



DEPARTMENT OF ENVIRONMENTAL QUALITY

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March 5, 2010

ASARCO LLC

Attn: Mr. Richard Rhoades
4201 W. Pima Mine Road
Sahuarita, AZ 85629

Re: Follow up questions/comments for February 26, 2010, meeting discussion of the preliminary draft Berm Building Dust Control Plan

Dear Mr. Rhoades,

Pima County Department of Environmental Quality (PDEQ) staff members Dustin Fitzpatrick, Air Compliance Supervisor; Mukonde Chama, Air Permitting Supervisor; and Rupesh Patel, Air Permit Engineer met with ASARCO LLC personnel Dr. Krishna Parameswaran, Director Environmental Services and Compliance Assurance; J. Christopher Pfahl, Sr. Mine Engineer; Arturo Burgos, Sr. Environmental Engineer; and Jamie Ekholm, Environmental Engineer on February 26, 2010, to discuss the preliminary draft of the Berm Building Dust Control Plan (Plan) for the ASARCO LLC – Mission Complex proposed in response to Notice of Violation # PC0911-061 and PC0912-067. PDEQ requests that ASARCO LLC respond to the following questions/comments related to the proposed plan.

- 1) Add reference to the permit requirement to prevent effluent from a fugitive emissions source to have an average optical density greater than 20 percent (opacity standard) and the visibility limiting standard in the Introduction.
- 2) The Introduction states, 'This Berm Building Dust Control Plan is adopted by Asarco to comply with these requirements.' PDEQ believes the Plan is adopted to facilitate compliance with permit requirements and is not a demonstration of compliance. Please adapt the language of this sentence accordingly.
- 3) The Introduction states, 'This Plan may be revised from time to time...' PDEQ requests the addition of language that ASARCO LLC will submit a copy of the revised Plan to PDEQ within 5 working days after the Plan is revised.
- 4) PDEQ requests the addition of a section to the Plan between the Introduction and Plan Details that will provide a tailings dam description. Provide PDEQ the following information and include in this section:
 - The area in acres and the current elevation of each active tailings dam
 - The berm perimeter length in feet of each active tailings dam
 - The source of tailings (i.e. North Mill, South Mill) for each active tailings dam

- The estimated monthly tailing slurry production of each mill
 - The length of the dikes that will be used to segment the tailings dams
 - A detailed description of how the segmentation and berm building process will be conducted for each active tailings dam including the sequential progression from timing of filling the segments to capacity with tailings to preparation for berm building to construction of dikes and berms
 - A description of the tailing supply pipelines and the process for disassembling and reassembling tailings supply lines for each active tailings dam
 - A diagram showing the general configuration of each active tailings dam including the position of segments and dikes
- 5) What is the rationale for the chosen number of segments for each tailings dam?
 - 6) The Introduction states that inactive mode includes the period when a tailings dam is in preparation for berm building. Please describe how ASARCO LLC addresses dust control during the berm preparation period and include in the Plan.
 - 7) In the Plan Details, section 1.0 Preparation for Berm Building, please include the average length of time of the evaporating period for each tailings dam and the quantitative measures used to determine when the “proper moisture content” is reached so that berm construction can begin.
 - 8) Include a subsection for Notice of Commencement of Preparation for Berm Building in section 1.0, in which ASARCO LLC will give notice to PDEQ within 5 days after commencement of preparation for berm building. Commencement of preparation for berm building will begin when a segment stops receiving tailings in preparation for berm building.
 - 9) Include subsections for Operational Control and Controls Employed During Preparation for Berm Building in section 1.0.
 - 10) In section 2.1.1 Notice of Commencement of Perimeter Berm Building, include a provision that ASARCO LLC will notify PDEQ within 5 working days with the starting date for berm building for each segment and include specific details of the location where construction will begin, the equipment that will be utilized, the anticipated rate of berm building in feet per day, and the anticipated monthly schedule for progression.
 - 11) Section 2.1.2 states, ‘A combination of a low ground pressure bulldozer and a large hydraulic excavator will be used to place and shape the berm in a single lift.’ Please describe a low ground pressure bulldozer and how it will be involved in this process.
 - 12) Give reference for the basis of determining the height of the berm lift.
 - 13) Discuss the method for berm building used at ASARCO LLC – Ray Complex in Hayden, Arizona, and explain the reason why the trenching method for berm building is used at ASARCO LLC – Mission Complex as opposed to alternate methods.
 - 14) Identify the manufacturer and commercial product name of the co-polymer. What mix ratio is used and what is the basis of the chosen ratio? What is the application rate? Will a colorant indicator always be added with the co-polymer?
 - 15) What are the specific types and capacities of spray application vehicles that ASARCO LLC will be using and what is the basis for choosing such types and quantities of vehicles?
 - 16) What is the distance to the source of water and co-polymer from each active tailings dam and what is the estimated time for a round-trip to refill each spray application vehicle and return to each active tailings dam?

- 17) Will ASARCO LLC be using low ground pressure spray application vehicles adapted specifically for mine tailings surface conditions such as the Terra-Gator “floater” vehicles utilized in 2006 in order to access the tailings dam surface?
- 18) Describe how the tailings surface of the segments will be inspected as part of the Weekly Controls and describe how loss of encrustation will be determined.
- 19) Quantify how the interior areas of the tailings surface within the segments will be “judged safe and practicable for spray vehicles to access.”
- 20) Describe the alternative measures will be utilized for dust control if it is judged that a spray application vehicle is unable to access interior areas of the tailings surface exhibiting a loss of encrustation.
- 21) Add a form to the Plan to record the results of the inspections conducted and the controls employed during the Construction Period. The form shall record the conditions observed and identify on a map areas that require additional dust control and quantify the amount of water or co-polymer applied to those areas.
- 22) Construction Period – Supplementary Controls refers to implementing supplementary controls if the morning weather forecast predicts sustained winds in excess of 20 mph. Please change this section to refer to the National Weather Service website (<http://www.nws.noaa.gov/>) forecast for Sahuarita, AZ, and implement supplementary controls 2-3 days in advance of forecasted sustained wind speeds in excess of 20 mph.
- 23) Section 2.4.1 states, ‘Once a sufficient portion of berm construction is complete and the tailings spigots can be reinstalled and extended, tailings deposition will commence...’ Please discuss how a sufficient portion is quantified.
- 24) Include in section 2.2 a Notice of Commencement of Perimeter Berm Building.
- 25) Will the pipeline lift and associated service road construction be completed prior to the commencement of berm building?
- 26) Change section 2.2.5 to indicate that any active berm building segment will be smeared with fresh tails within sixty (60) days of commencement of berm building.
- 27) What effect on the tailings dam surface crust does ASARCO LLC acknowledge for heavy rainfall sufficient to cause surface runoff and are control measures adjusted following such rainfall events?
- 28) Add a contingency plan to the Plan to address a situation where tailings are not available for application to a tailings dam due to force majeure.
- 29) Add a section to the Plan in which an evaluation of the plan is conducted periodically.

Please provide PDEQ with a written response to the above comments and questions within twenty (20) working days. PDEQ looks forward to resolving plan details prior to submission of the final plan as a permit revision.

Sincerely,



Dustin Fitzpatrick
Air Compliance Supervisor

cc: PDEQ Case File #: PC0911-061 & PC 0912-067