



Hualapai Department of Cultural Resources  
P.O. Box 310  
Peach Springs, Arizona 86434  
Office: 928.769.2223 FAX: 928.769.2235

July 21, 2011

Mr. Aaron Yue  
California Department of Toxic Substances Control  
5796 Corporate Ave.  
Cypress, CA 90630

Ms. Pamela Innis  
U.S. Department of the Interior, Office of Environmental Policy and Compliance  
P.O. Box 25007 (D-108)  
Denver Federal Center, Building 56  
Denver, Colorado 80225

**Subject: Soil RCRA Facility Investigation/Remedial Investigation Work Plan**

The Hualapai Tribe would like to offer comments regarding the report *Soil RCRA Facility Investigation/Remedial Investigation Work Plan, Pacific Gas and Electric Topock Compressor Station, Needles, California*, by CH2M HILL, released May 6, 2011. The draft Soil Work Plan from September 15, 2010, was reviewed by the Hualapai Department of Cultural Resources, and comments were submitted December 3, 2010. Comparing the September 2010 and May 2011 reports, a number of proposed soil borings have been deleted, especially along the west side of Bat Cave Wash. However, new elements of the program were added (e.g. the storm drain investigation), and new sample sites have been added to the list, which gives an appearance of project creep. We are concerned that other new objectives could be added in the future, and more samples could again be collected.

Following the soil characterization studies, contaminated soils could be remediated by soil flushing. As described in the Soil Work Plan, Appendix A, page 6-1, soil flushing must be combined with groundwater remediation. In order to simultaneously accomplish multiple objectives, the groundwater and soil programs should be combined.

Mitigation measures for cultural features should be part of the discussion (the sooner the better). However, mitigation measures are already being discussed regarding the impacts of the groundwater remediation. Mitigation measures should be combined to include the total cumulative impacts; therefore, the groundwater and soil programs should be combined.

In the HDCR December 3, 2010, review of the draft Soil Work Plan, suggestions were made to perform additional soil leaching tests (e.g. SPLP, which uses deionized water as the leachate). Leaching tests can help describe the threat to groundwater from

contaminated soils; however, additional SPLP analyses were not described in the May 2011 Soil Work Plan.

As suggested in Appendix A, page 6-2, treatability studies should be included. Treatability studies would describe not only the potential for chromium-6 leaching from soils, but also whether flushing and/or carbon amendments would be helpful for soil remediation. These studies would include laboratory core tests of soil samples; however, if laboratory core tests are proposed later in the future, then more sampling will occur. These core samples need to be collected as part of the current Soil Work Plan, and treatability studies need to be performed.

Other comments on the May 2011 Soil Work Plan are as follows:

- Page 2-4, Main Text: "...the boreholes will be filled." This doesn't describe the fill material. The topic of well decommissioning and borehole filling has been discussed at Topock meetings. The conclusions of these meetings should be compiled, and the different methods for borehole filling should be included in the Soil Work Plan, with emphasis on the preferred method.
- Table 1-1: The area of AOC-10 is shown as 1,400 ft<sup>2</sup> (0.032 acres), and the area of AOC-11 is shown as 14,000 ft<sup>2</sup> (0.33 acres). AOC-10 and -11 should be about 50 or 60 acres.
- Table 4-1, Main Text: Soil physical parameters will be determined; however, it does not mention permeability testing. If soil flushing is an option for remediation, then soil permeability is an important parameter to determine.
- In Appendix H, Quality Assurance Project Plan: Holding times for soil samples are not described. Holding times may vary for different analyses; however, all soil samples should be archived for possible future analyses, where testing of archived core samples would be preferred over new boreholes near sacred cultural features.

The groundwater and soil programs should be combined because the remediation of both the soil and groundwater are inexorably tied.

The Hualapai Department of Cultural Resources and the Hualapai Tribe appreciates the efforts by all parties to address our concerns. If you have any questions, please do not hesitate to contact myself, or Dawn Hubbs, Program Manager at (928) 769-2223.

Sincerely,



Loretta Jackson-Kelly, Director  
Tribal Historic Preservation Officer  
Hualapai Department of Cultural Resources