burning for the instruction and training of the fire brigade. The material to be burned shall consist of clean pallets, numbering one-hundred (100) or fewer with a frequency not exceeding once in any period of two (2) consecutive months.

6. Compliance Demonstration

A. Monitoring ***[Mandated by 40 CFR §70.6(a)(3)]***

1. Non-instrumental emissions monitoring - Particulate matter.

a. Monitoring Process Operations - Emission Quantification

Since the emissions authorized under this permit constitute a direct function of the material throughput at the source, the Permittee shall maintain records, updated at least monthly, of the amount of material processed by or delivered to the following systems:

1. In-pit sulfide ore crusher system;
~~2. In-pit secondary crusher system;~~
2. Coarse ore reclaim system;
3. Near-pit crusher;
4. Concentrator lime receiving, storage, and handling facility;
5. New near-pit crusher (CR4) system;
6. Screening plant.

b. Monitoring Landfill Operations - Emission Quantification

Permittee shall maintain records of the volume or weight of the material accepted at the waste landfill and asbestos cell.

c. Fugitive Emission Control

To verify effective control of fugitive particulate emissions, Permittee shall maintain on-site a daily log of water truck operations. The log shall include frequency of watering and volume of water applied.

d. NSPS Opacity Monitoring ***[Federally enforceable pursuant to Code §6~~0~~-1-030.42 and 40 CFR §60.382(b)]***

1. A certified EPA Reference Method 9 observer shall conduct a monthly survey of the visible emissions from the crusher inlets and outlets, the screen inlets and outlets, and the conveyor drops on the sulfide ore primary crusher, and ~~secondary crusher~~ new-near pit crusher (CR4) lines. Permittee shall keep a record, signed by the observer, showing the following:

a. the date and time of the survey; and
b. identification of any emission points where Reference Method 9 observations were taken pursuant to subparagraph 2.

2. If the survey identifies any emissions that may exceed the applicable

opacity standard, the certified observer shall attempt to perform a Method 9 observation of the emission point(s) of concern. If the Method 9 results indicate that an exceedance has occurred, it shall be reported as an excess emission and appropriate remedial action shall be taken.

3. If Method 9 observations are made or attempted pursuant to subparagraph 2, the observer shall indicate in the monthly record:

   a. the results of the Method 9 observation or the reasons a Method 9 observation could not be performed;
   b. the cause of the abnormal emissions; and
   c. any corrective actions taken.

4. To further contribute to a factual basis that will support an on-going determination that Permittee's compliance is continuous and on-going, Permittee shall conduct a visual inspection of each of all the spray heads on at least a weekly basis, and shall further include in the monthly record described above:
   a. a record of those inspections;
   b. any spray system malfunctions observed; and
   c. any corrective actions taken.

e. Non-NSPS Opacity Monitoring ***[Currently federally enforceable; see ¶5.C.1 supra]***

1. A certified EPA Reference Method 9 observer shall conduct:
   a. A monthly survey of the visible emissions from all crusher inlets and outlets, screen inlets and outlets, and conveyor drops on ore processing lines except those listed in §6.A.1.d above.
   b. A semi-annual survey of the visible emissions from the exhaust stacks of the 5.7 mmBtu/hr. process hot water heaters;
   c. A semi-annual survey of the visible emissions from the exhaust stacks of the maintenance hot water washers.

2. Permittee shall keep a record, signed by the observer, showing the date, time and results of the survey.

3. If a survey identifies any emissions that may exceed the applicable opacity standard, the certified observer shall attempt to perform a Method 9 observation of the emission point(s) of concern. If the Method 9 results indicate that an exceedance has occurred, it shall be reported as an excess emission and appropriate remedial action shall be taken.

4. If Method 9 observations are made or attempted pursuant to subparagraph 3, the observer shall indicate in the survey record:

   a. the results of the Method 9 observation or the reasons a Method 9 observation could not be performed;
   b. the cause of the abnormal emissions; and
   c. any corrective actions taken.

f. ~~CAM Plan Opacity Screening and Monitoring~~ ~~***[Currently federally enforceable; see 40 CFR §64.1*** **et seq.** ***(1997)]***~~

1. ~~Commencing upon issuance of this permit V20600.000, during any calendar day when the in-pit secondary crusher operates, the Permittee shall execute the CAM plan as defined in this subsection.~~

2. ~~For purposes of this CAM requirement, each of the secondary sulfide ore crushing system emission points identified above as regulated under 40 CFR §60.380 shall constitute an "affected emission point."~~

3. ~~Emission control at affected emission points is achieved by using ADS "fogging" heads to create water droplet clouds at those affected emission points. Successful operation of the ADS system requires proper air pressure, proper water flow, and assurance that the "fogging" nozzles do not become obstructed, worn or otherwise impaired in operation. The CAM requirement under this permit therefore requires:~~
   a. ~~daily verification of air pressure delivered to the secondary crusher ADS circuit;~~
   b. ~~daily verification of water volume flowing to the secondary crusher ADS circuit;~~
   c. ~~inspection of each ADS "fogging" nozzles at each affected emission point, or, where individual nozzles are not observable, verification that "fog" vapor is escaping from the openings in a shroud or enclosure surrounding an affected emissions point.~~

4. ~~Any of the following shall constitute an "excursion":~~
   a. ~~improper air pressure to the secondary crusher ADS system, meaning an observed pressure:~~

      I. ~~below the nominal 45 p.s.i. operating pressure;~~

      ii. ~~above 70 p.s.i., or 155% of the 45 p.s.i. operating pressure.~~

   b. ~~improper water volume flow to the secondary crusher ADS system, meaning an observed flow rate:~~

      I. ~~less than 2.5 g.p.m, or 17% below the designated operating flow rate of 3.0 g.p.m.;~~

      ii. ~~more than 6.0 g.p.m., or 200% of the designated operating flow rate of 3.0 g.p.m.~~

   c. ~~observation of an individual "fogging" nozzle that is not producing a perceptible "fog"; or~~

   d. ~~where individual "fogging" nozzles are enclosed or shrouded, an absence of perceptible "fog" emanating from the openings to the enclosure or shroud.~~

~~5. Within the latter of 180 days after the issuance of this permit V206000.000 or the re-start of the secondary crushing line, the Permittee verify that the foregoing ADS air pressure and water flow rate provide compliance with the prevailing 10% opacity limitation. That verification shall be accomplished by preparing a testing plan; submitting that plan for review and approval by the Control Officer; executing the testing plan; and submitting a report defining the results of the testing plan.~~

