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Ref: 8ENF-RCRA August 19, 2009

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Jon Nickel
Asarco East Helena Plant
100 Smelter Road
P.O. Box 1230
East Helena, MT 59635

Re: Additional Comments on the RCRA Facility Investigation (RFI) Phase 2 Characterization and Risk Assessment Work Plan Technical Memorandum, Asarco East Helena Facility, March 31, 2009

Dear Mr. Nickel:

As we discussed briefly, EPA is requesting that you segregate the human health risk characterization from the soils, sediment and ground water characterization to expedite the characterization and ground water modeling and well usage work this year. Please ensure that the RFI Phase 2 Characterization Work Plan addresses the attached comments as well as includes the following components

- Broader parameter list for soil analysis and water analysis;
- Compilation and submittal of all existing metals data, including plant process data as well as data collected pursuant to CERCLA investigations for selenium, antimony, thallium, beryllium, and other metals;
- An appendix containing all prior risk studies for onsite and offsite areas, including Prickly Pear Creek and Wilson Ditch;
- Evaluation of detection limits to ensure that they do not exceed the lowest level of concern protective of human or ecological receptors for the contaminants being investigated;
- Definition of the source(s) extent of onsite and offsite groundwater plumes, which may necessitate new well installation;
- Additional investigation:
    - Prickly Pear Creek
    - Wilson Ditch (Onsite & Offsite)
    - Slag Pile
    - Acid Plant Wastewater Pond
    - Rail Car Staging Area

- Old Thornlock Lake
- Tito Park
- Upper and Lower Lake sediments, soils, water, including the marsh area
- Thawhouse (built over Wilson Ditch)
- Sewer Lines
- Old Zinc Plant

➢ Water Usage Study (water rights, well usage, surface water, PWS systems, etc.);

➢ Thorough description of the proposed update to the existing ground water model to encompass onsite and offsite plume sources, migration routes, capture zones, and potential treatment demands and volumes to identify and model potential interception and treatment systems to halt further plume migration and capture and remediate offsite plumes;

➢ Identification and evaluation of technologies to be further assessed during the Corrective Measures Study, including bench-scale and pilot studies to evaluate options to address ground water plumes or source areas and a schedule for these studies.

Please submit the RFI Phase 2 Characterization Work Plan within twenty-one (21) days from your receipt of this letter. If you have questions on this letter, please contact me at (303) 312-6503.

Sincerely,

Linda Jacobson

Linda Jacobson, EPA Project Manager
RCRA Enforcement

cc: Denise Kirkpatrick, MDEQ

ADDITIONAL COMMENTS ON PHASE 2 RFI CHARACTERIZATION

CHARACTERIZATION COMMENTS:

1. Technical Memorandum and Appendix B, soil sampling appears to have been developed for purposes of risk assessment and focuses on documenting current site conditions including impacts from previous remedial activities. Many of these samples may be useful; however, there are areas of the plant that need re-sampling or initial sampling to assist in future remedial selection. For example, the source of the selenium in groundwater has not been determined. Additional samples are warranted to determine the selenium source(s).

2. On page 5 of the Technical Memorandum, Asarco proposes collecting three slag pile samples. The proposed sample locations are near three previous sampling sites. Samples are proposed to be collected over an interval from 0 to 36 feet. Asarco does not explain why the samples are to be collected or why the proposed sample depth was chosen. The usefulness of collecting samples near previous sample locations does not appear to expand the knowledge of slag pile. The Phase II Work Plan must propose additional slag samples to be collected from the top of the pile to below the base of the pile.

3. Purpose, pages 1-3, 1-4, and 3-1, the text should be amended to reflect that, in addition to collection of additional data for risk assessment purposes, additional characterization is necessary to determine the nature and extent of contamination to allow identification and selection of technologies for consideration in the Corrective Measures Study, as well as further identification of potential source areas.

4. Page 1-5, Section 1.3, the attached appendices must contain all site data, including ground water, surface water, sediment, and biota data collected pursuant to CERCLA studies, exclusive of air monitoring and residential yard data, as well as additional groundwater and surface water monitoring conducted as part of the long-term monitoring program and as part of the RCRA interim measures.

5. The work plan must propose a sufficient number of samples, using a slant drill rig, to characterize the base and marsh and sediments below the base of the slag pile.

6. For all areas listed in the February 4, 2009 call-in letter, the work plan must propose samples from ground surface to the confining layer in sufficient number to characterize the nature and extent of contamination, using a drill rig.

7. The work plan must include compilation of all demolition footprint sampling results in tabular form, including the results for all parameters analyzed and highlighting areas where further sampling may be warranted. These should include, for example, the former blast furnace baghouse and the former blast furnace flue which may be acting as continuing sources to groundwater.

8. The work plan must propose the development of a computer-generated 3-D visual interpretation of the subsurface stratigraphy and contaminant distribution, using a computer program such as Visual Ground Water, RockWare, or CMS.

9. To develop a better model of the plume configuration in three dimensions the work plan should include cross-sections using all available well construction logs and boring logs from the various well installations and identify additional locations necessary to refine these. Based on analyses of these cross-sections, a better model of the hydrostratigraphy should come to the surface.

10. To develop a detailed sense of the chemical stratigraphy, the work plan should propose a series of more detailed nested wells in selected locations. This might entail a series of wells or perhaps wells with packers installed to isolate certain depth intervals. Ultimately, the cross-sections and nested wells should present a 3-dimensional picture of the arsenic and selenium plumes and how they relate to one another and to the geology of the aquifer.