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March 30, 1994

Mr. Chad Glenn
US NRC
Washington, DC 70555

Dear Mr. Glenn:

Enclosed is our response to the US NRC's comments on the surface impoundment closure plan originally submitted to the PA Department of Environmental Resources and US NRC August 31, 1992. The revised plan, submitted April, 1993, is still undergoing review by the state. We will advise you as soon as we receive the state's comments.

Please accept our apologies for the delay in the response.

Sincerely,

Barbara K. Dankmyer,
Resident Manager

BKD/dc

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Response to NRC Comments for Revised Closure Plans for Eight Surface Impoundments at Molycorp's Washington, Pennsylvania facility, dated May 27, 1993.

Page 2, Surveys:

For the boreholes drilled down the center of each pond to bedrock, in addition to logging radiation levels with a gamma probe, split spoon samples will be taken every eighteen inches.

Page 38, Determination of Thorium Concentrations in the Field During Closure:

Impoundment liquids. All water will be treated by reverse osmosis prior to release. The nature of the reverse osmosis process insures that material in the effluent is either dispersible or soluble. Accordingly, the use of the reverse osmosis process itself insures that the release will be of a dispersible material.

Molycorp intends to comply with the applicable requirements in 10 CFR 20, effective January, 1994. Molycorp has developed a quality assurance procedure for the release of waste water to the sanitary sewer. Individual releases will be monitored by gross alpha measurements and subsequent measurements of composites will be measured for ^{232}Th and ^{228}Ra to demonstrate compliance with 10 CFR 20 if the gross alpha measurements indicate releases are anywhere near the limits. The limits are summarized in the enclosed table.

Sampling of Impoundment Materials:

Molycorp will conduct a gamma scan of 100% of all waste using the sodium iodide scintillation probe calibrated either for a 55-gallon drum or another suitable container.

In addition, 10% of all waste, as suggested by the NRC, will be measured for ^{232}Th with an analytical technique capable of measuring well below 5 pCi/g of ^{232}Th and daughters. The technique used may be gamma spectrometry as opposed to a strict radiochemical analysis.

Calibration of Scintillation Probe for Measuring Average ^{232}Th Concentration in Drums:

As suggested in this paragraph Molycorp will demonstrate that a good correlation exists between the concentration of ^{232}Th inferred from exposure measurements in the boreholes and that found in 5 or more samples collected from around the borehole and analyzed in the laboratory for ^{232}Th .

Molycorp shares with NRC the desire that for waste in drums, that the measurement process be sufficiently accurate and precise that no material in excess of 5 pCi/g ²³²Th is inadvertently disposed of offsite as non-radioactive waste.

Page 41, Closure Schedule:

We agree with the NRC comments and will adhere to their recommendations.

The following table summarizes the 10CFR20 monthly average concentration limits for radionuclides in the thorium decay series releases to sewers.

thorium-232 decay series	10CFR20 Releases to Sewers, Monthly Average Concentration	
	μCi/ml	pCi/l
Th-232	3.00E-07	300
Ra-228	6.00E-07	600
Ac-228	3.00E-04	300000
Th-228	2.00E-06	2000
Ra-224	2.00E-06	2000