~~At a minimum, the testing plan shall provide for a demonstration of compliance with air pressure and water flow both set to minimum acceptable values, and a with air pressure and water flow both set to maximum acceptable values. If observed opacity exceeds the 10% allowable limitation, then the testing plan shall require iterative testing until upper and lower bounds for air pressure and water flow are derived in a manner that does achieve compliance with that opacity limitation.~~

~~Permittee may additionally develop shall develop a factual basis for expanding the tolerance windows specified above for either or both of air pressure and water flow. To the extent the test-derived minimum or maximum air pressure or water flow rate deviate by more than 2% from the values defined above, or the Permittee wishes to amend permissible tolerance levels defined above, then within 30 days of submitting the test report Permittee shall apply for a corresponding revision to this permit. To the extent that such changes are expressly contemplated as within the monitoring provisions of this permit, Permittee need only apply for a minor revision to this permit.~~

~~6. An observed excursion shall trigger a requirement to conduct a Method 9 opacity test for each affected emission point. Excursions involving air pressure or water flow shall require an opacity test for each affected emissions point. Excursions involving visual screening shall only require opacity testing for directly affected emissions points.~~

~~7. An "exceedance" consists of an opacity test resulting in an observed opacity above the standard.~~

~~8. This CAM requirement requires logging of the daily verifications required above. Records shall identify the specific emission point or points associated with any excursion or exceedance.~~

~~9. Malfunction of any air pressure gauge, a water flow meter, or failure to conduct or record the observations shall constitute a "monitoring malfunction." Records shall identify the emission point or points affected by any monitoring malfunction.~~

~~10. In order to meet minimum data availability requirements required to provide a reasonable assurance of continuous compliance, monitoring malfunctions affecting observations shall not exceed 20 such monitoring malfunction incidents affecting any single emission point in any given 100 calendar day period.~~

~~11. Permittee shall exercise proper maintenance, including annual calibration, with respect to the air pressure gauge and the water flow gauge on the water supply system. Given the essentially manual nature of the visual screening aspect of this CAM requirement, there is no need to "exercise proper maintenance" with respect to those elements of this CAM requirement.~~

~~12. Any of an excursion, exceedance or monitoring malfunction shall require the operator to restore operation of the control and/or monitoring system to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include taking any necessary corrective actions to restore normal operations and prevent the likely recurrence of the cause of such excursion, exceedance or monitoring malfunction.~~

~~13. A Quality Improvement Plan ("QIP"), confirming to the requirements of 40 CFR §64.8, shall be required if any combination of excursions or monitoring malfunctions exceeds either of:~~

~~a. 3% of operating time, defined as 3 daily events in any given 100 calendar day period, for any water distribution subsystem, or~~

~~b. 3% of operating time, defined as 3 daily events in any given 100 calendar day period, for any nozzle or combination of nozzles at a given emission point regulated under Subpart LL.~~

~~14. If the permittee finds the CAM plan inadequate to assure compliance with Subpart LL, the operator shall apply for a corrective revision to the permit.~~

~~15. Logs, excursion observations, exceedance observations and summaries of downtime incidents shall all be subject to the recordkeeping and reporting requirements under the permit.~~

f. CAM Plan for Near-Pit Crusher (CR4) ***[Currently federally enforceable; see 40 CFR §64.1* et seq. *(1997)]***

1. Indicators

I. Water flow rate for each of the water sprays at the dump pocket, crusher and conveyor drop points shall be indicators of water spray performance.

ii. Pressure drop shall be an indicator of each scrubber performance.

2. Permittee shall install flow meters to monitor the water flow to the water sprays, in accordance with §4.D of this permit. Permittee shall monitor the water sprays at the dump pocket and crusher as follows:

I. Weekly verification of the water volume flowing to the water sprays;
ii. Weekly inspection of the on/off valve and sensor for proper operation;
iii. Weekly inspection of the water spray nozzles.

3. Permittee shall install a magnahelic differential pressure gauge at each scrubber, in accordance with §4.D of this permit and shall monitor the change in pressure of the gas stream through the scrubber as follows:

   I. Daily inspection of the pressure drop;

   ii. Daily zero-check to verify the gauge is operational.

   iii. Annual calibration conducted using a second gauge, or replacement of gauge**.**

4. Any of the following shall constitute an "excursion" while the crusher is in operation:

   I. Improper water volume flow to the water spray systems, meaning a flow rate outside the range established in §6.A.1.g.5 of this permit;

   ii. Observation of an more than two individual nozzles at one spray system that are not producing a spray;

   iii. Pressure drops outside the range established in §6.A.1.g.5 of this permit.

5. Within 45 days of the installation of the Near-Pit Crusher (CR4), Permittee shall prepare and submit to PCAQCD for approval a testing plan that will provide compliance with the prevailing opacity limitation and establish an operational range of volume flow at the spray systems and pressure drop at the scrubber.

   The testing plan shall provide for a demonstration of compliance for the chosen range of volume flow and pressure drop set at the minimum and maximum levels. If observed opacity exceeds the 10% allowable limitation, the testing plan shall require iterative testing until upper and lower bounds for water flow and pressure drop achieve compliance with the opacity standard.

   Permittee shall within 30 days after the test, submit to the Department and the Administrator, a CAM plan which includes 'X' water flow rate and 'Y' pressure differential for the water sprays and the scrubber.

6. Any excursion shall trigger a requirement to conduct a Method 9 opacity test for each affected emission point.

7. An "exceedance" consists of an opacity test resulting in an observed opacity above the standard.

8. Permittee shall maintain the monitoring, including but not limited to maintaining necessary parts for routine repair of the monitoring equipment.

9. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance of control activities, Permittee shall conduct all monitoring at all times when the crushing system is operating.

10. Malfunction of any water flow meters, or the pressure gauge or failure to conduct or record the observations shall constitute a monitoring malfunction. Records shall identify the emission point or points affected by any monitoring malfunction.

11. Any excursion, exceedance or monitoring malfunction shall require the operator to restore operation of the control and/or monitoring system to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of startup, shutdown or malfunction, and taking necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance.

12. Permittee shall submit a Quality Improvement Plan (QIP) in accordance with 40 CFR §64.8 if any combination of excursions or monitoring malfunctions exceeds 5% of operating time, defined as 5events in any given 100 calendar day period.

