

**TECHNICAL REVIEW AND EVALUATION  
OF APPLICATION FOR  
AIR QUALITY PERMIT NO. 72943  
(SIGNIFICANT PERMIT REVISION TO PERMIT NO. 39948)**

**ASARCO LLC – HAYDEN OPERATIONS**

**I. INTRODUCTION**

This Class I Permit No. 72943 (significant permit revision to Permit No. 39948) is issued to ASARCO LLC., the Permittee, to incorporate the existing slag screening and transport process into their Title V operating permit. This revision also removes the applicable requirements for batch converters #1, 3, 4, and 5 from Attachment “G” and the equipment for the converter building and furnace ventilation gas control, Pre-CRP in Attachment “J”.

**A. Company Information**

1. Facility Name: ASARCO LLC  
Hayden Operations
2. Facility Location: 6904 N. Asarco Road  
Hayden, AZ 85135
3. Mailing Address: P.O Box 8,  
Hayden, AZ 85135

**B. Attainment Classification**

The Hayden area is currently designated as a non-attainment area for particulate matter with a diameter less than 10 microns (PM<sub>10</sub>), sulfur dioxide (SO<sub>2</sub>) and lead (Pb). The area is in attainment or unclassified for all other pollutants.

**II. REVISION DESCRIPTION**

ASARCO LLC is requesting to include the existing slag screening and transport operations which were previously overlooked in the prior permit renewal. Slag, which is generated in the INCO oxygen flash furnace is skimmed off of the top of the molten bath and into a slag pot for deposition. The molten slag is transported to the slag deposition area. Once the slag is cooled, a fraction is sent through a grizzly screen to separate the oversized and undersized material. The oversized material is sent back to the pile. The undersized material is loaded into a rail car to be emptied into the track hopper and reintroduced into the milling process. Some of the unscreened slag is loaded into trucks and transported off site.

**III. EMISSIONS**

The slag screening and transporting operations result in an increase in the emissions of particulate matter, lead, and HAPs. Emissions are controlled by pre-wetting the slag and only performing screening operations within a fenced area.

The emissions calculations for the permit review process relied upon emission factors drawn from the EPA’s Compilation of Air Pollution Emission Factors (AP-42) and an analysis of the



composition of the slag. Table 1 below depicts the potential-to-emit (PTE) for the increase in emissions for the revision.

**Table 1: Potential Emissions for Slag Screening and Transport**

**Table 1: Potential Emissions**

Pollutant	Emissions (tons per year)			Minor NSR Threshold
	Proposed	Current	Change	
PM	1560.0	1551.1	8.86	-
PM <sub>10</sub>	2092.3	2088.1	4.19	7.5
PM <sub>2.5</sub>	1569.8	1569.2	0.63	5
NO <sub>x</sub>	280.7	280.7	0.0	20
CO	142.5	142.5	0.0	50
SO <sub>2</sub>	2524.1	2524.1	0.0	20
VOC	12.5	12.5	0.0	20
Pb	4.9	4.3	0.05	0.3
HAPs	18.6	18.6	0.06	-

#### IV. MINOR NEW SOURCE REVIEW

The Permittee has taken a voluntary limitation for the amount of slag processed in order to stay below the permitting exemption threshold for minor New Source Review (NSR) pollutants. Hence, this revision is not subject to minor NSR.

#### V. APPLICABLE REGULATIONS

Table 2 displays the applicable requirements for each permitted piece of equipment along with an explanation of why the requirement is applicable.

**Table 2: Verification of Applicable Regulations**

Unit	Control Device	Rule	Discussion
Grizzly screen and transport operations	Water sprays and wind fence	CD CV-15-02206-PHX-DLR A.A.C. R18-2-606 40 CFR 52.126 A.A.C. R18-2-715	These operations are subject to the requirements of the Consent Decree and A.A.C R18-2-606 for material handling.



**VI. NEW MONITORING REQUIREMENTS**

**A. Monitoring, Recordkeeping, and Reporting Requirements**

1. The Permittee is required to conduct visible emission surveys as required by the Fugitive Dust Plan.
2. The Permittee shall record the monthly and 12-month rolling totals of material passed through the grizzly screen and loaded for offsite shipment.

**VII. LIST OF ABBREVIATIONS**

A.A.C.	Arizona Administrative Code
NO <sub>x</sub>	Nitrogen Oxide
Pb	Lead
PM	Particulate Matter
PM <sub>10</sub>	Particulate Matter Nominally less than 10 Micrometers
PM <sub>2.5</sub>	Particulate Matter Nominally less than 2.5 Micrometers
PTE	Potential-to-Emit
SO <sub>2</sub>	Sulfur Dioxide
TPY	Tons per Year
VOC	Volatile Organic Compound