



**PIMA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR PROGRAM**

150 W. CONGRESS, SUITE 109
TUCSON, ARIZONA 85701
PHONE (520) 740-3340 FAX (520) 243-7340
www.deq.pima.gov

OPPORTUNITY TO CORRECT - TRACKING # 0910-122

December 4, 2009

ASARCO, LLC - Mission Complex
Attn: Richard S. Rhoades
4201 W. Pima Mine Road
Sahuarita, AZ 85629

Sent by Email
RRhoades@asarco.com

Dear Mr. Rhoades,

The Pima County Department of Environmental Quality (PDEQ) Air Program completed complaint investigations at ASARCO, LLC – Mission Complex on October 21 and 27, 2009. During the inspections, the following deficiencies of Air Quality Operating Permit #2026 and the Pima County Code (PCC) were noted:

Deficiency #1:

PDEQ has reason to believe that ASARCO, LLC – Mission Complex did not monitor for dust emissions from tailings dam #8 once per week from observation points T-2 and T-5 following the protocol for the bi-weekly visual surveys conducted in accordance with the Visual Observation Plan and required by Permit Condition Part “B” Section II.C.5.

Deficiency #2:

PDEQ has reason to believe that ASARCO, LLC – Mission Complex caused fugitive dust emissions from tailings dam #8 to have an average optical density greater than 20 percent, as prohibited by Permit Condition Part “B” Section I.C.2, PCC 17.16.40.A and PCC 17.16.050.B.

PDEQ Air Program has determined that an opportunity to correct these deficiencies will be afforded to you, given your compliance history. Included with this document are the Complaint Investigation Reports for your reference.

Please submit a written response outlining the corrective actions to be taken to achieve and maintain compliance with the cited deficiencies on or before January 4, 2010. Failure to do so may result in the escalation of this matter. If you have any questions regarding this notice, please contact me at (520) 740-3340. PDEQ looks forward to working with you to achieve compliance.

Sincerely,

A handwritten signature in black ink that reads "James M. Jones".

James M. Jones
Civil Engineering Assistant

Attachments: Complaint Investigation Reports dated October 21 and 27, 2009

cc: Permit File: #2026, Jamie Ekholm JEkholtm@asarco.com, Arturo Burgos ABurgos@asarco.com



PIMA DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR PROGRAM

150 W CONGRESS STREET
TUCSON, ARIZONA 85701-1317
PHONE (520) 740-3340 FAX (520) 882-7709
www.deq.pima.gov

Complaint Investigation Report

Tracking ID: PC0910-086

Permit #: 2026

Source: ASARCO, LLC - Mission Complex

Location: 4201 W. Pima Mine Road, Sahuarita, AZ

Date: 10/21/2009

Inspector: James Jones

Arrival Time: 10:55 AM

Spoke With: Mr. Arturo Burgos

Departure Time: 1:00 PM

Phone #: (520) 648-4588

Reason for Inspection: Complaint

Compliance Status: Compliant

I. INSPECTION NARRATIVE

The inspector met with Mr. Arturo Burgos, Senior Environmental Engineer at ASARCO, LLC – Mission Complex (ASARCO). Mr. Burgos signed the Notification of Inspection Rights Form (Attachment 1). The inspector informed Mr. Burgos that the Pima County Department of Environmental Quality (PDEQ) had received a number of complaints the previous day, October 20, 2009, about dust generated from the top of the tailings southwest of the intersection of Helmet Peak Road and La Canada Drive, and that was the purpose of the inspection. Mr. Burgos was informed that the inspector wanted to examine the state and condition of the tailings and controls implemented to minimize fugitive emissions during the complaint period.

Mr. Burgos suspected that the complaints were from tailings dam #8, which was currently in the berm building mode. Mr. Burgos stated that they had received a call from the construction crew on the previous morning that the winds were high and generating fugitive emissions from tailings dam #8. Mr. Burgos stated that the construction crew immediately stopped all activity and began to take additional steps to apply water and polymer to stabilize the areas generating fugitive emissions. Mr. Burgos stated that the mill manager had immediately authorized the use and implementation of additional polymer stabilizer to affected areas of tailings pile #8 to minimize fugitive emissions. Mr. Burgos showed the inspector the recorded windspeeds, measured in 15 minute maximums from ASARCO’s weather station showing the winds in excess of 25 mph around the mid-day period on October 20, 2009.

Physical Inspection of condition of Tailings Pile #8

The inspector proceeded with Mr. Burgos to the one of the observation points (T-5) identified in ASARCO’s Non-Point Source Monitoring Plan that is incorporated as part of ASARCO’S Air Quality Operating Permit. High winds were not present at the time of inspection. The inspector observed that the mill was using tailings dam #7 at the time and that tailings dam #7 was covered with moist tailings throughout a majority of the its top surface area (Attachment 2, Photo No. 1). Tailing dam #8 was not in use and dry on the surface and in berm-building mode. The inspector observed that a new berm had been constructed on the northeast and most of the north slope

of the tailings dam. The inspector observed the blue coloring of the new berm indicative of applied polymer soil stabilizer (Attachment 2, Photo No.'s 2-4). The inspector examined the stability of the north slope of the tailings dam and found the soils to be stable and encrusted (Attachment 2, Photo No.'s 5-6). The inspector observed that polymer had been applied along the inside top surface of the north berm (Attachment 2, Photo No. 7). The inspector did not observe any fugitive emissions or unstable conditions at the time of the inspection. The condition of the open surface of the tailings dam was observed to be relatively dry but encrusted and stable at the time of inspection.

The inspector returned to the ASARCO environmental offices with Mr. Burgos and obtained copies of recent biweekly observations of the tailings dams required by the non-point monitoring plan of the air quality permit.

II. DOCUMENT REQUEST

The inspector requested a written summary of the steps taken and controls implemented for tailings dam #8 on October 20, 2009, and weekly observations conducted during the berm building mode. Mr. Burgos stated he would send this information to the inspector.

III. REVIEW OF PERMIT CONDITIONS AND APPLICABLE REGULATIONS

To determine compliance with Air Quality Control Permit #2026, which has been issued to your facility, the following review of your permit conditions was performed. The design of this report is in a specific format to facilitate the reader's understanding of the inspection and compliance determinations. The results of the investigation are documented below under a "Findings" heading that is preceded by the applicable permit condition from your permit. Permit conditions transcribed directly from your permit are provided in a smaller size font for clarity.

Permit Condition(s):

Part "B, Section, I.C.3

No person shall cause, suffer, allow, or permit diffusion of visible emissions, including fugitive dust, beyond the property boundary line within which the emissions become airborne, without taking reasonably necessary and feasible precautions to control generation of airborne particulate matter. Sources may be required to cease temporarily the activity or operation which is causing or contributing to the emissions until reasonably necessary and feasible precautions are taken. [SIP Rule 343 and PCC 17.16.050.DI]

Part "B, Section, I.C.3.b

This subsection shall not apply when wind speeds exceed twenty-five (25) miles per hour (using the Beaufort Scale of Wind-Speed Equivalents, or as recorded by the National Weather Service). This exception does not apply if control measures have not been taken or were not commensurate with the size or scope of the emission source.

Part "B, Section, I.C.10

Mineral Tailings:

[This Is Not a Federally Enforceable Condition] [PCC 17.16.120]

a. The Permittee shall not cause, suffer, allow, or permit construction of mineral tailing piles without taking reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne. Reasonable precautions shall mean wetting by water trucks or other means, chemical stabilization, application of wet tailings (smearing), revegetation or such other measures as are approved by the Control Officer.

b. No person shall cause, suffer, allow, or permit construction of mineral tailings piles without taking reasonable precautions (i.e. wetting by watertruck or other means, chemical stabilization, application of wet tailings (smearing), or revegetation) to minimize and control dust emissions.

Part B, Section II.C.5.

Biweekly (every two weeks) monitoring of non-point source emissions from sources subject to I.C of this Part.

a. Within 180 days of the issuance of this permit, the Permittee shall submit a visual observation plan to be approved by the control officer. The observation plan shall identify a central lookout station or multiple observation points, as appropriate, from where the non-point sources shall be monitored. When multiple observation points are used, all the non-point sources associated with each observation point shall be specifically identified within the observation plan. Any changes to the observation plan originally approved by the control officer shall be made only with the prior approval of the control officer.

b. A certified Method 9 observer shall conduct a biweekly visual survey of visible emissions from the non-point sources, while they are in operation, in accordance with the observation plan. The Permittee shall keep a record of the name of the observer, the date on which the observation was made, and the results of the observation. The Permittee shall keep a record of the name of the observer, the date on which the observation was made, and the results of the observation.

