ASARCO

Mission Complex

December 9, 2010

Mr. Mukonde Chama
Air Quality Program
Pima County Department of Environmental Quality
33 N. Stone Ave., Suite 700
Tucson, AZ 85701

Re: Request for Minor Air Quality Permit Revision
ASARCO LLC—Mission Complex, Permit No. 2026

Dear Mr. Chama:

ASARCO LLC ("Asarco") Mission Complex is undertaking a program to replace and upgrade some of its air pollution control equipment. Specifically, Asarco plans the following projects:

- Replace SSOPM-3, Unit 307-108, Ducon 54 wet scrubber with a Ducon 60 wet scrubber. The new unit is sized larger to allow additional fugitive emissions control. The new unit will meet the emission limits established for existing SSOPM-3, Unit 307-108.
- Replace SSOPM-2, Unit 305-07, American Air Scrubber with a substantially identical unit manufactured by Beu-Math Engineering. In addition, a backup unit of the same design will be added at this location. Either the primary or the backup unit, but not both, will operate at any time.

Pursuant to PCC 17.12.230, replacement of a piece of air pollution control equipment with an identical or substantially similar unit can be accomplished as a change without permit revision. However, Pima County SIP Rule 202.A requires an installation permit prior to addition of a control device or an expansion. Therefore, Asarco is submitting a request for a minor permit revision to encompass the changes described above.

Asarco believes that the proposed replacement activities and addition of a backup unit at SSOPM-2 qualify for a minor permit revision for the following reasons:

- Replacement and addition of the pollution control equipment does not violate any applicable requirement;
- Replacement and addition of the pollution control equipment does not require any substantive change to existing monitoring, reporting or recordkeeping requirements in the permit. The new equipment is adequately addressed by the existing requirements.

- Replacement and addition of the pollution control equipment does not require or change a case-by-case determination of an emission limitation, other standard, or a source-specific determination of ambient impacts or visibility. The pieces of equipment merely substitute for existing equipment and, in the case of SSOPM-3, allow for additional fugitive emissions control that should reduce ambient impacts.
- The replacement and addition of the pollution control equipment do not alter an emissions cap or federal alternative emissions limit. Instead, the units will comply with existing NSPS limits.
- The changes are not modifications under any provision of Title I. Only emissions controls are being replaced or upgraded, so there is no impact on underlying NSPS equipment that could lead to an NSPS modification. Similarly, the amount of emissions increase, if any, is well below PSD "significant" thresholds, as demonstrated in the attached application materials.
- The proposed replacement and additional pollution control equipment is not a change in fuels.
- The proposed replacement and additional pollution control equipment will not cause a "significant" increase in air emissions.
- The proposed replacement and additional pollution control equipment is not required to be processed as a "significant" permit revision by PCC 17.12.260.

PCC 17.12.255.A. Asarco therefore believes that a minor permit revision satisfies both the Pima County Code and Pima County SIP provisions and requests that PDEQ issue the requested permit revision as soon as possible.

Asarco is requesting that Pima County include one special condition that limits operation of the primary or secondary scrubbers at SSOPM-2 to one at a time, except for short periods of maintenance or testing, as follows:

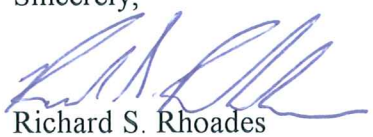
> Operation of scrubbers at point SSOPM-2 shall be limited to either the primary or secondary scrubber at any time, except that joint operation during transfer from one scrubber to the other or for maintenance and testing shall be allowed.

Asarco requests that minor permit processing procedures be used on this application. A copy of the standard permit application form and supporting emissions calculations is attached. Please contact Jamie Ekholm at 520-393-4671 if you have any questions or concerns.

I certify that the proposed revision meets the criteria for use of minor permit revision procedures and that the information contained in this document and all attachments is

true, accurate, and complete to the best of my knowledge after reasonable inquiry of those who prepare them.