13. Logs, excursion observations, exceedance observations and summaries of downtime incidents shall all be subject to the recordkeeping and reporting requirements under the permit.

14. If Permittee identifies a failure to achieve compliance with the CAM requirements, Permittee shall promptly notify the Department, and if necessary submit a revision to the permit to address the necessary monitoring changes.

g. Dry PM_{10} Control Screening

Since the use of cyclones and baghouses are required to limit the emissions authorized under this permit, the Permittee shall inspect the baghouses and final exhaust fan at least once per week to determine they are operating properly. Records of these inspections shall be maintained.

2. Near-Pit Crushing System Testing ***[Federally enforceable pursuant to Code §6-1-030.41 and 40 CFR §§60.380-386]***(Code §3-1-160)

a. Within 180 days of the start-up of the near-pit crushing system (CR4), Permittee shall conduct performance tests on the system to ensure compliance with the control efficiency of the scrubbers required by this permit, as well as the NSPS particulate matter standard and opacity. Tests shall be performed at the maximum practical production rate. This test shall be repeated every 5 calendar years.

b. Required tests shall use standard EPA test methods (40 CFR Part 60). At least 30 days before the test, Permittee shall submit a test protocol to PCAQCD for review and approval; Permittee shall provide notice of the performance test at least 15

days prior to running the test.

c. If observed opacity during the test exceeds the allowable limitation, then iterative testing shall be conducted until upper and lower bounds for pressure and water flow are derived in a manner that does achieve compliance with the opacity limitation.

d. Test reports shall be submitted to the District for approval within forty-five (45) days after the test. The test reports shall define the scrubber operating parameters, namely the range of pressure drops across and range of volumetric flows of water through the scrubber.

Upon approval of the testing report by the District, Permittee shall operate the scrubber within the operating parameters recorded during the performance tests.

3. Ore Moisture Content Determination (Code §§3-1-103, 3-7-590.C.1)

To accurately quantify actual regulated emissions associated with the crushing system, Permittee shall conduct a sampling of the ore moisture on an annual basis, beginning no later than 12 months from the previous sampling (first sampling conducted on 7/18/07). At least 30 days before the sampling, Permittee shall prepare and submit for the Control Officer's approval a sampling protocol, which will identify the location of the sample, as well as the planned date for obtaining the sample and analyzing it.

The sampling at a minimum shall employ ASTM D2216 or other recognized testing methods.

Within 15 days of each ore sampling, Permittee shall submit a report to the Director with the results. If results of this sampling indicate that the moisture content is below 4 percent, Permittee shall include in the report a corrective action plan.

4. Non-instrumental emissions monitoring - nitrogen oxides

As a surrogate measurement for monitoring emissions of nitrogen oxides, Permittee shall maintain records of natural gas purchased for use in the process hot water heaters.

5. Non-instrumental emissions monitoring - sulfur dioxide

As a surrogate measurement for monitoring emissions of sulfur dioxide from the maintenance hot water washers, and to assess compliance with the relevant fuel-sulfur limitation, Permittee shall maintain records reflecting total diesel fuel consumption and the sulfur content of the fuel used in the hot water washers. For purposes of quantifying fuel sulfur, Permittee may rely on fuel supplier certifications regarding sulfur content. Permittee shall use the highest reported fuel sulfur content during the reporting period to quantify SO_2 emissions and assess compliance with the SO_2 emission limit under this permit.

6. Non-instrumental emissions monitoring - VOCs

As a surrogate measurement for monitoring emissions of VOCs, Permittee shall:

a. maintain records of gasoline deliveries to the storage tank;

b. maintain records of organic make-up to the solvent extraction system.

c. Permittee shall maintain records of all the paint operations done on the mining equipment including but not limited to haul trucks, drilling rigs , water trucks etc

7. Non-instrumental emissions monitoring - photochemically reactive solvent use

To assess compliance with the maintenance paint product formulation limitation, Permittee shall maintain adequate records of organic composition of each coating product, solvent or thinner used for architectural maintenance painting operations.

8. Non-instrumental emissions monitoring - sulfuric acid

As a surrogate measurement for monitoring emissions of sulfuric acid, Permittee shall maintain records of sulfuric acid added to the electrowinning process and the average flow rate of sulfuric acid used in the system.

B. Recordkeeping ***[Mandated by 40 CFR §70.6(a)(3)]*** (Code §3-1-083)

1. Permittee shall maintain at the source, a file of all measurements, including continuous monitoring-system-, monitoring-device-, and performance- testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required pursuant to any federally enforceable provision of this permit, recorded in a permanent form suitable for inspection.

2. Permittee shall maintain records of the occurrence and duration of any start-up, shutdown or malfunction in the operation of the permitted facility or any air pollution control equipment. For purposes of this provision, a "shut-down" means a cessation of operations at the entire facility for more than seven days, and a "start-up" constitutes the reactivation of the facility after a "shut-down."

C. Compliance Reporting ***[Mandated by 40 CFR §§70.6(a)(3) and 70.6(c)(4)]*** (Code §3-1-083.A)

Permittee shall submit a semi-annual report containing a summary of the information required to be recorded pursuant to this permit, which summary shall clearly show whether or not Permittee has complied with the operational requirements and emissions limitations under this permit. All instances of deviations from permit requirements shall be clearly identified in such reports. For brevity, such deviation reports may incorporate by reference any written supplemental upset reports filed by Permittee during the reporting period. The report shall be submitted to the District within 30 days after the end of each calendar half. Appendix A of this permit is a form which may be used for the report.

D. Regular Compliance/Compliance Progress Certification ***[Mandated by 40 CFR §§70.5(c)(8), 70.5(c)(9), 70.6(c)(4), 70.6(c)(5)]***

Permittee shall annually submit a certification of compliance with the provisions of this permit. The certification shall:

1. Be signed by a responsible official, namely the president, secretary, treasurer or vice-president of the corporation, or such other person as may be approved by the Control Officer as an administrative amendment to this permit;

2. Identify each term or condition of the permit that is the basis of the certification;

3. Verify the compliance status with respect to each such term or condition;

4. Verify whether compliance with respect to each such term or condition has been continuous or intermittent;

5. Identify the permit provision, or other, compliance mechanism upon which the certification is based; and

6. Be postmarked within thirty (30) days of the start of each calendar year.

7. Other Reporting Obligations

A. Supplemental Upset Reports ***[Mandated by 40 CFR §§70.6(a)(3)(iii)(B), 70.6(g)]***

Permittee shall report any deviation from the requirements of this permit along with the probable cause for such deviation, and any corrective actions or preventative measures taken to the District within ten days of the deviation unless earlier notification is required by the provisions of this permit.