Non-Point Source Monitoring Plan, Appendix A: Visual Observation Plan

This visual observation plan is written to comply with requirement II *Monitoring of Operations* (C) (5) of Attachment "B": Specific Conditions of the ASARCO Mission Complex Air Quality Permit No. 2026. In addition, this plan also covers the NSPS equipment per I.A.2, I.C.2 (open areas, roadways, streets, materials handling, storage piles and tailings) as well as II.C.1 (bi-weekly monitoring of process fugitives).

Non-point sources will be monitored bi-weekly using a visual survey by a certified Method 9 observer from strategic lookouts located throughout the Mission Complex Property. The lookout locations are identified (M-1, S-1, S-2, T-1, T-2, T-3, T-4 and T-5) on the accompanying Map (Figure 1-A). The visual survey will occur once in each two week time period, as close to a full two weeks between observations as possible. Each bi-weekly visual survey of emissions from non-point sources will be conducted, when the source is in operation, in accordance with this observation plan. The *Non-Point Source Visual Observation Checklist* (see attachment 1) will be used to record the name of the observer, the date of the observation, the result of the observation for each source and actions taken.

During the visual survey, if the Method 9 observer notices an emission from the source that on an instantaneous basis appears to exceed 20% opacity, the observer will, if feasible, take a six-minute Method 9 observation of the emissions using the *Visible Emission Observation Form* (see attachment 2). If the six-minute opacity reading exceeds 20%, then the observer will report the exceedance to the proper personnel. Responsible staff members will ensure that emission controls or equipment are adjusted or repaired accordingly to reduce the opacity to below 20%. Accordingly, responsible personnel will report the excess emission under Section XIII.B of PART A: "GENERAL PROVISIONS" of the permit. If the six-minute opacity reading of the emission is less than 20%, the observer will record the date, time of the reading, location, and result of the observation on the *Non-Point Source Visual Observation Checklist*.

The following conditions have been added to the Visual Observation Plan as agreed in ASARCO's response to the PDEQ Compliance Status Letter (CSL# PC 0310-185) dated January 9, 2004 and as a result of subsequent consultation with PDEQ. The following conditions only apply to any tailings dam in the berm building mode:

- Prior to the initiation of berm building, Asarco personnel will conduct an initial inspection of the tailings dam on which berm building will occur. The initial inspection will determine and document whether any portions of the tailings dam are drier than necessary for berm building and may reasonably result in dust emissions. If such areas are identified, Asarco personnel will identify and document an appropriate control strategy and will apply dust suppressant or water, as appropriate, to minimize the possibility of dust emissions. Asarco will notify PDEQ of the initial berm building inspection results, including any corrective measures that are to be taken.
- Asarco personnel will increase monitoring for dust emissions to once per week (or more as conditions require) following the protocol for the biweekly visual surveys conducted according to the Visual Observation Plan that was submitted to PDEQ on December 11, 2003. The increased monitoring frequency will only affect tailings dams in the berm building mode and will occur at the following observation points as necessary: a. T-1, b. T-2, c. T-3, d. T-4, e. T-5
- Asarco will increase the watering schedule beyond the required "two times per day" whenever increasing dusty conditions are noted during the "berm-building mode" of tailing impoundment construction.
- Each day that construction occurs after the construction has ceased for the day Asarco personnel will conduct an inspection of the disturbed areas of each tailings dam in the berm building mode to determine whether any disturbed portions of the tailings dam are dry and may reasonably result in dust emissions. If such areas are identified, Asarco personnel will apply dust suppressant or water, as appropriate, to minimize the possibility of dust emissions.

Findings:

Mr. Burgos informed the inspector that the dam construction crew notified the environmental department the morning of October 20, 2009, that the area was experiencing high winds and was causing dust emissions on Tailings dam #8. Mr. Burgos stated that dam construction activities were immediately ceased and the mine and crew began taking additional measures to stabilize the area and minimize fugitive dust emissions. Overtime labor was approved and two dedicated water trucks were mobilized to work on stabilizing the area. The mine provided documentation that a total of 9 totes of polymer totaling 22,500 gallons and an additional 24,000 gallons of water were sprayed to suppress and minimize dust emissions. The inspector examined the tailings dam and the tailings impoundment surface on October 21, 2009. The tailings dam along the north slope was observed to be encrusted and stabilized with polymer along the majority of the west and north slope up to the point of construction. The inspector observed that additional polymer had been applied on the top inner surface of the north side, where the tailings had been excavated to construct the tailings dam and vehicles drive to access the area. The tailings impoundment surface was relatively dry and flat and had a dry encrusted surface. A notification was sent to PDEQ on September 10, 2009, notifying that an initial inspection of Tailings Dam #8 was

conducted on September 10, 2009, and berm building was to be initiated on September 14, 2009, with an estimated construction time of 2.5 to 3 months.

Mr. Burgos provided the inspector with the bi-weekly monitoring results for the dates of September 21, 2009, and October 5, 2009, recorded on the Visual Observation Plan Checklist (Attachment 3). He also emailed the inspector on October 21, 2009, with requested information documenting the dust control actions taken on October 20, 2009, at tailings dam #8 (Attachment 4). Jamie Ekholm emailed the inspector a file on October 27, 2009, showing the dates and times of all observations made for the active period of berm building for tailings dam #8 (Attachment 5). The inspector sent a follow up email on December 2, 2009, to request verification of whether ASARCO had recorded weekly observations of tailings dam #8 during berm building mode from Points T-2 and T-5 recorded on the approved Visual Observation Plan Checklist as required by the Visual Observation Plan contained in ASARCO's Non-Point Source Monitoring Plan. Mr. Ekholm replied to the email on December 3, 2009, indicating that ASARCO has been recording weekly observations of tailings dam #8 from Point T-5 in the Environmental Engineer's notebook (Attachment 6). He provided that ASARCO's interpretation of the Visual Observation Plan has been that the protocol for biweekly visual observation surveys does not indicate where monitored results are recorded and that weekly observations are made only from Point T-5 because it provides the best view of the entire surface of tailings dam #8 because the plan states that monitoring will occur at observation points as necessary. The response indicates that ASARCO has not followed the Visual Observation Plan as required.

Deficiency:

ASARCO, LLC – Mission Complex failed to monitor for dust emissions from tailings dam #8 once per week from observation points T-2 and T-5 following the protocol for the bi-weekly visual surveys conducted in accordance with the Visual Observation Plan and required by Permit Condition Part “B” Section II.C.5.

IV. EXIT INTERVIEW

The inspector reviewed the findings of the site inspection with Mr. Burgos and stated that a compliance determination would be made after the findings were reviewed with PDEQ management.

V. COMPLIANCE SUMMARY

Upon review of the inspection results and compliance history for this source, PDEQ management determined that the facility will be issued an Opportunity to Correct for the above listed deficiency.

Attachments:

1. Notification of Inspection Rights Form
2. Inspection Photo Log
3. Documentation of VE Plan observations of Tailings Dam #8 on September 21, 2009, and October 5, 2009
4. October 21, 2009 E-mail from Arturo Burgos
5. October 27, 2009 E-mail with attachment from Jamie Ekholm
6. December 3, 2009 E-mail from Jamie Ekholm

ATTACHMENT 1
Notification of Inspection Rights Form



PIMA COUNTY DEPARTMENT OF ENVIRONMENTAL QUALITY

150 West Congress • Tucson • Arizona • 85701

PHONE (520) 740-3340 • FAX (520) 882-7709

NOTIFICATION OF INSPECTION RIGHTS

REGULATED PARTY INFORMATION

Regulated Party Asarco - Mission Complex Permit # 2026
Site Location W. Pima Mine Rd
Site Contact Arturo Burgos Phone 648-4589
Mailing Address

PDEQ INFORMATION

Inspector Name James M. Jones Phone 740-3341
Inspection Date 10/21/2009 Time 11:20 am
Accompanied by Arturo Burgos

INSPECTION RIGHTS

Upon entry to the premises, the Pima County Department of Environmental Quality (PDEQ) inspector(s) met with the regulated party, presented photo identification indicating that they are PDEQ employees and explained:

- The purpose of the inspection is to determine compliance with Air Quality Regulations or Pima County Code (PCC) Title 17. The inspection is being conducted pursuant to Arizona Revised Statutes §49-471 et seq. and PCC 17.20.050.
Inspection fee: \$0 or A portion of Activity Permit Fee or A portion of your annual emission fee
Regulated parties may accompany the PDEQ inspector(s) on the premises, except during confidential interviews.
Each person interviewed during the inspection will be informed that statements made by the person may be included in the inspection report.
The regulated party has the right to copies of any original documents taken by PDEQ during the inspection.
Each person whose conversation is tape-recorded will be informed that the conversation is being tape-recorded.
Administrative hearing rights to appeal an administrative order or permit decision that was made as a result of the inspection are set forth in Arizona Revised Statutes A.R.S. §49.511, 49.490, 49.496 and 49.497 et seq.