Sincerely,



Richard S. Rhoades
General Manager

Enclosures

ATTACHMENT "A"
Standard Permit Application

PIMA COUNTY DEPARTMENT OF ENVIRONMENTAL QUALITY
Air Program
33 N. Stone Avenue ▪ Suite 700 ▪ Tucson, AZ 85701 ▪ Phone: (520) 243-7400

STANDARD PERMIT APPLICATION FORM FOR CLASS I SOURCES

(As required by A.R.S. § 49-480, and Title 17 of the Pima County Code)

1. Permit to be issued to (Arizona Corporate Commission Registered Name): ASARCO LLC

2. Mailing Address: 4201 West Pima Mine Road

   City: Sahuarita State: AZ ZIP: 85629

3. Plant Name (if different than item #1): Mission Complex

4. Name (or names) of Owner or Operator: ASARCO LLC

   FAX #: (520) 648-0802 Phone: (520) 648-2500

   Email: NA

5. Name of Owner's Agent: Richard S. Rhoades

   FAX #: (520) 625-9632 Phone: (520) 648-4528

6. Plant/Site Manager/Contact Person: Jamie Ekholm

   FAX #: (520) 648-0802 Phone: (520) 393-4671

   Email: jekholm@asarco.com

7. Proposed Equipment/Plant Location Address: Same as above

   City: State: ZIP:

   Indian Reservation (if applicable): NA T/R/S, Lat/Long, Elev: 31 59'50.35"N/111 02'58.95" W, 3123 ft

8. General Nature of Business: Mining

   Standard Industrial Classification Code: 1021 State Permit Class: Title V, Class I

9. Type of Organization: ☐Corporation ☐Individual Owner ☐Partnership ☐Government Entity ☒Other LLC

10. Permit Application Basis *(Check all that apply):* ☐New Source ☐General Permit

    ☐Renewal *Revision:* ☐Administrative ☒Minor ☐Significant Existing Permit # _____

    Date of Commencement of Construction or Modification: Once approved

    Is any of the equipment to be leased to another individual or entity? ☐Yes ☒No

11. Signature of Responsible Official of Organization: _____

    Official Title of Signer: General Manager

12. Typed or Printed Name & E-mail of Signer: Richard S. Rhoades

    Date: 12/15/2010 Telephone Number: (520) 648-4528

EQUIPMENT LIST

The following table should include all equipment utilized at the facility and be complete with all data requested. The date of manufacture must be included in order to determine if portions of the facility are subject to NSPS. Make additional copies of this form if necessary.

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Equipment ID Number	Date of Manufacture
Air Filter	11,000 cfm	Beu-Math Engineering	-	TBD	305-07a	TBD
Air Filter	11,000 cfm	Beu-Math Engineering	-	TBD	305-07b	TBD
Wet Scrubber	10,000 cfm	Ducon	Size 60 UW-4	TBD	307-108	TBD

EMISSION SOURCES

COMPANY NAME: ASARCO LLC

DATE Dec. 2010

Estimated "Potential to Emit" per 17.04.340.A.164.
Review of applications and issuance of permits will be expedited by supplying all necessary information on this Table.

REGULATED AIR POLLUTANT DATA					EMISSION POINT DISCHARGE PARAMETERS										
EMISSION POINT [1]		CHEMICAL COMPOSITION OF TOTAL STREAM	REG. AIR POLLUTANT EMISSION RATE		UTM COORDINATES OF EMISSION POINT [5]			STACK SOURCES [6]					NONPOINT	
										EXIT DATA			SOURCES [7]	
NUMBER	NAME	REGULATED AIR POLLUTANT NAME [2]	#/ HR. [3]	TONS/ YEAR [4]	ZONE	EAST (Mtrs)	NORTH (Mtrs)	HEIGHT ABOVE GROUND (ft)	HEIGHT ABOVE STRUC. (ft)	DIA. (ft)	VEL (fps)	TEMP. (°F)	LENGTH (ft)	WIDTH (ft)
SSOPM-2'	Air Filter	PM	1.89	8.26	12	495160	3539925	9.4	NA	1.2x1.6	62.9	93.5		
SSOPM-2'	Air Filter	PM	1.89	8.26	12	495160	3539925	9.4	NA	1.2x1.6	62.9	93.5		
SSOPM-3	Wet Scrubber	PM	1.71	7.51	12	495035	3539950	14	NA	2.27	37.6	60		
'Only one of these units will operate at any time [see requested permit condition in December 9, 2010 cover letter].														

