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OAK RIDGE INSTITUTE FOR SCIENCE AND EDUCATION

September 8, 2003

Mr. Tom McLaughlin
Mail Stop T-7F27
U.S. Nuclear Regulatory Commission
Division of Waste Management
11555 Rockville Pike
Rockville, MD 20852

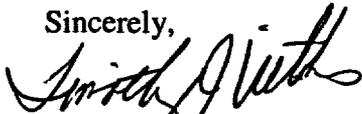
**SUBJECT: DOCUMENT REVIEW—COMMENTS ON THE AUGUST 2003
DRAFT SUPPLEMENTAL CHARACTERIZATION PLAN FOR
THE MOLYCORP, INC., WASHINGTON, PENNSYLVANIA SITE
(DOCKET NO. 040-08778, RFTA NO. 03-021)**

Dear Mr. McLaughlin:

The Environmental Survey and Site Assessment Program of the Oak Ridge Institute for Science and Education has reviewed the subject document. Comments have been enclosed for your consideration.

Please contact me at (865) 576-5073 or Wade Adams at (865) 576-0065 should you have any questions.

Sincerely,



Timothy B. Vitkus
Survey Projects Manager
Environmental Survey and
Site Assessment Program

TJV:ar

Enclosure

cc: E. Knox-Davin, NRC/NMSS/TWFN 8A23
C. Gordon, NRC/Region I
E. Abelquist, ORISE/ESSAP
W. Adams, ORISE/ESSAP
File/0879

| Distribution approval and concurrence: | Initials | Date |
|--|----------|--------|
| Technical Management Team Member | EG | 9/8/03 |

P. O. BOX 117, OAK RIDGE, TENNESSEE 37831-0117

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**Comments on the
August 2003 Draft Supplemental Characterization Plan for the
Molycorp, Inc., Washington, Pennsylvania Site**

Comments

1. Section 1.1: This section of the document provides the general characterization project objectives. However, because of the site complexity, numerous unknown conditions, and the various types of site areas to be addressed, ESSAP recommends that a more formal data quality objective (DQO) section be developed for each site area that follows the guidance contained in the U.S. Environmental Protection Agency's *Data Quality Objectives Process for Hazardous Waste Site Investigations; EPA QA/G-4HW, January 2000*. For example, site areas may require varying degrees of characterization survey effort based on expected site conditions. This same guidance has been adapted into the *Multi-Agency Radiation Survey and Site Investigation Manual*.
2. Section 1.2.5 and 1.2.6: These sections provide information on prior investigations and remedial actions. It is unclear to the reviewer for some of the discussed areas, whether or not they are within the bounds of proposed characterization activities. It would be helpful to the reviewer to more fully evaluate the adequacy of the plan if the land areas in these sections, where applicable, were cross-referenced to the appropriate land area nomenclature (Areas 1 through 10) used in Section 1.2.2 and elsewhere throughout the document. Alternatively, the investigated or remediated areas could be referenced to and shown on a site map that also includes the ten characterization area demarcations.
3. Section 4.1.1, Page 4-3: The bulletized list provides the procedure for performing gamma scans of investigated areas. ESSAP recommends that additional information be included regarding the method for determining the minimum, maximum, and average count rates. Furthermore if not already planned, ESSAP recommends that the surveyor use the audio output to identify suspect locations of elevated activity requiring further investigation. ESSAP also recommends that rather than using the gamma radiation levels to reposition boring locations as discussed in the next paragraph, that any suspect locations identified during gamma walkovers be considered for judgmental sampling in addition to the proposed systematic locations discussed in later sections.
4. Sections 4.1.2.1, 4.1.2.2, and 4.1.2.3: ESSAP recommends that the document include additional information as to what process was used to determine the number of sample locations in each characterization area. Alternatively, this information could be discussed in a formalized DQO section as discussed in comment no. 1. This comment also applies as applicable to Sections 4.2, 4.2.1, 4.3.1, 4.4.2, and 4.5.1.

5. Section 4.1.2.1, Page 4-5, 3rd Paragraph: ESSAP recommends that additional information be provided regarding the decision process for core section analysis. As written, it is unclear to the reviewer the intended process for determining the depth intervals that will be analyzed. For instance, will each 1-foot section be analyzed or is the intended guidance to only analyze certain sections representing 1-foot intervals that exhibit elevated activity; or alternatively, is it intended to possibly composite and analyze the entire core? Furthermore, mixing English and metric units hinders clarity. Lastly, what is the technical basis for the intervals of interest? Again, a formal DQO presentation that outlines ultimate data use would be helpful. Site modeling applications to determine release criteria and an idea of the eventual compliance units—e.g., will compliance be based on concentrations over intervals of 15 centimeters, one meter, or some other interval—will necessitate that this information be known prior to implementing the plan.
6. Sections 4.2 through 4.8: The proposed characterization activities for the areas discussed in these sections concentrate primarily—with a few noted exceptions for Areas 4 and 6 in Sections 4.2 and 4.4, respectively—on chemical concerns. The plans for Areas 4 through 9 do not include gamma walkover surveys or radiological analyses, with the exception of radiological analysis of suspected NORM-containing refractory brick found in Area 4 and sediments from Chartiers Creek in Area 6.

It is ESSAP's opinion that the site history provided, although extensive and well documented, can not completely eliminate the possibility of these remaining areas to have been impacted by site activities. For example, there are several references to possible slag disposal in some of the areas discussed in these Sections, albeit the slag is believed to not have been from the licensed operations. As another example, Section 4.9 states that within Area 10 "There are no records of slag or processed material ever being produced or stored in either of these areas; however...thorium was identified at a concentration greater than 10 pCi/g..." Therefore, ESSAP recommends that both gamma walkovers of judgmental areas and random and or judgmental radiological sampling be performed.

Although this characterization plans makes no reference to or purports to follow the guidance in MARSSIM, ESSAP recommends that consideration be given to incorporating some of the MARSSIM principles in designing the characterization surveys for Areas 4 through 9 to address the preceding concern. Proper planning using these principles may assist with the eventual plans and requirements to release the site. That is, Areas 4 through 9 may be considered as Class 3 areas as defined in MARSSIM and an appropriate characterization survey planned that satisfies both the characterization and eventual final status survey objectives. Appropriate application of the DQO process would be necessary to achieve this objective.