I have read this notification and discussed any questions or concerns with the PDEQ inspector(s).

X [Signature] Date: 10/21/09

refused to sign the Notification.

No authorized on-site representative is present at the facility.

***** NOTE: PDEQ inspectors may still proceed with the inspection even if Permittee declines to sign this form.*****

ATTACHMENT 2
Inspection Photo Log

Site Location:
ASARCO, LLC – Mission Complex
4201 W. Pima Mine Road

Photographer:
J. M. Jones

Camera:
Canon A620

Photo No. 1

Date: 10/21/2009

Photo Description:

View of the top surface of tailings dam #7 (as viewed from Point T-5 of the Visual Observation Plan). The dam is in use and wet and moist over most of the surface area.



Photo No. 2

Date: 10/21/2009

Photo Description:

View of the tailings dam #8. A new berm has been built on the west and north faces. The slopes are colored blue from the polymer stabilizer applied to the surface.



Photo No. 3	
Date: 10/21/2009	
Photo Description: View of the tailings dam #8. A new berm has been built on the west and north faces. The outer sides of the slopes are colored blue from the polymer stabilizer applied to the surface.	

Photo No. 4	
Date: 10/21/2009	
Photo Description: View of the tailings dam #8. A new berm has been built on the west and north faces. The outer sides of the slopes are colored blue from the polymer stabilizer applied to the surface.	

<p>Photo No. 5 a, b</p>	
<p>Date: 10/21/2009</p>	
<p>Photo Description:</p> <p>View of the polymer stabilized surface of the new outer slope along the north face of the new berm. The surface was observed to have been encrusted.</p>	<div> <p>a</p> </div> <div> <p>b</p> </div>

<p>Photo No. 6</p>	
<p>Date: 10/21/2009</p>	
<p>Photo Description:</p> <p>View of the top of the north berm (lower right).</p> <p>The inspector observed the surfaces of the new berm and tailings surface to be stable under wind conditions at the time of inspection.</p>	

Photo No. 7 a, b	
Date: 10/21/2009	
Photo Description: View of polymer stabilized areas on inner base of the north berm (blue). Bucket excavator at the present point of berm building.	<p>a</p>  <p>b</p> 

ATTACHMENT 3

Documentation of VE Plan observations of Tailings Dam #8 on September 21, 2009, and
October 5, 2009

ASARCO Mission Complex
Visual Observation Plan Checklist (Includes fugitives)

(revised 08/28/2007)

Weather Conditions (Temperature, Sky Conditions, etc.)
86°F, 37% FH mostly clear 79.5%

Observation	Dust Source ¹	Visual Survey			Method 9 Opacity (1)			Windspeed & Direction	Corrective Action Taken?
		<20%	>20%	Date	Time	Y/N	Date		
M-1	N/A if None Present	X		9/2/09	10:45	N		0-5 mph N	NA
	Concentrate Storage Area	X			10:45	N		0-5 mph N	NA
	Filler Plant and unpaired roadways	X			10:45	N		0-5 mph N	NA
	Moly Plant area, unpaired roadways & process fugitives	X			10:46	N		0-5 mph N	NA
	North Crusher Area, unpaired roadways & process fugitives	X			10:46	N		0-5 mph N	NA
	Secondary Crusher-Deposited Roads	X			10:47	N		0-5 mph N	NA
	*Process/Conveyor Fugitives (Method 9 Completed When Opacity is >10%)	X	(≥10%)		10:47	N		0-5 mph N	NA
	Unpaired Roads & process fugitives near Mission Mill	X			10:47	N		0-5 mph N	NA
	Warehouse yard, Maint. Shops & unpaired roadways	X			10:48	N		0-5 mph E	NA
	North slope of East & Pima rock dumps	X			10:48	N		0-5 mph E	NA
	East slopes of Pima, Min. Hill, and Ike rock dumps	X			10:50	N		0-5 mph E	NA
	S. Mills process fugitive areas	X			10:51	N		0-5 mph E	NA
	Unpaired roadways-Mission PII postmotor	X			10:51	N		0-5 mph E	NA
	Mission Mill coarse ore stockpile	X			10:51	N		0-5 mph E	NA
	Mission Primary Crusher	X			10:52	N		0-5 mph E	NA
S-1	N/A	X			10:52	N		0-5 mph E	NA
	S. Mills process fugitive areas	X			10:55	N		0-5 mph N	NA
	Unpaired roadways-Mission PII postmotor	X			10:56	N		0-5 mph N	NA
	Mission Mill coarse ore stockpile	X			10:56	N		0-5 mph N	NA
	Mission Primary Crusher	X			10:56	N		0-5 mph N	NA
	Top of Tailing Dam #4	X			10:57	N		0-5 mph N	NA
	Top of Tailing Dam #5	X			10:57	N		0-5 mph N	NA
S-2	N/A	X			10:57	N		0-5 mph N	NA
	South slope of East, Pima & Mineral Hill Dumps	X			10:21	N		0-5 mph NE	NA
	Top of Tailing Dam #6	X			10:19	N		0-5 mph NE	NA
	Top of Tailing Dam #7	X			10:19	N		0-5 mph NE	NA
	Top of Tailing Dam #4	X			9:45	N		0-5 mph NE	NA
T-1	N/A	X			9:45	N		0-5 mph NE	NA
	E. Slope of Tailing Dam # 4	X			9:45	N		0-5 mph NE	NA
	E. Slope of Tailing Dam # 7	X			9:47	N		0-5 mph NE	NA
T-2	N/A	X			9:47	N		0-5 mph NE	NA
	E. Slope of Tailing Dam # 7	X			9:50	N		0-5 mph NE	NA
	E. Slope of Tailing Dam # 8	X			11:03	N		0-5 mph E	NA
T-3	N/A	X			11:03	N		0-5 mph E	NA
	N. Slope of Tailing Dam # 4	X			9:58	N		0-5 mph E	NA
T-4	N/A	X			9:58	N		0-5 mph E	NA
	Top of Tailing Dam #6	X			9:59	N		0-5 mph E	NA
	N. Slope of Tailing Dam # 7	X			9:59	N		0-5 mph E	NA
	N. Slope of Tailing Dam # 8	X			9:59	N		0-5 mph E	NA
	South Slope East Dump	X			9:59	N		0-5 mph E	NA
T-5	N/A	X			9:59	N		0-5 mph E	NA
	Top of Tailing Dam #8	X			9:54	N		0-5 mph E	NA
	Top of Tailing Dam #7	X			9:54	N		0-5 mph E	NA
	N. Slope of Tailing Dam # 8	X			9:54	N		0-5 mph E	NA

Observer Name & Signature: Jemie Elchola Date: 9/2/09 Last Inspection Date: 9/8/09

Method 9 Certified Date: 9/9/09

(1) Method 9. If Method 9 needs to be completed, use additional form
Note: Any changes or corrections made to the information recorded on this form must be dated and initialed.