GROUND ELEVATION OF FACILITY ABOVE MEAN SEA LEVEL 3123 feet. PDEQ STANDARD CONDITIONS ARE 293K AND 101.3 KILOPASCALS (17.04.340.A.210)

General Instructions:

1. Identify each emission point with a unique number for this plant site, consistent with emission point identification used on plot plan, previous permits, and Emissions Inventory Questionnaire. Include fugitive emissions. Limit emission point number to eight (8) character spaces. For each emission point use as many lines as necessary to list regulated air pollutant data. Typical emission point names are: heater, vent, boiler, tank, reactor, separator, baghouse, fugitive, etc. Abbreviations are O.K.
2. Components to be listed include regulated air pollutants as defined in 17.04.340.A.182. Examples of typical component names are: Carbon Monoxide (CO), Nitrogen Oxides (NO_X), Sulfur Dioxide (SO_2), Volatile Organic Compounds (VOC), particulate matter (PM), particulate less than 10 microns (PM_{10}), etc. Abbreviations are O.K.
3. Pounds per hour (#/HR) is maximum potential emission rate expected by applicant.
4. Tons per year is annual maximum potential emission expected by applicant, which takes into account process operating schedule.
5. As a minimum applicant shall furnish a facility plot plan as described in the filing instructions. UTM coordinates are required only if the source is a major source or is required to perform refined modeling for the purposes of demonstrating compliance with ambient air quality guidelines.
6. Supply additional information as follows if appropriate:
   (a) Stack exit configuration other than a round vertical stack. Show length and width for a rectangular stack. Indicate if horizontal discharge with a note.
   (b) Stack's height above supporting or adjacent structures if structure is within 3 times the "stack height above the ground" of stack.
7. Dimensions of nonpoint sources as defined in 17.04.34.A.147.

Certification of Compliance with all Applicable Requirements

Permit Number (If existing source) 2026

This certification must be signed by a Responsible Official. Applications without a signed certification will be deemed incomplete.

> *The responsible official is defined as a person who is in charge of principal business functions or who performs policy or decision making functions for the business. This may also include an authorized representative for such persons. For a complete definition, see Pima County Air Quality Control, Title 17, Section 17.04.340(A)(186).*

I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by the Pima County Department of Environmental Quality (PDEQ) as public record. I also attest that I am in compliance with the applicable requirements and will continue to comply with such requirements and any future requirements that become effective during the life of my permit. I will present a certification of compliance to PDEQ no less than annually and more frequently if specified by PDEQ. I further state that I will assume responsibility for the construction, modification, or operation of the source in accordance with the requirements of Title 17 of the Pima County Code and any permit issued thereof.

Name (Print/Type): Richard S. Rhoades Title: General Manager

(Signature): _____ Date: 12/15/2010

Certification of Truth, Accuracy, and Completeness

17.12.160(H) - Certification of Truth, Accuracy, and Completeness. Any application form, report, or compliance certification submitted pursuant to this Chapter shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the documents are true, accurate, and complete.

By my signature I,(Name) Richard S. Rhoades, hereby certify that based on information and belief formed after reasonable inquiry, the statements and information in this document are true, accurate, and complete.

Signature of Responsible Official of Organization: _____

Title: General Manager Date: 12/15/2010

ATTACHMENT "B"
Emissions Calculations

Emissions Calculations for SSOPM-3

The proposed unit is a Ducon 60 wet scrubber, model UW-4. It is designed for an air flow of 10,000 cfm at an emission rate of 0.02 gr/dscf. Only particulate emissions are expected. The potential to emit of this unit is as follows:

0.02 gr/dscf * 10000 dscf/min * 60 min/1 hr * 1 lb/7000 gr = 1.71 lb/hr
1.71 lb/hr * 8760 hr/year * 1 ton/2000 lbs = 7.51 tpy

This limit meets or exceeds the NSPS at 40 C.F.R. § 60.382(a)(1). The unit will be equipped with differential pressure and scrubber flow rate monitoring devices required by 40 C.F.R. § 60.384(a) and (b).

Based on this calculation, it is clear that the proposed replacement does not trigger PSD review because the total emissions of the project are less than 10 tons/year even without accounting for past emissions.

Emissions Calculations for SSOPM-2

The proposed primary unit is a substantially equivalent replacement unit for the existing American Air Filter that will be manufactured by Beu-Math Engineering to the same specifications. The secondary unit will be identical to the primary unit. Only one of these units will operate at a time, except during transition from one unit to the other or for maintenance and testing. Only particulate emissions are expected. The potential to emit of this unit is as follows:

0.02 gr/dscf * 11,000 dscf/min * 60 min/1 hr * 1 lb/7000 gr = 1.89 lb/hr
1.89 lb/hr * 8760 hours/year * 1 ton/2000 lbs = 8.26 tpy

This limit meets or exceeds the NSPS at 40 C.F.R. § 60.382(a)(1). The unit will be equipped with differential pressure and scrubber flow rate monitoring devices required by 40 C.F.R. § 60.384(a) and (b).