B. Asbestos NESHAP Reporting Operational Changes; Closure Notification ***[Currently federally enforceable; 40 CFR 61, Subpart M]*** (Code §§7-1-030; 7-1-060)

Upon facility closure, Permittee shall:

1. Submit to the Control Officer a copy of the asbestos waste disposal locations and quantities.

2. Comply with all the requirements of 40 CFR §61.151, including those pertaining to post-closure obligations.

C. Asbestos NESHAP Reporting Requirements ***[Currently federally enforceable; 40 CFR 61, Subpart M]*** (Code §§7-1-030; 7-1-060)

Receipt, handling and disposal of asbestos containing waste must meet the following standards:

1. If Permittee discovers improperly enclosed or uncovered asbestos-containing waste materials, or any asbestos-containing waste material not sealed in leak-tight containers, Permittee shall by the following working day report in writing to the Control Officer, as well as to any additional local, State, or EPA Regional Office responsible for administering the asbestos NESHAP program, reporting the incident and submitting a copy of the waste shipment record.

2. If Permittee discovers a discrepancy between the quantity of waste designated on the waste shipment records and the quantity actually received, Permittee shall attempt to reconcile the discrepancy. If the discrepancy is not resolved within 15 days after accepting the waste, Permittee shall immediately report in writing to the Control Officer, as well as to any additional local, State or EPA Regional office responsible for administering the asbestos NESHAP program, describing the discrepancy, the attempts to reconcile the discrepancy, and submit an accompanying copy of the waste shipment record.

D. Annual emissions inventory questionnaire [Code §3-1-103. (Nov. '93)]

Since this source would be subject to an ADEQ permitting requirement, Permittee shall complete and submit to the District an annual emissions inventory questionnaire, disclosing actual emissions for the preceding calendar year. The submittal shall be made on a form provided by the District. The questionnaire is due by the latter of March 31, or ninety (90) days after the form is furnished by the District.

8. Fee Payment ***[Mandated by 40 CFR §§70.6(a)(7), 70.9]*** (Code §3-1-081.A.9)

As an essential term of this permit, an annual permit fee shall be assessed by the District and paid by Permittee in accord with the provisions of Code Chapter 3, Article 7 generally, and Code §3-1-081.A.9. specifically. The annual permit fee shall be due on or before the anniversary date of the issuance of an individual permit, or formal grant of approval to operate under a general permit. The District will notify the Permittee of the amount to be due, as well as the specific date on which the fee is due.

9. General Conditions

A. Term ***[Mandated by 40 CFR §70.6(a)(2)]*** (Code §3-1-089)

This permit shall have a term of five (5) years, measured from the date of issuance.

B. Basic Obligation ***[Mandated by 40 CFR §§70.4(b)(15), 70.6(a)(6(I), 70.6(a)(6)(ii), 70.7.b]*** (Code §3-1-081.)

1. The owner or operator ("Permittee") of the facilities shall operate them in compliance with all conditions of this permit, the Pinal County Air Quality Control District ("the District") Code of Regulations ("Code"), and consistent with all State and Federal laws, statutes, and codes relating to air quality that apply to these facilities. Any permit noncompliance is grounds for enforcement action; for a permit termination, revocation and reissuance, or revision; or for denial of a permit renewal application and may additionally constitute a violation of the Clean Air Act (1990).

2. All equipment, facilities, and systems used to achieve compliance with the terms and conditions of this permit shall at all times be maintained and operated in good working order.

3. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

C. Duty to Supplement Application ***[Mandated by 40 CFR §§70.5(b), 70.6(a)(6)(v)]*** (Code §3-1-081.A.8.e.)

Permittee shall furnish to the District within a reasonable time, which shall not exceed thirty days unless the Control Officer fixes some other time period for response, any information that the Control Officer may request in writing to determine whether cause exists for revising, revoking, reissuing, or terminating this permit or to determine compliance with this permit. Upon request, the Permittee shall also furnish to the Control Officer copies of records required under this permit. For information claimed to be confidential, Permittee shall submit along with the requested information or records a showing as required under Code §3-1-120, and shall separately submit a full duplicate copy to the EPA Regional Office (Regional Administrator c/o Air Division Permits Office, EPA Region IX, 75 Hawthorne Street, San Francisco, CA 94105-3901).

D. Right to Enter ***[Mandated by 40 CFR §70.6(c)(2)]*** (Code §§ 3-1-083.A.6, 3-1-132)

Authorized representatives of the District shall, upon presentation of proper credentials and while observing reasonable standard safety requirements as set forth by the owner or operator of the source, be allowed for purposes of ascertaining compliance with this permit and with other applicable requirements:

1. to enter upon the premises where the source is located, where emissions-related activity is conducted, or in which any records are required to be kept under the terms and conditions of this permit;

2. to inspect any equipment, operation, or method required in this permit;

3. to sample or monitor emissions from the source, or other substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements;

4. to have access to and copy, at reasonable times, any records that are required to be kept under the terms of this permit; and

5. to record any inspection by use of written, electronic, magnetic and photographic media.

E. Transfer of Ownership ***[Mandated by 40 CFR §70.7(d)(4)]*** (Code §3-1-090)

This permit may be transferred under an administrative permit amendment from one person to another by notifying the District at least 30 days in advance of the transfer. The notice shall contain all the information and items required by Code § 3-1-090. The transfer may take place if not denied by the District within 10 days of the receipt of the transfer notification.

F. Posting of Permit (Code §3-1-100)

Permittee shall firmly affix the permit, an approved facsimile of the permit, or other approved identification bearing the permit number, upon such building, structure, facility or installation for which the permit was issued. In the event that such building, structure, facility or installation is so constructed or operated that the permit cannot be so placed, the permit shall be mounted so as to be clearly visible in an accessible place within a reasonable distance of the equipment or maintained readily available at all times on the operating premises.