ASARCO Mission Complex
Visual Observation Plan Checklist (includes fugitives)

(revision 02/20/09)

Observation Point #	Observation	Date		Time	General Observations: (Conditions of Tailings/Actions Taken When Dust Present etc.)
M-1	Concrete Storage Area Floor Plant and unpaved roadways Moly Plant area, unpaved roadways & process fugitives North Crusher Area, unpaved roadways & process fugitives Secondary Crusher-Open-pit Road Process/Conveyor Fugitive Unpaved Roads & process fugitives near Mission Mill Warehouse yard, Mill, Shops & unpaved roadways North slope of East & Pinta rock dumps East slope of Pinta, Mo. Hill, and the rock dumps S. Mill process fugitives areas Unpaved roadways-Mission Pit reactor Mission Mill coarse ore stockpile Mission Primary Crusher S. Mill process fugitives areas Unpaved roadways-Mission Pit reactor Mission Mill coarse ore stockpile Mission Primary Crusher Top of Tailing Dam #4 Top of Tailing Dam #5 South slope of East, Pinta & Mineral Tail Dumps Top of Tailing Dam #6 Top of Tailing Dam #7 Top of Tailing Dam #8 E. Slope of Tailing Dam #4 E. Slope of Tailing Dam #7 E. Slope of Tailing Dam #8 N. Slope of Tailing Dam #4 Top of Tailing Dam #4 Top of Tailing Dam #6 N. Slope of Tailing Dam #7 N. Slope of Tailing Dam #8 South Slope East Dump Top of Tailing Dam #8 Top of Tailing Dam #7 N. Slope of Tailing Dam #8				
S-1					
S-2					
T-1		9/21	9:45		Top of TD #4 is wet/slumping water
T-2					
T-3					
T-4		9/21	9:57		NE/E section of TD #7 is wet/fresh tailings
T-5		9/21	9:59		beam buildings on west + north slopes - no dust/mist conditions.

Josiah E. Kuhn
Observer Name & Signature

9/21/09
Date
9/19/09
Method of Certification Date

ASARCO Mission Complex
Visual Observation Plan Checklist (Includes fugitives)

(revised 08/28/2007)

Weather Conditions (Temperature, Sky Conditions, etc.)
Cloudy > 75% RH 40% RH

Observation	Point #	Dust Source?	Visual Survey		Method 9 Opacity (1)			Windspeed & Direction	Corrective Action Taken?	
			<20%	>20%	Date	Time	Y/N			Date
Concentrate Storage Area Filter Plant and unpaired roadways Melt Plant area, unpaired roadways & process fugitives North Crusher Area, unpaired roadways & process fugitives Secondary Crusher-Unpaired Roads *Process/Conveyor Fugitives (Method 9 Completed When Opacity is >10%) Unpaired Roads & process fugitives near Mission Mill Warehouse yard, Maint. Shops & unpaired roadways North slope of East & Pima rock dumps East slopes of Pima, Min. Hill, and like rock dumps S. Mill & process fugitives areas Unpaired roadways-Mission Pit perimeter Mission Mill coarse ore stockpile. Mission Primary Crusher Mission Primary Crusher S. Mill & process fugitives areas Unpaired roadways-Mission Pit perimeter Mission Mill coarse ore stockpile. Mission Primary Crusher Top of Tailing Dam #4 Top of Tailing Dam #6 South slope of East, Pima & Minner Hill Dumps Top of Tailing Dam #6 Top of Tailing Dam #1 Top of Tailing Dam #4 Top of Tailing Dam #4 E. Slope of Tailing Dam #4 E. Slope of Tailing Dam #7 E. Slope of Tailing Dam #9 N. Slope of Tailing Dam #4 Top of Tailing Dam #4 Top of Tailing Dam #6 N. Slope of Tailing Dam #1 N. Slope of Tailing Dam #6 South Slope East Dump Top of Tailing Dam #8 Top of Tailing Dam #1 N. Slope of Tailing Dam #8	M-1	N/A if None Present			10/15/09	11:04	N		10-15 mph SW	NA
						11:05	N		10-15 mph SW	NA
						11:05	N		10-15 mph SW	NA
						11:06	N		10-15 mph SW	NA
						11:06	N		10-15 mph SW	NA
						11:07	N		10-15 mph SW	NA
						11:07	N		10-15 mph SW	NA
						11:08	N		10-15 mph SW	NA
						11:08	N		10-15 mph SW	NA
						11:09	N		10-15 mph SW	NA
S-1					11:09	N		10-15 mph SW	NA	
					11:09	N		10-15 mph SW	NA	
					10:53	N		10-15 mph SW	NA	
					10:51	N		10-15 mph SW	NA	
					10:51	N		10-15 mph SW	NA	
					10:52	N		10-15 mph SW	NA	
					10:52	N		10-15 mph SW	NA	
					10:55	N		5-10 mph SW	NA	
					10:55	N		5-10 mph SW	NA	
					9:58	N		0-5 mph SW	NA	
T-1					9:58	N		0-5 mph SW	NA	
					10:03	N		0-5 mph SW	NA	
					10:03	N		0-5 mph SW	NA	
					11:20	N		10-15 mph SW	NA	
					10:13	N		5-10 mph SW	NA	
					10:13	N		5-10 mph SW	NA	
					10:13	N		5-10 mph SW	NA	
					10:13	N		5-10 mph SW	NA	
					10:07	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
T-2					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
T-3					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
T-4					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
T-5					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	
					10:08	N		5-10 mph SW	NA	

Observer Name & Signature: Jamie Eichler Date: 10/15/09
 Last Inspection Date: 9/2/07
 Method 9 Certified Date: 9/9/09

(1) Method 9. If Method 9 needs to be completed, use additional form

Note: Any changes or corrections made to the information recorded on this form must be dated and initialed.

ATTACHMENT 4
October 21, 2009 E-mail from Arturo Burgos

James Jones

From: Burgos, Arturo [ABurgos@asarco.com]
Sent: Wednesday, October 21, 2009 3:40 PM
To: James Jones
Subject: Mission Mine-Corrective Actions
Attachments: Dust Conditions1.ppt

James;

As indicated to you yesterday between 10:30 AM and 5:00 PM we had a windy situation within the Mission Mine area. Hi Wind speeds were recorded in the upper 20 mph. To ensure compliance with regulatory requirements and Mission Mine Best management Practices, the following was implemented.

- Berm building activities on Tailing # 8 were immediately stopped.
- Mission Mine General manager was updated on the windy situation and got his approval for overtime labor to ensure that the sources generating dust within Tailing # 8 were properly addressed
- Immediately mobilized two dedicated water trucks to the area.
 - A total of 9 totes of polymer were applied in the area for a total usage of 22500 gallons
 - Additionally, 24000 gallons of water were sprayed to suppress dust conditions

The enclosed photographic record (presentation) illustrates the corrective actions implemented. I put together the photographic record in four separate files to ensure you get it (it is very big to send it in one single file). Therefore, you will be receiving three additional mails. Please let me know if you have any question or need additional information

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Berm Building Area. North side of Tailing # 8.
Berm building stopped



On top of Tailing # 8. looking West.
Dusty conditions generated by the water truck



On top of Tailing # 8. Looking SW



On top of Tailing # 8. Looking SW



On top of Tailing # 8. Water being applied to areas suspect to generate dust



On top of Tailing # 8. Water being applied to areas suspect to generate dust



On top of Tailing # 8. Water being applied to areas suspect to generate dust



On top of Tailing # 8. Water being applied to areas suspect to generate dust



On top of Tailing # 8. Water being applied to areas suspect to generate dust

ATTACHMENT 5

October 27, 2009 E-mail with attachment from Jamie Ekholm

James Jones

From: Ekholm, Jamie [JEkholm@asarco.com]
Sent: Tuesday, October 27, 2009 3:20 PM
To: James Jones
Cc: Burgos, Arturo
Subject: Asarco Mission - TD #8 Berm Building Observations
Importance: High
Attachments: Tailings Impoundment #8 Weekly Biweekly Observations.doc

Mr. Jones,

I have attached a file showing the dates and times of all observations made for berm building on Asarco Mission's Tailings Dam #8. The observations for #8 are shown from 9/08/09 until today, 10/27/09. I hope that you find this information satisfactory.

If you have any further questions, please do not hesitate to contact myself or Arturo Burgos.

Thank you,

Jamie

Jamie Ekholm
Environmental Engineer
ASARCO LLC, Mission Complex
4201 West Pima Mine Road
Sahuarita, Arizona 85629
Tel: 520-393-4671
Fax: 520-648-0802

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Tailings Impoundment #8 Visual Observations

9/8/09 – 9:49 AM – Bi-weekly observations.