Based on this calculation, it is clear that the proposed replacement does not trigger PSD review because the total emissions of the project are less than 10 tons/year even without accounting for past emissions.

ATTACHMENT "C"
Controlled Equipment

SSOPM-3 Controlled Equipment

SSOPM-3 is controlling emissions off of the M307-E23 belt. This is the transfer tower where oversized material exits the secondary crusher (M307-E21 belt), drops down on the M307-E23 belt, and then is sent back into the secondary crusher to be re-crushed. It is at this drop point where emissions are being controlled. Additional hooding will be placed near the counter-weight pulley at the transfer tower which will allow for additional fugitive emission controls.

SSOPM-2 Controlled Equipment

SSOPM-2 is controlling emissions from ore as it drops down from the vibratory feeders found below the intermediate stockpile onto the E2 and E6 conveyors. These feeders are V305-E1, E2, E3, E4, E5 and E6.

ATTACHMENT "D"
Additional Information

1. Description of the process to be carried out by each unit.

Unit 307-108, 305-07a and 305-07b are wet scrubber air pollution control devices. The wet scrubbers remove particulate matter emissions by capturing dust particles from copper ore crushing and screening operations in a liquid stream.

2. Description of raw materials, intermediates and products.

The air pollution control devices are capturing emissions from copper ore crushing and screening operations.

3. Description of alternating operating scenario.

In addition to replacement of the current 305-07 air filter unit, Asarco will install a backup unit of the same design at this location. Either the primary unit (305-07a) or the backup unit (305-07b), but not both, will operate at any time, except for brief periods when Asarco is transitioning from one unit to the other, maintenance, and testing.

While Asarco does not believe that this configuration meets the definition of an "alternative operating scenario," it nonetheless requests the following condition in its operating permit:

> Operation of scrubbers 305-07a and 305-07b at point SSOPM-2 shall be limited to either the primary or secondary scrubber at any time, except that joint operation during transfer from one scrubber to the other or for maintenance and testing shall be allowed.

4. Not Applicable

5. Flow Diagram for All Processes

Attached as Attachment "E".

6. Not Applicable

7. Emissions Related Information

See Attachment "B".

8. Citation and description of all applicable requirements as defined in 17.04.340.A.25.

Federal New Source Performance Standard 40 C.F.R. § 60.382(a)(1) is applicable to these air pollution control devices. The units will be equipped with differential

pressure and scrubber flow rate monitoring devices required by 40 C.F.R. § 60.384(a) and (b). Asarco will conduct initial performance tests of the new scrubbers and record measurements of differential pressure and flow rate at least weekly thereafter according to 40 C.F.R. § 60.385.

Air pollution control devices 307-08 (SSOPM-3) and 305-07 (SSOPM-2) are currently regulated under Asarco's Title V permit no. 2026 and the replacement units will be regulated under the same provisions.

9. Not Applicable

10. Not Applicable

11. Description of all process and control equipment for which permits are required

See "Standard Permit Application Form for Class I Sources," page 2.

12. Stack Information

See "Standard Permit Application Form for Class I Sources," page 3.

13. Site Diagram

Attached as Attachment "E".

14. Air Pollution Control Equipment

Test methods for determining compliance with applicable requirements will remain the same as currently required by Asarco's Title V permit no. 2026.

The basis of this permit application is for replacement and upgrade of two current air pollution control devices. All operational details required by Question 14 are included in the Standard Permit Application Form and supplemental attachments.

15. Not Applicable

16. Compliance Plan and Schedule

Asarco is currently in compliance with all requirements applicable to SSOPM-2 and SSOPM-3 air pollution control device operation. Replacement/upgrade air pollution control device units will continue to meet all applicable regulations.

17. Compliance certification

ASARCO Mission Complex's responsible corporate official has certified this application as required.