G. Permit Revocation for Cause ***[Mandated by 40 CFR §70.6(a)(6)(iii)]*** (Code §3-1-140)

The Director of the District ("Director") may issue a notice of intent to revoke this permit for cause pursuant to Code §3-1-140, which cause shall include occurrence of any of the following:

1. The Director has reasonable cause to believe that the permit was obtained by fraud or material misrepresentation;

2. Permittee failed to disclose a material fact required by the permit application form or a regulation applicable to the permit;

3. The terms and conditions of the permit have been or are being violated.

H. Certification of Truth, Accuracy, and Completeness ***[Mandated by 40 CFR §§70.5(a)(2),***

70.6(a)(3)(iii)(B)] [Federally enforceable - Code §§3-1-083.A.5, 3-1-175 (as amended 10/12/95) approved as SIP Elements at 61 FR 15717 (4/9/96)]

Any application form, report, or compliance certification submitted pursuant to the Code shall contain certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under Chapter 3 of the Code shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

I. Renewal of Permit ***[Mandated by 40 CFR §§70.5(a)(1)(iii), 70.7©)]*** (Code §3-1-050.C.2)

Expiration of this permit will terminate the facility's right to operate unless either a timely application for renewal has been submitted in accordance with §§3-1-050, 3-1-055 and 3-1-060, or a substitute application for a general permit under §3-5-490. For Class I permit renewals, a timely application is one that is submitted at least 6 months, but not greater than 18 months prior to the date of the permit expiration. For Class II or Class III permit renewals, a timely application is one that is submitted at least 3 months, but not greater than 12 months prior to the date of permit expiration.

J. Severability ***[Mandated by 40 CFR §70.6(a)(5)]*** (Code §3-1-081.A.7)

Pursuant to Code § 3-1-081.A.7., the provisions of this permit are severable, and if any provision of this permit is held invalid the remainder of this permit shall not be affected thereby.

K. Permit Shield ***[Mandated by 40 CFR §70.6(f)]*** (Code § 3-1-102.)

1. Exclusions Generally

Subject to the following schedule of exclusions, compliance with the terms of this permit shall be deemed compliance with any applicable requirement identified in this permit. The permit-shield exclusions include:

a. PGCAQCD Rule §7-3-1.3 OPEN BURNING;
b. PGCAQCD Rule §7-3-4.1 INDUSTRIAL - CARBON MONOXIDE EMISSIONS.
c. Appendix A - reporting form
d. Appendix B - insignificant activities

2. Non-Road Engine Exclusion (40 CFR Part 89)

Notwithstanding the possible inclusion in Section 11 defining "processes," or Section 12 reciting an "equipment list," or Section 13 defining an "emission inventory," operation of non-road engines in self-propelled equipment, manually propelled equipment, and short-term portable equipment is not subject to regulation under this permit, and is therefore also excluded from the permit shield.

3. Additional Inclusions Under the Permit Shield

The permit shield also extends to the following provisions of the code, due to a finding by the Control Officer of non-applicability:

a. Code §§5-22-950, 5-22-960 & 5-22-970, all dealing with Fossil Fuel-Fired Steam Generators.

L. Permit Revisions ***[Mandated by 40 CFR §70.7(d), 70.7(e)]*** (Code Chapter 3, Article 2, specifically Code §3-1-081.A.8.c)

1. This permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit revision, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

2. Permit amendments, permit revisions, and changes made without a permit revision shall conform to the requirements in Article 2, Chapter 3, of the Code.

M. Permit Re-opening ***[Mandated by 40 CFR §§70.6(a)(6)(iii), 70.7(f), 70.7(g)]*** (Code §3-1-087.)

1. This permit shall be reopened if:

a. Additional applicable requirements under the Clean Air Act (1990) become applicable to this source, and on that date, this permit has a remaining term of three or more years. Provided, that no such reopening under this subparagraph is required if the effective date of the newly applicable requirement is later than the date on which this permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to Code §3-1-089.C.

b. The Control Officer determines that it contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of it;

c. The Control Officer determines that it needs to be revised or revoked to assure compliance with the applicable requirements; or

d. The EPA Administrator finds that cause exists to terminate, modify, or revoke and reissue this permit.

2. If this permit must be reopened or revised, the District will notify the permittee in accord with Code §3-1-087.A.3.

N. Record Retention ***[Mandated by 40 CFR §70.6(a)(3)(ii)(B)]*** (Code §3-1-083.A.2.b)

Permittee shall retain for a period of five (5) years all documents required under this permit, including reports, monitoring data, support information, calibration and maintenance records, and all original recordings or physical records of required continuous monitoring instrumentation.

O. Scope of License Conferred ***[Mandated by 40 CFR §70.6(a)(6)(iv)]*** (Code §3-1-081.A.8.d)

This permit does not convey any property rights of any sort, or any exclusive privilege.

P. Excess Emission Reports; Emergency Provision ***[Mandated by 40 CFR §70.6(g)]*** (Code §3-1-081.E, Code §8-1-030)

1. To the extent Permittee may wish to offer a showing in mitigation of any potential penalty, underlying upset events resulting in excess emissions shall reported as follows:

a. The permittee shall report to the Control Officer any emissions in excess of the limits established by this permit. Such report shall be in two parts:

I. Notifications by telephone or facsimile within 24 hours or the next business day, whichever is later, of the time when the owner or operator first learned of the occurrence of excess emissions, including all available information required under subparagraph b. below.

ii. Detailed written notification within 3 working days of the initial occurrence containing the information required under subparagraph b. below.

b. The excess emissions report shall contain the following information:

I. The identity of each stack or other emission point where the excess emissions occurred.

ii. The magnitude of the excess emissions expressed in the units of the applicable limitation.

iii. The time and duration or expected duration of the excess emissions.

iv. The identity of the equipment from which the excess emissions occurred.

v. The nature and cause of such emissions.

vi. If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions.

vii. The steps that were or are being taken to limit the excess emissions. To the extent this permit defines procedures governing operations during periods of start-up or malfunction, the report shall contain a list of steps taken to comply with this permit.

viii. To the extent excess emissions are continuous or recurring, the initial notification shall include an estimate of the time the excess emissions will continue. Continued excess emissions beyond the estimated date will require an additional notification.

2. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

3. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of the following subparagraph are met.

4. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

   a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;

   b. The permitted facility was at the time being properly operated;

   c. During the period of emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and

   d. The permittee submitted notice of the emergency to the Control Officer by certified mail or hand delivery within 2 working days of the time when emissions limitations were exceeded due to emergency. The notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.