9/10/09 – 1:30 PM – Sent notification to Pima County DEQ regarding berm building on TD #8. Construction should take 2.5 to 3 months.

9/15/09 – 11:30 AM – Observed berm building on the west side of TD #8. Tailings material is very moist. No dust observed.

9/21/09 – 9:54 AM – Bi-weekly observations.

9/24/09 – 1:25 PM – Observed berm building on TD #8. No dust observed (from VOP Point T-5). Polymer truck spraying berm with polymer. Temp approx. 85F. Clear 100%. Winds ESE 0-5 mph.

9/30/09 – 11:00 AM – Out with contractor (Kleinfelder) near VOP Point T-5. No dust observed on TD #8. Winds were gusty at 10 to 15 mph from the SW.

10/1/09 – 10:45-10:51 AM – Monthly Opacity Performance Test for TD #8. No dust observed (0% opacity over 6 minutes). Temp 83F. Skies clear >95%. Winds ESE 0-5 mph. Observation taken from SE corner of TD #8 (top of berm) with sun at back.

10/5/09 – 10:07 AM – Bi-weekly observations.

10/7/09 – 1:15 PM – Observed berm building on TD #8 (north wall). No dust observed. Polymer truck spraying down new berm section. Skies P. cloudy <30%. Temp approx. 85F. Winds WNW 0-5 mph.

10/12/09 – 1:17 PM – Observed berm building on north side of TD #8. No dust observed. P. cloudy approx. 35% Temp approx. 85F. Winds ESE 0-5 mph.

10/21/09 – 9:14 AM – Bi-weekly observations.

10/27/09 – 1:10 PM – From VOP observation point T-5 observed top of TD #8. Winds from the SSW. Minimal dust from tailings. Some dust coming from polymer trucks as they drive off the impoundment. No berm building taking place. At 1:14 PM no dust observed. Winds are strong +15 mph with gusts 35 mph. At 1:18 PM noticed small amount of dust coming off area where polymer trucks just drove over. Quickly dissipates.

ATTACHMENT 6
December 3, 2009 E-mail from Jamie Ekholm

James Jones

From: Ekholm, Jamie [JEkholm@asarco.com]
Sent: Thursday, December 03, 2009 2:08 PM
To: James Jones
Cc: Burgos, Arturo; Dustin Fitzpatrick
Subject: RE: Inspection Inquiry and Document Request
Importance: High

Dear Mr. Jones,

Please see Asarco's response to your e-mail of December 2nd regarding weekly observations for tailings dam #8 in the berm building mode below. Please call me if you have any questions.

Jamie Ekholm

PDEQ is preparing an Opportunity to Correct identifying deficiencies observed from the complaint investigations and site inspections conducted on October 21, and October 27, 2009. PDEQ is sending this E-mail to inquire about the weekly observations for tailings dam #8 during berm building mode.

You provided an E-mail with a summary of weekly and bi-weekly observations on October 27, 2009, in response to a request for documentation made for Tailings dam #8. The Visual Emission Observation Plan states that ASARCO will increase monitoring to once per week (or more as conditions require) following the protocol for the bi-weekly surveys, using the visual observation checklist form, at the relevant observation points T1-T5 (T2 and T5 are relevant observation points for tailings dam #8) during berm building mode. Below I have pasted in the relevant sections contained in the Visible Observation Plan (Appendix A), as incorporated in the current Non-Point Source Monitoring Plan:

Asarco personnel will increase monitoring for dust emissions to once per week (or more as conditions require) following the protocol for the biweekly visual surveys conducted according to the Visual Observation Plan that was submitted to PDEQ on December 11, 2003. The increased monitoring frequency will only affect tailings dams in the berm building mode and will occur at the following observation points as necessary:

- a. T-1
- b. T-2
- c. T-3
- d. T-4
- e. T-5

Each bi-weekly visual survey of emissions from non-point sources will be conducted, when the source is in operation, in accordance with this observation plan.

The *Non-Point Source Visual Observation Checklist* (see attachment 1) will be used to record the name of the observer, the date of the observation, the result of the observation for each source and actions taken.

In reviewing the file attached to your October 27 E-mail, I observed that the inspections other than those identified as bi-weekly were not provided in the form of the Non-Point Visual Observation Checklist. Also the observations noted your file do not include any references or results of observations made from the T-2 observation point (east slope of tailings dam #8).

ASARCO RESPONSE:

12/4/2009

*Asarco interprets the requirement of the Visual Observation Plan (VOP) for tailings dams in the berm building mode, as requiring weekly **monitoring following the protocol for the biweekly visual observation surveys**, and not to where the monitored results are recorded. The results of the weekly observations are noted in the Environmental Engineer's notebook. The data on weekly monitoring results provided in my October 27th e-mail to you were from this notebook.*

The observations noted in the file do not reference observations made from the T-2 observation point (east slope of tailings dam #8) because from our experience in implementing the VOP over many years this observation point does not give the best view of the entire surface of tailings dam #8. Because of its location, (the SE corner of tailings dam #7) the view is generally only of the north face and north east corner of tailings dam #8, both of which are observable from T5. From T2 you are not able to view the east slope of tailings dam #8 due to the fact that tailings dam #7 sits further to the west than tailings dam #8.

As a matter of fact, it is our experience observation point T2 does not give the best overall view of tailings dam #8. Therefore, all observations were taken at observation point T5. In fact, the excess emissions that I noted on October 27th were first viewed from T5 (the emissions on this date and on the 21st originated from the surface of tailings dam #8).

*Finally, the VOP states that "increased monitoring frequency will only affect tailings dams in the berm building mode and will occur at the following observation points **as necessary**."*

ASARCO RESPONSE:

As noted in the prior response, weekly observations are recorded in the Environmental Engineer's notebook not on the bi-weekly VOP checklist forms. Also, for the reason explained in the prior response, observations were made only from T5. They are recorded in the Environmental Engineer's notebook and were provided in the October 27 e-mail file.

However, Asarco is willing to record the weekly observations in a format similar to the VOP checklist form. We are of the view that these records should be kept separate from the biweekly observations, as they cover much more than tailings dams in the berm building mode.

From: James Jones [mailto:James.Jones@deq.pima.gov]
Sent: Wednesday, December 02, 2009 1:37 PM
To: Ekholm, Jamie
Cc: Burgos, Arturo; Dustin Fitzpatrick
Subject: Inspection Inquiry and Document Request
Importance: High

Dear Mr. Ekholm,

PDEQ is preparing an Opportunity to Correct identifying deficiencies observed from the complaint investigations and site inspections conducted on October 21, and October 27, 2009. PDEQ is sending this E-mail to inquire about the weekly observations for tailings dam #8 during berm building mode.

You provided an E-mail with a summary of weekly and bi-weekly observations on October 27, 2009, in response to a request for documentation made for Tailings dam #8. The Visual Emission Observation Plan states that ASARCO will increase monitoring to once per week (or more as conditions require) following the protocol for the bi-weekly surveys, using the visual observation checklist form, at the relevant observation points T1-T5 (T2 and T5 are relevant observation points for tailings dam #8) during berm building mode. Below I have pasted in the relevant sections contained in the Visible Observation Plan

(Appendix A), as incorporated in the current Non-Point Source Monitoring Plan:

Asarco personnel will increase monitoring for dust emissions to once per week (or more as conditions require) following the protocol for the biweekly visual surveys conducted according to the Visual Observation Plan that was submitted to PDEQ on December 11, 2003. The increased monitoring frequency will only affect tailings dams in the berm building mode and will occur at the following observation points as necessary:

- a. T-1
- b. T-2
- c. T-3
- d. T-4
- e. T-5

Each bi-weekly visual survey of emissions from non-point sources will be conducted, when the source is in operation, in accordance with this observation plan.

The *Non-Point Source Visual Observation Checklist* (see attachment 1) will be used to record the name of the observer, the date of the observation, the result of the observation for each source and actions taken.

In reviewing the file attached to your October 27 E-mail, I observed that the inspections other than those identified as bi-weekly were not provided in the form of the Non-Point Visual Observation Checklist. Also the observations noted your file do not include any references or results of observations made from the T-2 observation point (east slope of tailings dam #8).

PDEQ is inquiring if the weekly observations of tailings dam #8 during berm building mode have been recorded on the Non-Point Visual Observation Checklist forms (including observations from both points # T2 & T5), and requesting copies of these records if available.