18. Not Applicable

19. New major source or major modification requirements

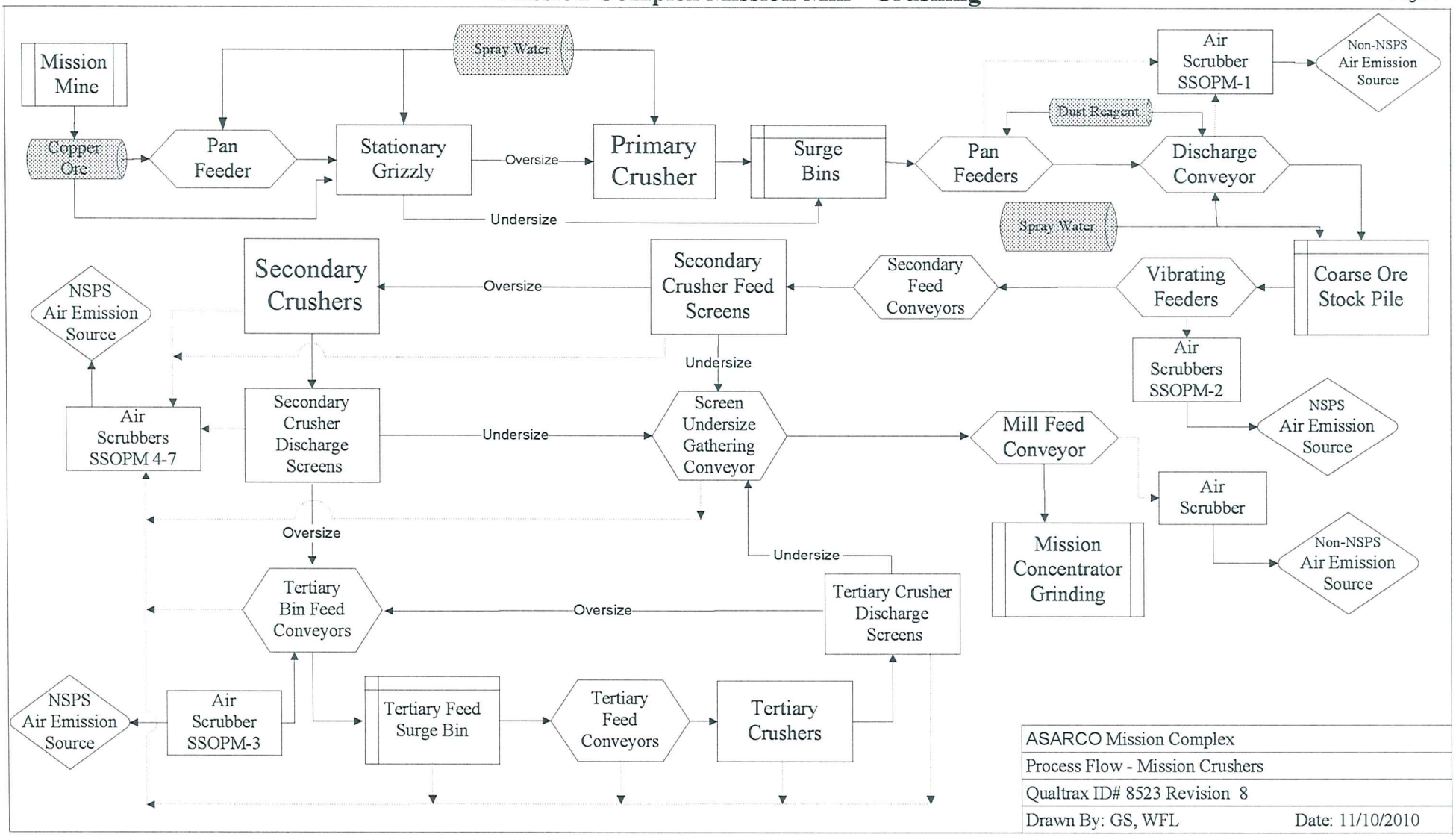
Based on ASARCO's emission calculations contained in Attachment "B," the proposed replacement does not trigger PSD review because the total emissions of the project are less than 10 tons/year.

