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July 31, 2000

David J. Allard, Director
Bureau of Radiation Protection
Pennsylvania Department of Environmental
Protection
P.O. Box 8469
Harrisburg, PA 17105-8469

SUBJECT: REVIEW OF THE MOLYCORP, WASHINGTON, PA, DECOMMISSIONING
PLAN, PHASE I

Dear Mr. Allard:

I am responding to your letter of July 21, 2000, which forwarded your agency's comments on the subject decommissioning plan. Our responses to your comments are enclosed.

If you have any questions concerning this response, please call me at (301) 415-7234 or Mr. Robert Nelson of my staff at (301) 415-7298.

Sincerely,

Larry W. Camper, Chief
Decommissioning Branch
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards

Enclosures:
Responses to Comments

cc: Molycorp, Washington Dist. List

Docket No.: 040-08778
License No.: SMB-1393

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**RESPONSES TO COMMENTS FROM
THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CONCERNING THE MOLYCORP, WASHINGTON, PA
DECOMMISSIONING PLAN, PHASE I**

Comment 1: Many of the comments provided in BRP's [Bureau of Radiation Protection's] July 14, 2000 letter commenting on the NRC's EA [environmental assessment] are also applicable to the DP-1 [Decommissioning Plan, Phase 1]. Specifically Comments Number 5 -17 are applicable to the DP-1.

Response: See NRC responses to the EA comments 5 - 17.

Comment 2: As stated in Comment Number 1 of BRP's July 14 letter, we are concerned that actions proposed for Part 1 of the decommissioning should not preclude any feasible option for disposal of the radioactive waste in Part 2 of the decommissioning. Molycorp should ensure that actions taken in the consolidation of waste in Part 1 do not preclude offsite disposal as a viable option in Part 2. For example, stockpiling of the waste should be performed in a manner such that offsite disposal could be carried out, consistent with good ALARA practices.

Response: The proposed action for Part 1 does not preclude offsite disposal. Under the Part 1 plan, contaminated material can be excavated and shipped to an NRC-approved location offsite so long as this is done in a timely manner. Planned stockpiling is for a limited time period (approximately two weeks), therefore, the disposal option will have to be known prior to excavation of that material planned for Part 2 disposal. Material not planned for Part 2 disposal can be excavated and shipped offsite to an NRC-approved location at any time following NRC approval of the Part 1 DP. NRC staff responses to PADEP comments 2 and 4 on the NRC EA provide additional information to clarify this response.

Comment 3: The DP-1 soil sampling plan should provide samples with sufficient volume to permit splitting samples with BRP for independent verification of Molycorp's analysis results. NRC should keep BRP informed of progress at the site to ensure that split samples are available prior to backfilling with clean soil. In addition, BRP should be kept informed of general progress in the site cleanup activities to permit independent survey measurements by the Commonwealth.

Response: NRC will notify BRP when soil samples are available for verification. NRC staff will review the forthcoming supplemental characterization plan to ensure soil surveys include sufficient material to allow splitting.

Comment 4: The thorium concentration maps of Figures 2-1 through 2-7b show levels of contamination ranging from 30 to 500 pCi/gm total thorium in the slag pile area. However, sampling results reported for the slag pile are higher than 1000 pCi/gm. Although Molycorp explains in their April 3 letter that data from the slag pile are not included because this would invalidate the site-wide modeling for thorium distribution, the DP-1 figures should be clarified to indicate that the slag pile is not included.

Enclosure

Response: NRC staff consider the supplemental information in Molycorp's April 3, 2000, letter (from G. Dawes to L. Camper) to be part of the decommissioning plan for the facility. This letter will be cited in the license condition that approves the DP. Because the April 3 letter clarifies the lack of inclusion of the slag pile in the cited figures, NRC staff believes no additional action is needed to correct the record. In the same April 3 letter, Molycorp provides inventory estimates for the slag pile.

Comment 5: The DP-1 should address precautions to be taken because of the potential for elevated levels of radium and radon, as well as heavy metals (non-radioactive).

Response: The DP (Part 1) references draft radiation protection procedures that have been developed to demonstrate compliance with the requirements of 10 CFR Part 20. NRC staff requested the final procedures be submitted to NRC for review and approval prior to the start of any approved decommissioning operations. NRC staff has received the procedures and will coordinate their review with BRP. Following approval, NRC will inspect the radiation protection program to ensure that implementation of the procedures is sufficient to demonstrate compliance with the 10 CFR Part 20 requirements.

Regarding non-radioactive contaminants (e.g., metals), NRC staff expects that Molycorp will include measures to control migration of metals during excavation in the supplemental groundwater characterization and monitoring plan requested in license condition 1 of the NRC EA. The license condition has been modified to include non-radiological contaminants to clarify this intent.