Sincerely,

**James M. Jones
Civil Engineering Assistant
Pima County DEQ
Air Program
(520) 740-3340**



PIMA DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR PROGRAM

150 W CONGRESS STREET
TUCSON, ARIZONA 85701-1317
PHONE (520) 740-3340 FAX (520) 882-7709
www.deq.pima.gov

Complaint Investigation Report

Tracking ID: PC0910-122

Permit #: 2026

Source: ASARCO, LLC - Mission Complex

Location: 4201 W. Pima Mine Road, Sahuarita, AZ

Date: 10/27/2009

Spoke With: James Churgovich,

Arrival Time: 2:58 PM

Arturo Burgos,

Departure Time: 5:45 PM

Jamie Ekholm

Inspector: James Jones

Phone #: (520) 648-4588

Reason for Inspection: Complaint of dust being generated from mine at the southwest corner of Sahuarita and I-19.

Compliance Status: Non-Compliant

I. INSPECTION NARRATIVE

The Pima County Department of Environmental Quality (PDEQ) received multiple complaints on October 27, 2009, between 10:30 am and 4:20 pm describing fugitive particulate emissions in the area southwest of Sahuarita Road and I-19. The inspector investigated similar complaints on October 20, 2009, and had observed that the surface of tailings dam #8 at the ASARCO, LLC – Mission Complex was dry and the dam was in berm building mode that began on September 14, 2009. The inspector drove to the intersection of Sahuarita Road and La Canada Drive.

Upon arriving at the complaint location the inspector observed fugitive particulate emissions from tailings dam #8 (Attachment 1, Photo No's 2-4). The inspector observed that the excavator on top of the tailings dam was not operating. Between 2:58 pm and 3:00 pm the inspector observed fugitive particulate matter emissions along the edge of the east slope of tailings dam #8 that appeared to be swept by the winds from the top of the dam across Helmet Peak Road. The inspector's viewing position was not at a proper angle in relation to the sun location to perform a Method 9 Visible Emission evaluation (VE). The inspector measured the windspeed to be 12 mph average, 17 mph maximum, and direction from the southwest at the time of the observation.

The inspector drove west on Helmet Peak Road to get a better vantage looking east that would provide an acceptable angle to perform a VE. The inspector observed that the sun was at an acceptable angle for a VE, but not ideal for the observation of emissions over the east slope of the tailings dam (Attachment 1, Photo 5). The inspector measured the windspeed to be 7 mph average, 16mph maximum, and direction from the southwest at the time of the observation. The inspector performed a VE (Attachment 2). The opacity was measured to be 0.6% between 3:21 pm and 3:27 pm at the time of the observation.

Next, the inspector continued offsite observations before proceeding to the mine offices on Pima Mine Road. The inspector drove to the overpass of Sahuarita Road and I-19 and pulled over and observed a fugitive particulate emission plume in the direction of a tailings dam northwest of

tailings dam #8 (Attachment 1, Photo No. 7).

Site Entry

The inspector went to the offices of the mine at the end of Pima Mine Road and proceeded to the front gate and asked to see a management representative to conduct an on-site inspection of tailings dam #8. The inspector observed that there was a shift change at the mill and employees were leaving. The front gate person called Mr. Arturo Burgos, Senior Environmental Engineer with the mine, by phone. The inspector spoke to Mr. Burgos and summarized the complaint and desire to do an on-site inspection. Mr. Burgos indicated that he was at home for the day and would arrange to have Jamie Ekholm or someone else meet the inspector to continue the inspection and observations. The inspector was met at the front gate by James Churgovich, an Engineer with the mine. Mr. Churgovich signed the Notification of Inspection Rights Form (Attachment 3) and stated that Mr. Jamie Ekholm had left the mill a few minutes earlier and was returning to meet the inspector. Mr. Churgovich asked if the inspector could wait 10 minutes for Mr. Ekholm's return, as he was more familiar with the air quality permit and tailings dam operations. The inspector agreed to wait. The inspector continued the on-site inspection of tailings dam #8 with Mr. Ekholm after his arrival.

The inspector went with Mr. Ekholm to the observation area at the southeast corner of tailings dam #6 (Point T-5 of the Visual Observation Plan) overlooking tailings dam #8, arriving around 4:55 pm. The inspector measured the windspeed at 18 mph average, 24 mph maximum, and direction from the southwest. The inspector did not observe any significant fugitive dust emission plumes from the surface of tailings dam #7 or #8 from this observation area at that time (Attachment 1, Photo No.'s 8-10). The inspector requested to be escorted to the top southeast side of tailings dam #8.

At the base of the upper east slope of tailings dam #8, the inspector observed tailings particulates strewn on the surface of the slope from fugitive emissions carried over the edge from the top surface of the tailing impoundment (Attachment 1, Photo No.11). The inspector observed the dam surface of the east slope to be relatively stable and encrusted. The inspector walked up the slope with Mr. Ekholm to the top of the tailings impoundment and observed the top surface from the southeast side around 5:15 pm (Attachment 1, Photo No. 12). The inspector observed that selective areas on the inside perimeter of tailings dam #8 had a blue green color indicating that polymer had been strategically applied to areas of the tailings dam. The inspector measured an average windspeed of greater than 25 mph and increasing at that time and observed across the top surface that there were relatively light particulate emissions sporadically generated from the top surface by the action of the winds. No significant fugitive particulate plumes were observed at that time. A layer of light colored particulate matter could be seen on the east access road of tailing dam #8, which appeared to have been carried by winds from the surface of the tailing impoundment (Attachment 1, Photo No. 13).

The inspector sat down on the top of the east slope of the tailings dam to conduct a VE, as the wind speed was high enough to affect the footing of the inspector. The wind speed recorded at the beginning of the VE was measured at 30 mph average and at the completion of the VE was 35 mph average as measured with assistance from Mr. Ekholm who was measuring windspeed with a Kestrel wind meter. During the VE, plumes of fugitive particulates generated from the

inner impoundment surface area were observed by the inspector as they crossed the east slope of the dam. The opacity was measured to be an average 29.8 % between 5:24 and 5:31 pm (Attachment 4).

II. REVIEW OF PERMIT CONDITIONS AND APPLICABLE REGULATIONS

To determine compliance with Air Quality Control Permit #2026, which has been issued to your facility, the following review of your permit conditions was performed. The design of this report is in a specific format to facilitate the reader's understanding of the inspection and compliance determinations. The results of the investigation are documented below under a "Findings" heading that is preceded by the applicable permit condition from your permit. Permit conditions transcribed directly from your permit are provided in a smaller size font for clarity.

Permit Condition(s):

Part "B", Section, I.C.2

No person shall cause or permit the effluent from a single emission point, multiple emission points, or fugitive emissions source to have an average optical density greater than 20 percent subject to the following provisions: [SIP Rule 321, PCC 17.16.040, and PCC 17.16.050.B]

- a. Opacities (optical densities) of an effluent shall be measured by a certified visible emissions evaluator with his natural eyes, approximately following the procedures which were used during his certification, or by an approved and precisely calibrated in-stack monitoring instrument.
- b. A violation of an opacity standard shall be determined by measuring and recording a set of consecutive, instantaneous opacities, and calculating the arithmetic average of the measurements within the set unless otherwise noted herein. The measurements shall be made at approximately fifteen-second intervals for a period of at least six minutes, and the number of required measurements shall be 25. Sets need not be consecutive in time, and in no case shall two sets overlap. If the average opacity of the set of instantaneous measurements exceeds the maximum allowed by any rule, this shall constitute a violation.

Findings:

During an on-site inspection of tailings dam #8, the inspector performed a Method 9 VE on the east slope between 5:24 pm and 5:31 pm. During the VE, a plume of fugitive particulates generated from the tailings surface was observed crossing the east slope of the tailings impoundment. The average opacity of the fugitive emission plume was determined to be 29.8%.

Deficiency:

ASARCO, LLC - Mission Complex caused fugitive dust emissions from tailings dam #8 to have an average optical density greater than 20 percent, as prohibited by Permit Condition Part B" Section I.C.2, Pima County Code(PCC) 17.16.040.A and PCC17.16.050.B.

III. EXIT INTERVIEW

The inspector reviewed the findings of the site inspection with Mr. Ekholm and stated that a compliance determination would be made after the findings were reviewed with PDEQ management.