10. Provisions Specifically Designated as Not Federally Enforceable (Code §3-1-081.B.2)

Subject to the following specific exclusions, all terms and conditions of this permit are enforceable by the Administrator and citizens under the Clean Air Act. The exclusions include:

A.	Section 1.	Introduction
B.	Section 4.A.	Authority to Construct
C.	Section 5.C.5	SO_2 Limitation
D.	Section 5.C.6	No_x Limitation
E.	Section 5.J	Particulate Emissions
F.	Section 5.K	Fuel Use Limitations
G.	Section 5.L	SO_2 Limitation
H.	Section 5.N	General Maintenance Obligation
I.	Section 5.R.1, .3, 4, 5 and 6	Supplemental Operating Scenarios
J.	Section 7.D	Annual emissions inventory
K.	Section 9.F	Posting of Permit
L.	Section 13	Emission Inventory Table

11. Processes ***[Mandated by 40 CFR §70.5(c)(3)(ii)]*** (Code §3-1-050.B)

Processes and operations for which emissions are allowed by this permit are as follows:

100. RAY MINE OPERATIONS

Process ID	Process Name	Process Description
110	Drilling	Drilling holes for assay and blasting
120	Blasting	Blasting ore and wastes for haulage
121	Bulk Loading	Bulk loading of prill silos (Ammonium Nitrate)
130	Loading	Loading haulage equipment with ore and waste
140	Truck Haulage	Hauling waste and ore from loading site with trucks
150	Watering Roads	Watering roads in pit, on heaps, dumps, and tailings dams
160	Dozing	Dozing mine areas, dumps, and stockpiles
170	Blading	Grading the roads in the mine and other areas
180	Transportation and Cleanup	Vehicle use for misc. cleanup, transportation, & maintenance
190	Dumping	Dumping waste rock on the dumps & ore at stockpiles

200. RAY MINE MAINTENANCE

Process ID	Process Name	Process Description
230	Fueling	Gasoline & diesel fueling of mobile equipment
250	Hot Water Washers	Hot water washers at truck shop wash pad

300. Ray Concentrator Operations

Process ID	Process Name	Process Description
310	Crushing	Crushing & ore handling at in-pit and near-pit crushers
320	Conveying	Conveying crushed ore for further processing
330	Stockpiling	Stockpiling crushed ore for further processing
340	Grinding	Grinding crushed ore for further processing in flotation
350	Flotation	Processing ore slurry with reagents & mechanical means
360	Reagent Storage/Mixing/Addition	Handling of lime and other reagents used to recover copper
370	Filtering Concentrates	Drying copper concentrate slurry for smelting
380	Tailings Dewatering/Handling	Recovering water & depositing unusable portion of ore slurry from flotation
390	Laboratory Assaying	Running assays with sulfur digestion & doing sample prep

400. Hayden Ore Crushing

Process ID	Process Name	Process Description
410	Crushing	Near-pit primary crushing and handling
420	Conveying	Near-pit primary conveying
430	Stockpiling	Near-pit primary stockpile of sulfide ore
440	Loading	Loading sulfide ore for further processing in Hayden

500. Leaching Operations

Process ID	Process Name	Process Description
580	Leaching	Adding silicate ore to heaps & processing it

600. Solvent Extraction and Electrowinning

Process ID	Process Name	Process Description
610	Solvent Extraction	Solvent extraction processes - solution movement, mixing
620	Reagent Storage	Solvent extraction processes - storage
640	Electrowinning	Processing SX solutions to copper using electricity
650	Hot Water Heaters Operating Process	Hot Water Heater operating process

700. Administrative/Miscellaneous Operations

Process ID	Process Name	Process Description
710	Employees Travel to Work	Travel down paved road
720	Vendor Visits	Travel down paved road
730	Dumps & Tailings Windblown Dust	Dumps & Tailings Windblown Dust
740	Heaps - Windblown Dust	Heaps - Windblown Dust
750	Stockpiles Windblown Dust	Stockpiles Windblown Dust
760	Water Treatment Plant	Water Treatment Plant

12. Equipment ***[Mandated by 40 CFR §70.5(c)(3)(ii)]*** (Code §3-1-050.B)

Equipment for which emissions are allowed by this permit are as follows:

ID	Equipment	Amount	Make	Model	Serial #	Date	Capacity

111	Drills	12		Electric/Diesel			
122	Prill Storage Bins ~~Tank~~	~~2~~3					~~39.37 tpd~~1620-1694 ft^3
131	Loading Equipment	~~10~~19					Avg. 30 yd^3/bucket load
131a	Loader (Future)	4	Le Tourneau	L2350			53 cubic yards
141	170 ton haul truck (to be removed)	2					170 ton
142	Haul Trucks (to be removed)	37					240 ton
142a	Haul Trucks (future)	21	Liebherr	T282B		2008-13	400 ton
144	Rubber Tire Rigs	5~~10~~					
144a	Misc. Equipment (excavator, backhoe, cable reeler, compactor) (Future)	7					
145	Misc Vehicles	200					
~~143~~	~~Haul Trucks~~	~~0~~					~~300 ton~~
151	Water Trucks	6					26,000 gal
152	Water Trucks (future)	2	170-ton class	WT503/504			
161	Dozer	19					
171	Grader	~~6~~5					
181	Vibrating Grizzly Feeder	1	Pioneer				42" x 20"
182	Portable Screening Plant	1	Reuter/JCI				7'x 20' screen
183	Stackable Conveyor	1					42"x 60'
184	Stackable Conveyor	1					36" x 60'
231	Gasoline/Diesel Tank	1	Nogales	UL 142		1993	15,000/5,000 gal
233	Vapor Recovery	1					
234	Diesel Tank	1	Garland		56304	1972	250,000 gal
251	Maintenance Hot Water Washers	9	Sioux	375-H		1991	434 mmbtu/hr
310.1	Belt Conveyor (to be removed)	1		60"x171'			
310.3	Diverter Gate (to be removed)	1					
310.5	Screens (to be removed)	2	Norberg	Double Deck		1998	
310.12	Belt Conveyor (to be removed)	1		42"x176'			