20. Calculations on which all information requested in this application are based

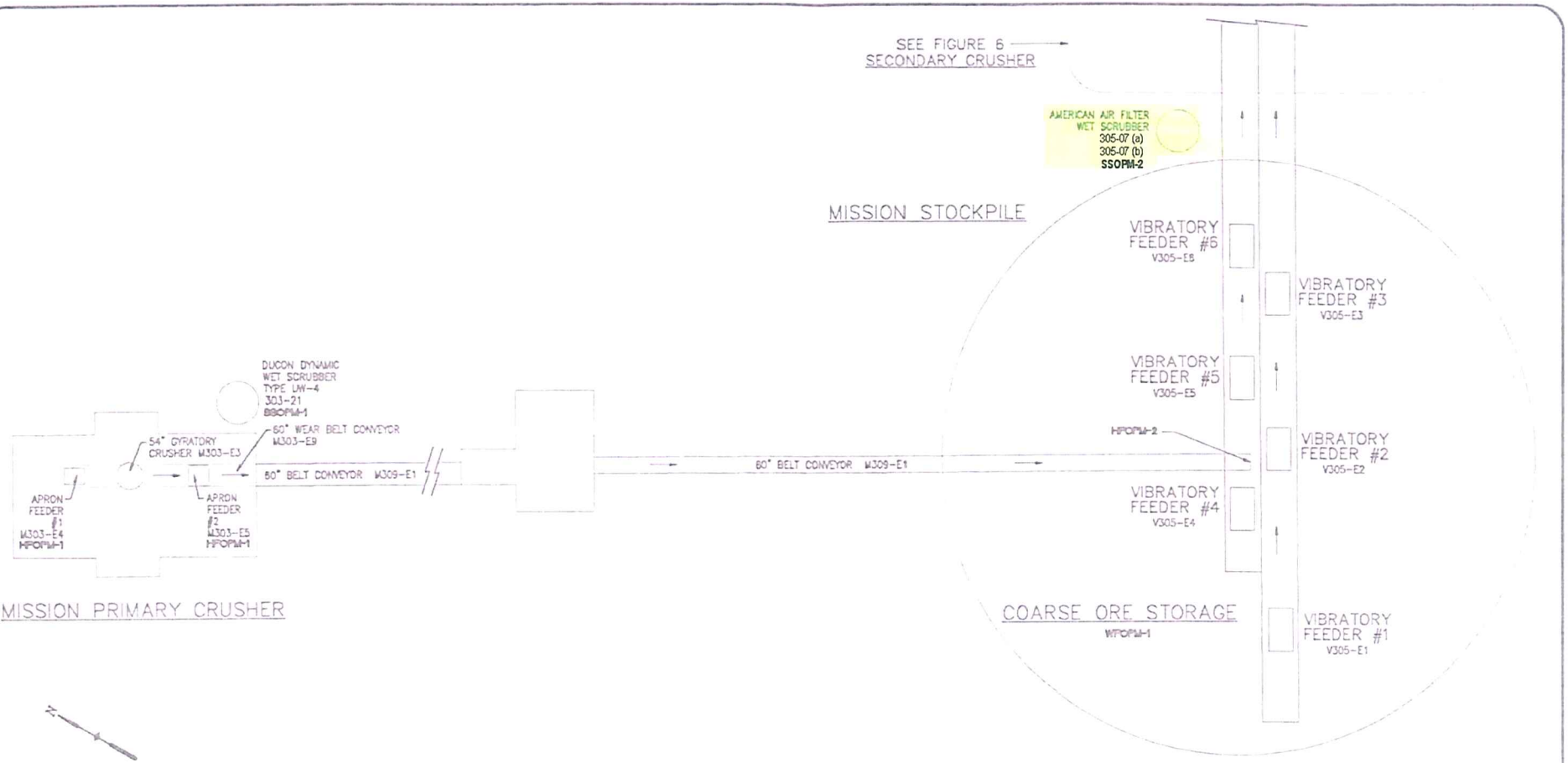
See Attachment "B".

ATTACHMENT "E"
Site & Flow Diagrams

Mission Complex Mission Mill - Crushing



ASARCO Mission Complex	
Process Flow - Mission Crushers	
Qualtrax ID# 8523 Revision 8	
Drawn By: GS, WFL	Date: 11/10/2010



EPN's: SSOPM-1
SSOPM-2
HFOPM-1
HFOPM-2
WFOPM-1

MISSION AIR PERMIT

Mission Primary Crusher and Stockpile – Equipment Location

Project No. 934X009A	FIGURE 5

Drawn By: DTB	Checked By: AC	Date: November 2010

ASARCO
MISSION COMPLEX

EPN's: SSOPM-3
SSOPM-4
SSOPM-5
SSOPM-6
SSOPM-7

MISSION AIR PERMIT

Mission Secondary Crusher – Equipment Location

Project No. 934X009A | FIGURE 6

Drawn By: DTB | Checked By: AC | Date: November 2007

ASARCO MISSION COMPLEX