Comment 6: The DP-1 states that the duration for temporary storage of contaminated radioactive soils will typically not exceed two to three weeks. In order to meet this objective, it appears that resolution of the final disposal location (Part-2) will be necessary shortly after initiation of Part-1 remediation work. BRP would appreciate being informed of the plans for approval of DP-2, relative to the planned authorized start of work for DP-1.

Response: If Molycorp is granted approval for Part 1 decommissioning activities, Molycorp will not begin excavation of material planned for Part 2 disposal until the disposal proposal under Part 2 has been considered by NRC. Planned stockpiling is for a limited time period (approximately two weeks), therefore, the disposal option will have to be known prior to excavation of that material planned for Part 2 disposal. Material not planned for Part 2 disposal can be excavated and shipped offsite to an NRC-approved location at any time following NRC approval of the Part 1 DP. For example, Molycorp may want to excavate the slag pile and dispose of material offsite prior to completion of the Part 2 proposal review.

The NRC staff received the Phase 2 DP on July 14, 2000. Copies of the DP are being made and a copy will be forwarded to you as soon as the copies are available. The first step in the review of this DP is an acceptance review which is underway. An acceptance review is an administrative review to determine if there is sufficient information to begin a technical review. The NRC staff goal is to complete the acceptance review within 30 days of receipt. If the DP is accepted, the technical review will be coordinated with BRP staff.

Comment 7: Scans for surfaces of affected building described in Section 4.6 should be clarified. Lower walls are required to be 100% surveyed only up to 2 meters above the floor. Above 2

meters, scans are to be performed only where direct measurements are performed (i.e., where the characterization survey has detected no activity above 5,000 dpm/100 cm², per Section 4.7.1). However, Section 4.6 is silent for walls and other surfaces more than 2 meters above the floor where characterization has shown levels above 5,000 dpm/100 cm².

Response: Section 4.6 of the DP (first bullet) states that surface scans on affected areas will include 100% of floor and lower wall surfaces...and other surfaces in affected areas found to have residual activity in excess of guideline values during the radiological characterization survey." (emphasis added). Thus, the DP does include the areas interpreted as excluded in the PADEP comment.

Comment 8: Section 4.7.1 states that if scanning methods produce a minimum detectable activity (MDA) that exceeds 1,000 dpm/100cm², the measurements will be performed at one meter intervals in lieu of 2 meter intervals. Since the unrestricted release criteria for thorium contaminated surfaces is an average of 1,000 dpm/100cm², it is unclear that statistically significant measurements can be obtained with this high MDA. Molycorp should demonstrate that meaningful measurements will be obtained or take steps to reduce the MDA.

Response: NRC staff agrees with the comment, however, NRC staff expects that details of the survey techniques and procedures will be addressed in the NRC staff review of forthcoming survey plans submitted as part of the EA license condition 2 requirement. During this review, NRC staff will ensure that Molycorp plans include use of acceptable survey equipment.

Comment 9: In the sampling of surface soil for Unaffected Areas discussed on page 4-5, (misnumbered Section 4.7.1), the 30 samples should be specified to be randomly located within the survey unit, in accordance with the guidance of NUREG/CR 5849.

Response: NRC staff agree with the intent of the comment. Chapter 4 of the DP is focused on methods for final status surveys. Because NRC recognized that more detail is needed to assess the acceptability of the proposed approach, NRC included a license condition in the EA to request a supplemental site characterization plan that will discuss details of final survey procedures. NRC staff plans to review this plan to ensure that procedures in NUREG/CR-5849 are implemented correctly. To clarify this, the license condition in the EA was modified to include "for NRC review and approval". Therefore, NRC staff believe a mechanism is in place to address the concerns raised in the PADEP comment and the comment can be addressed without specific modifications to the DP.

Comment 10: The sampling of subsurface soil discussed on page 4-5 (misnumbered Section 4.7.2) specifies that soil samples will be taken at the completion of the excavation. It should be clarified that these final radiological status survey samples will be taken prior to backfill with clean soil to ensure that results obtained are representative of the remediated area, not the backfill.

Response: NRC staff agrees with the comment. NRC staff made a similar comment (comment B.1.i) that Molycorp responded to in the April 3, 2000, letter (G. Dawes to L. Camper). In its response, Molycorp states that before excavated areas are backfilled with soil (that meets the unrestricted release criteria) Molycorp will complete final status surveys in excavated areas. Because NRC staff considers Molycorp's April 03, 2000, letter to be a

supplement to the DP, no additional modifications to the DP are needed to respond to the PADEP comment.