IV. COMPLIANCE SUMMARY

Upon review of the inspection results and compliance history for this source, PDEQ management determined that the facility will be issued an Opportunity to Correct for the above listed deficiency.

Attachments:

1. Inspection Photo Log
2. Notification of Inspection Rights Form
3. EPA Visible Emission Observation Form #1, 3:21 pm
4. EPA Visible Emission Observation Form #2, 5:24 pm

ATTACHMENT 1
Inspection Photo Log

Site Location: ASARCO, LLC - Mission Complex 4201 W. Pima Mine Road	Photographer: J. M. Jones	Camera: Canon A620
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<p>Photo No. 1 a,b,c</p>	
<p>Date: 10/27/2009</p>	
<p>Photo Description:</p> <p>View of fugitive dust conditions observed while driving to the intersection of Helmet Peak Road and La Canada Drive between 2:35 pm and 2:55 pm.</p> <p>This is a view of fugitive particulate matter from the tailings dams north of Pima Mine Road and west of I-19.</p> <p>Windspeed was measured at 2:45 pm at 14 mph average, maximum 23 mph from the south/southwest.</p>	

<p>Photo No. 2</p>	
<p>Date: 10/27/2009</p>	
<p>Photo Description:</p> <p>View of fugitive particulate matter conditions along Helmet Peak Road at tailings dam #8 at 2:58 pm at the intersection of La Canada Drive and Helmet Peak Road.</p> <p>Windspeed were measured to be 12 mph average, 17 mph maximum at the time and location of observation from the south/southwest.</p>	

<p>Photo No. 3</p>	
<p>Date: 10/27/2009</p>	
<p>Photo Description:</p> <p>View fugitive particulate matter emissions from tailings tam #8 between 2:58 pm and 3:00 pm at the intersection of La Canada Drive and Helmet Peak Road.</p> <p>Fugitive particulate matter was observed crossing the property boundary along Helmet Peak Road.</p> <p>Windspeed and direction was measured to be 12 mph average, 17 mph maximum at the time and location of the observation from the south/southwest.</p>	

<p>Photo No. 4</p>	
<p>Date: 10/27/2009</p>	
<p>Photo Description:</p> <p>View fugitive particulate matter emissions from tailings tam #8 between 2:58 pm and 3:00 pm at the intersection of LaCanada Drive and Helmet Peak Road.</p> <p>Windspeed and direction was measured to be 12 mph average, 17 mph maximum at the time and location of the observation from the south/southwest.</p>	

<p>Photo No. 5</p>	
<p>Date: 10/27/2009</p>	
<p>Photo Description:</p> <p>View of northeast corner of tailings dam #8 looking southeast on Helmet Peak Road at 3:22 pm. A Method 9 VE reading was taken from this location (see Attachment #2).</p> <p>The windspeed was measured to be 7 mph average and 16mph maximum with a direction from the southwest at the time of the observation.</p>	

<p>Photo No. 6</p>	
<p>Date: 10/27/2009</p>	
<p>Photo Description:</p> <p>View of northeast corner of tailings dam #8 looking south at 3:38 pm.</p>	

<p>Photo No. 7</p>	
<p>Date: 10/27/2009</p>	
<p>Photo Description:</p> <p>View of fugitive particulate matter plume observed at 3:41 pm from the Sahuarita Road/ I-19 overpass looking northwest. The plume is north of tailings dam #8.</p>	

<p>Photo No. 8</p>	
<p>Date: 10/27/2009</p>	
<p>Photo Description:</p> <p>View of the northeast corner of the top of tailings impoundment #8 from the southeast corner of tailings impoundment #6 (Point T-5 of Visual Observation Plan) at 4:56 pm.</p> <p>Windspeed was measured to be 18 mph average, 24 mph maximum at the time of the observation with direction from the southwest.</p> <p>No fugitive emissions were observed at the time of the observation.</p>	

<p>Photo No. 9</p>	
<p>Date: 10/27/2009</p>	
<p>Photo Description:</p> <p>View of the central area of the top of tailings impoundment #8 from the southeast corner of tailings impoundment #6 (Point T-5 of Visual Observation Plan) at 4:54 pm.</p> <p>Windspeed was measured to be 18 mph average, 24 mph maximum at the time of the observation with direction from the southwest.</p> <p>No fugitive emissions were observed at the time of the observation.</p>	

<p>Photo No. 10</p>	
<p>Date: 10/27/2009</p>	
<p>Photo Description:</p> <p>View of the south west area of the top of tailings impoundment #8 from the southeast corner of tailings impoundment #6 (Point T-5 of Visual Observation Plan) at 4:54 pm.</p> <p>Windspeed was measured to be 18 mph average, 24 mph maximum at the time of the observation with direction from the southwest.</p> <p>No fugitive emissions were observed at the time of the observation.</p>	

<p>Photo No. 11</p>	
<p>Date: 10/27/2009</p>	
<p>View of the east slope of the upper tailings dam of tailings dam #8, where the inspector accessed the top of the dam to make observations.</p> <p>Coarser tailings particulates were observed on the slope surface carried over from emissions from the top surface.</p>	

<p>Photo No. 12</p>	
<p>Date: 10/27/2009</p>	
<p>Photo Description:</p> <p>View of the top of the #8 tailings surface as observed from the southeast side at 5:15 pm.</p> <p>Fugitive particulate emissions were observed sporadically generated from a few areas of top of the impoundment surface on the areas to the southwest.</p> <p>The windspeed was measured to be 25 mph average with a 29 mph maximum and direction from the southwest.</p>	

<p>Photo No. 13</p>	
<p>Date: 10/27/2009</p>	
<p>Photo Description:</p> <p>View of the top of the tailings #8 before taking Method 9 VE.</p> <p>Light colored particulate matter observed on east side access road deposited by wind from surface of tailings dam #8.</p>	

<p>Photo No. 14</p>	
<p>Date: 10/27/2009</p>	
<p>Photo Description:</p> <p>View of the fugitive particulate emissions from the top of the tailings #8 impoundment surface blowing across the east slope at 5:33 pm.</p> <p>A Method 9 VE was taken of emissions at this location. The emissions were determined to have an average of 29.8 % opacity.</p>	

ATTACHMENT 2
Notification of Inspection Rights Form



PIMA COUNTY DEPARTMENT OF ENVIRONMENTAL QUALITY

150 West Congress • Tucson • Arizona • 85701

PHONE (520) 740-3340 • FAX (520) 882-7709

NOTIFICATION OF INSPECTION RIGHTS

REGULATED PARTY INFORMATION

Regulated Party Asarco - Mission Complex Permit # 2026
Site Location 4201 W. Pima Mine Rd.
Site Contact Phone 528-4588
Mailing Address Same

PDEQ INFORMATION

Inspector Name Jones Phone 740-3341
Inspection Date 10/27/2009 Time 3:50 pm
Accompanied by JAMES CHURGOVICH

INSPECTION RIGHTS

Upon entry to the premises, the Pima County Department of Environmental Quality (PDEQ) inspector(s) met with the regulated party, presented photo identification indicating that they are PDEQ employees and explained:

- The purpose of the inspection is to determine compliance with Air Quality Regulations or Pima County Code (PCC) Title 17. The inspection is being conducted pursuant to Arizona Revised Statutes §49-471 et seq. and PCC 17.20.050.
Inspection fee: \$ 0 or A portion of Activity Permit Fee or X A portion of your annual emission fee
Regulated parties may accompany the PDEQ inspector(s) on the premises, except during confidential interviews.
Each person interviewed during the inspection will be informed that statements made by the person may be included in the inspection report.
The regulated party has the right to copies of any original documents taken by PDEQ during the inspection. A split of any samples taken during the inspection if the split of any samples would not prohibit an analysis from being conducted or render an analysis inconclusive. Copies of any documents will be provided at PDEQ expense.
Each person whose conversation is tape-recorded will be informed that the conversation is being tape-recorded.
Administrative hearing rights to appeal an administrative order or permit decision that was made as a result of the inspection are set forth in Arizona Revised Statutes A.R.S. §49.511, 49.490, 49.496 and 49.497 et seq. Rights relating to an appeal of a final agency decision are found in A.R.S. §49.480.02 and 49.482 et seq.