310.14	Cone Crusher (to be removed)	1	Norberg	MP 1000		1998	
310.17	Belt Conveyor (to be removed)	1		60"x400'			
311	Dump Pocket (to be removed)	1				1991	5000 tons/hr
312	Apron Feeder (to be removed)	1	O&K			1991	300 hp
313	Dribble Conveyor (to be removed)	1	O&K			1991	100 tons/hr
314	In-pit Primary Crusher (to be removed)	1	Fuller-Trylor	60x89"		1991	5000 tons/hr
315	Crusher Discharge Belt (to be removed)	1	Bridgestone	96" wide		1991	150 hp
316	Water Sprays	35	Raring	ADS FP Series		1991	2.5 gph
318	Belt Conveyor	1		60"x188'			
319	Diverter Gate	1					
321	Overland Conveyor	1	Scandura	60"x4110'		1991	5000 hp
322	Transfer Station	1				1991	5000 tons/hr
323	Stacker Conveyor	1	Goodyear	60"x492'		1991	1000 hp
324	RR Loadout Conveyor	1	Goodyear	60"x1153'		1966	200 hp
325	Water Sprays	2	Raring	ADS FP Series		1991	2.5 gpm
331	Apron Feeders	3	NICO	54" wide		1991	40 hp
332	Water Spray	1	Sonic	24-3		1991	4 gph
341	Mill Feed Conveyor	1	Scandura	54" wide		1991	280 hp
342	SAG Mill	1				1991	14000 hp
343	Vibratory Screen	1				1991	30,000 tons/day
344	Crusher Feed Conveyors	4				1991	
345	Omni-Cone Crusher	1	Norberg	Shorthead		1991	1000 hp
346	Cyclones	16				1991	
347	Omni-Cone Crusher	2				1991	6500 hp
351	Flotation Feed Box & Cell (No longer in use)	25				1991	2280 cu ft
352	Regrind mills (No longer in use)	2				1991	900 hp
367	Lime Receiving	1			710-BN03	1991	66.5 tons/day
368	Lime Silo Baghouse	1	Flex-Kleen	84-BVVS-1611G	N33869	1991	1000 scfm
369	Lime Screw Conveyor	1	Thomas	9"x25'	710-FE06	1991	5 hp

371	Concentrate Thickener	1				1991	
372	Filters	2				1991	
373	Conveyor	1				1991	
375	Loader	1	Caterpillar	992	49201586	1992	
381	Grader	1	Caterpillar	14G	96U75192	1991	
382	Dozer	2		DIOR		1992	
383	Misc Vehicles	12				1992	
385	Tailings Thickener	1				1991	
387	Haul Trucks	2	Haulpak	170T	GF 30865FE36	1998	170 ton
391	Laboratory Fume Hoods	2				1991	
392	Laboratory Fume Hoods	2	WW Sly Mfg	JWO-7488		1991	
393	Dust Hood	~~1~~7	On site			1991	20" dia
394	Dust Hood Exhaust Scrubber	1	Ducon	UW4	D596-1438		7146 scfm
395	Lab Dust Hood Scrubber	~~1~~2	Turbulaire			1991	
396a	Apron hopper	1				2007	
396b	Dribble scraper conveyor	1				2007	
396	Gyratory crusher	1				2007	60"x89"
396c	Discharge chute	1				2007	
396d	Discharge conveyor	1				2007	94" wide
397	Discharge conveyor	1				2007	40'
398	Overland conveyor	1				2007	60" x 690'
411	Near-pit Dump Pocket	1				1965	59,520 tpd
412	Near-pit Primary Crusher	1	Allis Chlmers	54x74"	A71015	1965	59,520 tpd
413	Picking Belt	1	Yokohama	72"x171'		1966	2480 tph
414	Near-pit Dust Collector	1	Type N Rotoclone			2005	24,000 cfm
421	Stacker Conveyor	1	Price Rubber	54"x790'		1967	350 hp
422	Water Spray	1				1989	2.5 gpm
423	RR Loadout Conveyor	1	Goodyear			1966	200 hp
441	Loadout Chutes	8				1966	800 tph
442	Water Sprays	8				1989	3 gpm
569	Haul Trucks	~~2~~1	Wabco			1968	50 ton
582	Dozers	~~12~~13				1990	
584	Rubber Tire Rigs	2~~6~~				1980	

586	Water Trucks	~~3~~1	Wabco	35C		1980	1000 gal
611	Raffinate Storage Tanks	4				1980	5,800,000 gal
~~612~~	~~Wash Tank~~	~~1~~				~~1980~~	~~1,250,000 gal~~
617	Vat Storage	~~4~~12				1980	1,000,000 gal
618	Reclaim Tank	1				1980	100,000 gal
619	Raffinate Sumps	~~3~~5				1980	~~6570~~ 10,950 sf
621a	Diluent Tank	1	C,B&I			1980	50,000 gal
621b	Kerosene Tank	1	Garland	API Std 650		1972	207,774 gal
644	Electrowinning Cells	~~60~~300	CTI			1980	1500 gal
655	5.7 mmbtu Hot Water Heaters	4	Parker Boiler	T5700	50607, 50608, 50609, 50610	1999	5.7mmbtu
761	Lime Receiving System	1				1979	500 cu ft
762	Conveyor	1		16"		1979	1 hp
763	Ball Mill	1					
764	Mix Tanks	3					

13. Emission Inventory Table

See the Technical Support Document for information on emissions from this facilty.

~~ID~~	~~SOURCE~~	~~PM10 (TPY)~~	~~NOX (TPY)~~	~~CO (TPY)~~	~~SOX (TPY)~~	~~H2SO4 (TPY)~~	~~VOC (TPY)~~
~~110~~	~~DRILLING~~	~~1.2~~					
~~120~~	~~BLASTING~~	~~5.8~~	~~24.38~~	~~96.09~~	~~2.87~~		
~~130~~	~~LOADING~~	~~4.2~~					
~~140~~	~~HAULING~~	~~1706.6~~					
~~160~~	~~DOZING~~	~~12.1~~					
~~170~~	~~BLADING~~	~~28.3~~					
~~180~~	~~TRANSPORTATION & CLEANUP~~	~~<0.1~~					
~~190~~	~~DUMPING~~	~~11.6~~					
~~230~~	~~FUELING~~						~~1.15~~
~~250~~	~~HOT WATER WASHERS~~	~~<0.1~~	~~0.1~~	~~<0.1~~	~~<0.1~~		~~<0.1~~
~~310~~	~~CRUSHING~~	~~24.2~~					
~~320~~	~~CONVEYING~~	~~23.5~~					
~~330~~	~~CONCENTRATOR STOCKPILE~~	~~2.5~~					

