



YERINGTON PAIUTE TRIBE

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December 20, 2011

Jerelean Johnson
U.S. EPA Region 9
75 Hawthorne St. SFD-8-2
San Francisco, CA 94105

RE: Sub-Area A Sub-Surface Characterization Data Summary Report
Yerington Mine Site, November 9, 2011, Brown and Caldwell, Carson
City, NV

Dear Ms. Johnson:

Please find attached technical comments regarding the Sub-Area A Sub-Surface Characterization Data Summary Report. Previous comments by the Tribe for the work plan for this project and other attempts to use VLT to cover other mine waste included concerns for the chemistry of the material. The additional information provided in this report continues to justify those concerns and we appreciate recent efforts to locate more suitable capping materials. Unfortunately, the VLT material is not appropriate for cover material and appears to be another mine waste that requires additional management.

We are aware that prior to EPA management of the site, VLT material was used for cover material by both previous operators and for response activities regulated by NDEP. In addition, EPA has overseen the use of VLT for cover material for areas outside of Sub-Area A. With the new data, it appears that a plan to contain and/or relocate that material is now needed.

These comments are provided for the site record with the intent to improve the interpretation of the existing data collected at the Yerington Mine Site and, if required, suggest alternatives for the proposed investigation and/or site actions. Although the Tribe is not providing approval of the program, we feel it is important to participate in the process with the hope of developing a positive and constructive environment for stakeholders, regulatory agencies and responsible parties working with the Yerington Mine Site.

If you have any questions or need to schedule follow up meetings or conference calls, please feel free to contact Justin Whitesides, Environmental Director, at 775.463.7866 or environmentaldirector@ypt-nsn.gov.

Sincerely,
YERINGTON PAIUTE TRIBE



Linda Howard
Tribal Chairman

cc: Justin Whitesides, YPT Environmental Director
Tom Olsen, BLM
Jim Najima, NDEP
Margaret Pauly, YCAG
John Krause, BIA
Jim Sanford, MVEC
WRPT Environmental Director
Kerensa King, USFW
Taurus Massey, Singatse Peak Services

Document: Sub-Area A Sub-Surface Characterization Data Summary Report
 Yerington Mine Site, November 9, 2011, Brown and Caldwell, Carson City,
 NV

Reviewer: Yerington Paiute Tribe

Review Date: December 5, 2011, First review of document

Overview

The document presents the methodology and results of calculating the amount of water infiltrating sulfide tailings presently capped with VLT material.

Specific Comments

Comment Number	Section Page	Comment
1	Section 1, Page 1, Paragraph 2.	The location of Sub-Area A within the mine the site cannot be determined by Figures 2 and 3; the site is not marked on Figure 2 and Figure 3 lacks coordinate information. Figure 3 also lacks sufficient identifying features to know where it is located on Figure 2.
2	Section 1, Page 1, Paragraph 2.	The text states that the surface sediments (VLT) appear to consist of homogeneous reddish to grayish clay-sized particles. However, Table 6 reports the upper layer of VLT is clayey sand with gravel. This suggests that the fine grained surficial materials were washed onto the site by erosion or are wind-blown deposits. The sentence on page 1 gives the reader the impression the VLT is very fine-grained whereas they are actually comprised primarily of sand-sized and larger particles. A clarifying sentence should be added to the report stating that at depth below the surficial clays the VLT is comprised of clayey sand with gravel.
3	Section 3, Page 4, Paragraph 5.	The VLT materials exceed screening criteria for chromium, radium-226, and uranium. This calls into serious question as to the suitability of VLT to serve as a cover for tailing at the site. If the cover is hazardous, how does this protect human health? To what extent will this material erode and become an air borne contaminant?
4	Section 4, Page 6, Paragraph 2.	<p>The VLT materials generate leachate that exceeds federal MCLs for beryllium (by a factor of 3), copper (by a factor of 200), and uranium (by a factor of 8). So if the site is covered by VLT, then we will need to depend on the adsorption capacity and geochemistry of the underlying tailings and alluvial soils to protect groundwater. How many Superfund sites in the nation are allowed to use capping materials that generate hazardous leachate?</p> <p>The 7.2 acre Sub-Area A site will result in about 14,550 gallons of water per year exceeding federal MCLs per year to reach groundwater. What is the ultimate fate of this water and the associated contaminants?</p>

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Specific comments (continued)

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4 (continued)	Section 4, Page 6, Paragraph 2.	<p>The EPA and NDEP will need to officially present their opinion as to viability of using capping material that is mainly sand with clay that has been proven to generate leachate exceeding federal MCLs.</p> <p>Additional leachate testing of the VLT is recommended to determine how many years / pore volumes the VLT will produce leachate in excess of federal MCLs.</p> <p>The only rational conclusion is that use of VLT materials for capping the site will allow continued groundwater contamination.</p>
5	Section 7, Page 14, Paragraph 2.	<p>The calculated amount of infiltration is 1.4 percent of precipitation. Given the low permeability of the VLT, this is a reasonable value.</p> <p>This number does demonstrate the serious inadequacy of the groundwater recharge rate for undisturbed soils at 0.1 percent of precipitation that is often-referenced by ARC. If the clayey sands have a recharge value of 1.4 percent, then the far more permeable area soils can be expected to have a much higher recharge rate; similar to the recharge rate of 4 to 5 percent as estimated by the USGS for the area.</p>
6	Section 7, Page 14, Paragraph 5.	<p>The paragraph presents the mass balance equation for the unsaturated flow model. It would be helpful to know the percentage of each component in the equation so that we can evaluate how much runoff will be occurring on the VLT capping materials.</p>

General Comments

7. Section 7 Overall

The unsaturated zone modeling was well thought out is appropriate for the available data.

Given the importance of these calculations in planning future site work, ARC may wish to consider future monitoring of soil moisture at the Sub-Area A site to demonstrate that soil moisture will decrease in the sulfide tailings and alluvial soils beneath the VLT cover as predicted by the model.