I have read this notification and discussed any questions or concerns with the PDEQ inspector(s).
Date: 28 OCT 09
refused to sign the Notification.
No authorized on-site representative is present at the facility.

***** NOTE: PDEQ inspectors may still proceed with the inspection even if Permittee declines to sign this form.*****

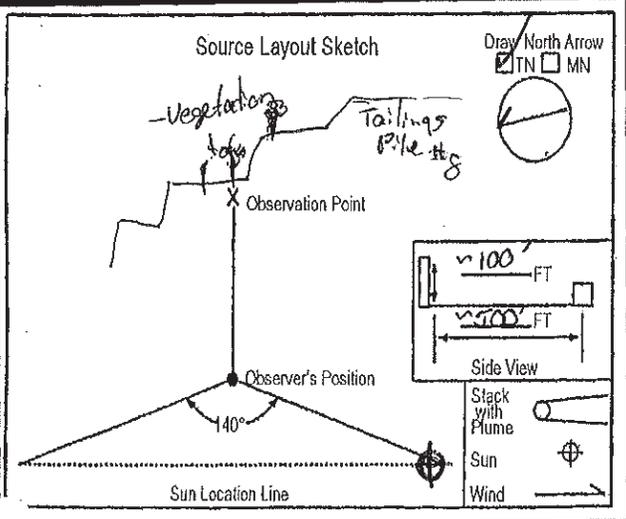
ATTACHMENT 3
EPA Visible Emission Observation Form #1, 3:21 pm

**EPA METHOD 9 (40 CFR 60 - Appendix A)
VISIBLE EMISSION OBSERVATION FORM**

COMPANY NAME ASARCO - Mission Complex Permit <u>2026</u>		
LOCATION 5 Helmet Peak Rd, Tailings Pile #8		
LOCATION		
CITY Sahuarita	STATE AZ	ZIP 85629
PROCESS EQUIPMENT ①	OPERATING MODE High Winds	
CONTROL EQUIPMENT Prior Application of Water + Polymer dust Supp.	OPERATING MODE Berm Building	
DESCRIBE EMISSION POINT Fugitive Dust sweeping from top over northeast corner		
HEIGHT OF EMISSION POINT ~120'	HEIGHT OF EMISSION POINT RELATIVE TO OBSERVER START ~120' END ~120'	
DISTANCE TO EMISSION POINT	DIRECTION TO EMISSION PT. (DEGREES 0-360))	
START 500' END 500'	START 100° END 100°	
VERTICAL ANGLE TO OBSERVATION POINT	DIRECTION TO OBSERVATION POINT (DEGREES 0-360))	
START 13.5° END 13.5°	START 100° END 100°	
DISTANCE & DIRECTION TO OBSERVATION POINT FROM EMISSION POINT		
START 100' @ 45° END 100' @ 45°		
DESCRIBE EMISSIONS Faint fugitive dust		
START	END same	
EMISSION COLOR Whit/Tan	WATER DROPLET PLUME	
START	END	
DESCRIBE PLUME BACKGROUND Tree/Bush		
START	END Tree Bush	
BACKGROUND COLOR Dark Green	SKY CONDITIONS Partly Cloudy	
START	END same	
WIND SPEED 7 Avg	WIND DIRECTION	
START	END West	
AMBIENT TEMP 75	WET BULB TEMP RH percent	
START	END 75	

OBSERVATION DATE 10/27/2009	START TIME 3:21	END TIME 3:27
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MIN	SEC				COMMENTS
	0	15	30	45	
1	0	10	0	0	
2	0	0	0	0	
3	0	0	0	5	
4	0	0	0	0	
5	0	0	0	0	
6	0	0	0	0	
7	0				Opacity = 0.6
8					AVG
9					Note:
10					See attached photos
11					taken before + after
12					
13					
14					
15					
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30					



OBSERVER'S NAME (PRINT) James M. Jones	DATE 10/27/2009
OBSERVER'S SIGNATURE <i>James M. Jones</i>	DATE 10/27/2009
ORGANIZATION Pima County DEQ	
CERTIFIED BY Arizona Smoke School, LLC	DATE 9/18/2009

ADDITIONAL INFORMATION
① Berm building mode - activity suspended due to forecast of high winds.

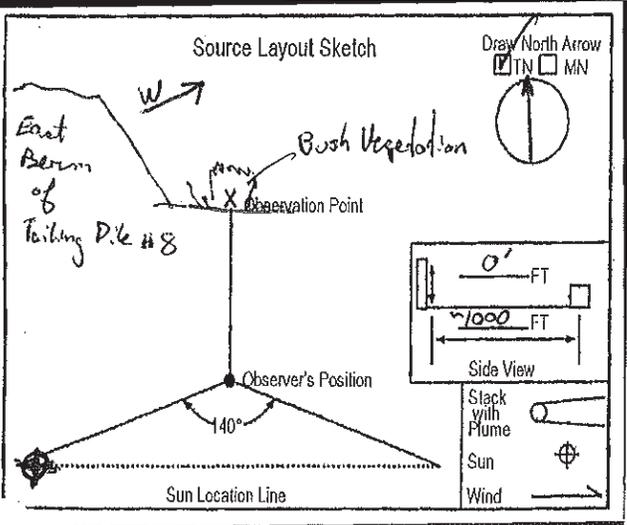
ATTACHMENT 4
EPA Visible Emission Observation Form #2, 5:24 pm

**EPA METHOD 9 (40 CFR 60 - Appendix A)
VISIBLE EMISSION OBSERVATION FORM**

COMPANY NAME ASARCO - Mission Cmplx <i>Permit 2026</i>	
LOCATION Tailings Pile #8	
LOCATION Southeast Side of berm ledge	
CITY Sahuarita	STATE AZ
ZIP 85629	
PROCESS EQUIPMENT (i) High Winds	OPERATING MODE High Winds
CONTROL EQUIPMENT Prior application of Water & Polymer Dust Supp	OPERATING MODE Berm building
DESCRIBE EMISSION POINT Plume of fugitive dust swept from surface over northeast side	
HEIGHT OF EMISSION POINT ~120'	HEIGHT OF EMISSION POINT RELATIVE TO OBSERVER START -3' END -3'
DISTANCE TO EMISSION POINT START 1000' END 1000'	DIRECTION TO EMISSION PT. (DEGREES 0-360) START 0° END 0°
VERTICAL ANGLE TO OBSERVATION POINT START -3° END -3°	DIRECTION TO OBSERVATION POINT DEGREES (0-360) START 1° END 1°
DISTANCE & DIRECTION TO OBSERVATION POINT FROM EMISSION POINT START 50' @ 45° END 50' @ 45°	
DESCRIBE EMISSIONS START Fugitive Dust END Fugitive Dust	
EMISSION COLOR START wh/ten END wh/ten	WATER DROPLET PLUME <input type="checkbox"/>
ATTACHED <input type="checkbox"/> DETACHED <input type="checkbox"/> NONE <input checked="" type="checkbox"/>	
DESCRIBE PLUME BACKGROUND START Bush, Vegetation END Same	
BACKGROUND COLOR START Dark Green END Dark Green	SKY CONDITIONS START Partly Cloudy END Same
WIND SPEED START 30 mph END 35 mph	WIND DIRECTION START Southwest END same
AMBIENT TEMP START 79°F END same	WET BULB TEMP START 79°F END same
RH percent 10%	

OBSERVATION DATE 10/27/2009	START TIME 5:24 pm	END TIME 5:31 pm
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MIN	SEC	0	15	30	45	COMMENTS
1	10	10	5	0		Readings taken
2	0	0	20	20		sitting close to wind pressure
3	40	30	20	10		
4	30	40	40	100		winds gusting
5	100	100	100	50		
6	20	0	0	0		
7	0					opacity
8						Avg = 29.8%
9						
10						
11						See Attached Photos.
12						taken before, during, & after VE evaluation
13						
14						
15						
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ADDITIONAL INFORMATION
 ① Berm building made - activity suspended due to forecast of high winds.

OBSERVER'S NAME (PRINT) James M. Jones	DATE 10/27/2009
OBSERVER'S SIGNATURE <i>James M. Jones</i>	DATE 10/27/2009
ORGANIZATION Pima County DEQ	DATE 9/18/2009
CERTIFIED BY Arizona Smoke School, LLC	DATE 9/18/2009