~~340~~	~~GRINDING~~	~~13.4~~					
~~360~~	~~REAGENT STORAGE/ADDITION~~	~~0.1~~					
~~370~~	~~FILTER PLANT~~						
~~380~~	~~TAILINGS~~	~~43.2~~					
~~390~~	~~LABORATORY~~	~~<0.1~~					
~~410~~	~~CRUSHING~~	~~13.0~~					
~~420~~	~~CONVEYING~~						
~~430~~	~~HAYDEN CONCENTRATOR STOCKPILE~~	~~0.6~~					
~~400~~	~~LOADING~~	~~0.2~~					
	~~510-550 refer to Silicate Crusher which is no longer in use~~						
~~560~~	~~CONVEYING~~	~~6.7~~					
~~580~~	~~LEACHING~~	~~10.8~~					
~~610~~	~~SOLVENT EXTRACTION~~						~~52.4~~
~~620~~	~~REAGENT STORAGE~~						~~0.1~~
~~640~~	~~ELECTROWINNING~~					~~1.7~~	
~~650~~	~~Hot Water Heaters~~		~~7.6~~	~~6.4~~	~~<0.1~~		~~0.4~~
~~710~~	~~EMPLOYEES REPORTING TO WORK~~	~~3.18~~					
~~720~~	~~VENDOR VISITS~~	~~0.6~~					
~~730~~	~~DUMPS & TAILINGS WINDBLOWN DUST~~	~~8.8~~					
~~740~~	~~HEAPS WINDBLOWN DUST~~	~~20.7~~					
~~750~~	~~STOCKPILES WINDBLOWN DUST~~	~~0.5~~					
~~760~~	~~WATER TREATMENT PLANT~~	~~<0.1~~					
	~~PAINTING OF MINING EQUIPMENT~~	~~1.8~~					~~4.0~~

Appendix A

Semi-annual Report

Permit V20633.000~~00.R04~~

Abstract

This constitutes a suggested semi-annual report of all required monitoring, documenting emissions during the subject reporting period. Permittee remains responsible for assuring timely meeting all reporting requirements under the permit.

Reporting Period - January-June __ July-December __ Year ____

Facility - ASARCO
Ray Mine
Hwy 177, 8 miles North of Kearny, Arizona

Parametric emissions report

Natural gas burned during reporting period . . . . . _____ therms

Diesel fuel burned in non-mobile equipment during reporting period . . . . . _____ gallons

Gasoline purchased during reporting period . . . . . _____ gallons

Material processed during reporting period in the In-pit crusher system . . . . . _____ tons

Material processed during reporting period in the near-pit crusher system . . . . . _____ tons

Material processed during reporting period in the screening plant . . . . . _____ tons

Material processed during reporting period in the Coarse ore reclaim system . . . . . _____ tons

Material processed during reporting period in the concentrator lime receiving, storage, & handling system . . . . . _____ tons

Waste deposited in landfill - Quantity _____ (cubic yards/tons) (circle appropriate units)

Operations report

Have:

Records required under 6.A.1.d (NSPS Opacity) been maintained? . . . . . YES/NO
Records required under 6.A.1.e (non-NSPS Opacity) been maintained? . . . . . YES/NO
Records required under §6.A.1.a (material processed) been maintained? . . . . . YES / NO
Records required under §6.A.1.b (waste accepted) been maintained? . . . . . YES / NO
Records required under §6.A.1.c (water truck operations) been maintained? . . . . . YES / NO
Records required under §6.A.1.h (baghouse inspections) been maintained? . . . . . YES / NO
Records required under §6.A.1.f (CAM logging) been maintained? . . . . . YES / NO
Records required under §6.A.1.g (CAM logging) been maintained? . . . . . YES / NO
Records required under §§6.A.4,5&6 (fuel consumption) been maintained? . . . . . YES / NO
Records required under §6.A.8 (sulfuric acid) been maintained? . . . . . YES / NO
Records required under §6.B (generic recordkeeping) been maintained? . . . . . YES / NO
Records required under §6.A.6,7 (paint operations) been maintained? . . . . . YES / NO
Records required under §5.P.3 (asbestos cell size and location) been maintained? . . . . . YES / NO

Records required under §5.P.4.a (asbestos waste shipment records) been maintained? . . . . . YES / NO
Records required under §5.P.4.d (daily cover logs) been maintained? . . . . . YES / NO

Did:

Any "excursions" under §6.A.1.f.4 or §6.A.1.g.4 (CAM indicators) occur? . . . . . YES / NO
Any "exceedances" under §6.A.1.f.7 or §6.A.1.g.7 occur? . . . . . YES / NO

On a separate sheet, describe and explain any monitoring activity or recordkeeping that occurred with respect to the Asbestos NESHAP or Stratospheric Ozone requirements respectively defined in §§5.P and 5.Q of the permit during the reporting period.
Is such a supplemental disclosure attached? . . . . . YES / NO

On a separate sheet, describe and explain any previously un-reported deviations from the terms of this permit. Is such a supplemental disclosure attached? . . . . . YES / NO

Certification by Responsible Official

I certify that, based on information and belief formed after reasonable inquiry, that the statements and information in this report are true, accurate and complete.

Signed _____

Title _____

Date _____

Mail to - Pinal County Air Quality Control District
PO Box 987
Florence, AZ 85232

Appendix B

INSIGNIFICANT ACTIVITIES

A. General information (Code §§ 1-3-140.74A, 3-1-050, & 3-3-081)

1. An insignificant is one which accounts for less than 1 percent of a source's emissions of conventional air pollutants or generates less than 200 pounds per year of regulated air pollutants. Additionally, an activity specifically listed as such in the Code is insignificant.

2. Permit application need not provide emissions data regarding insignificant activities and such activities need not be listed in the permit. Insignificant activities need only be listed in the permit application.

B. Non-exclusive list of insignificant activities.

Activities which may generate emissions in insignificant amounts include but are not limited to the following:

1. Short term maintenance activities including but not limited to:
   a. Abrasive blasting
   b. Painting
   c. Solvent use
   d. Steam cleaning
   e. Equipment removal and replacement
   f. Welding, brazing, and soldering operations
2. Operation of lab equipment
3. Operation of cooling water, plant water, wastewater, and other water systems.
4. Emissions from testing and sampling
5. Research and development facilities
6. Storage of chemicals and fuels
7. Operation of emergency and standby equipment rated at less than 325 brake horsepower and used less than 72 hours per year.

C. Permittee has disclosed the following insignificant activities in the application for this permit:

210. VOC emissions from hydraulic fluid tanks.

220. VOC emissions from oil maintenance tanks.

240. VOC emissions from grease tanks.

351. Particulate matter emissions from the concentrator flotation operation.

392. Sulfuric acid emissions from lab fume exhaust system.

620. VOC emissions from solvent extraction reagent storage.