



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION IV
URANIUM RECOVERY FIELD OFFICE
BOX 26326
DENVER, COLORADO 80226

JAN 11 1991

URFO: PJG
Docket No. 40-8903
04008903380E

MEMORANDUM FOR: Docket File No. 40-8903
FROM: Pete J. Garcia, Jr., Project Manager
SUBJECT: WINDBLOWN SURVEY AT THE MILAN MILL

Introduction

By letter dated September 28, 1990, Homestake Mining Company submitted the results of a gamma survey and soil sampling program to evaluate the effectiveness of stabilization measures taken at the Milan Mill to control blowing of tailings. The data was submitted in accordance with Condition No. 19 of Source Material License SUA-1471 for the Milan Mill. The submittal also contained a summary of stabilization activities which have been performed. Additional data was submitted by letter dated November 29, 1990.

Discussion

An erosion control blanket to physically stabilize underlying tailings had previously been placed on the entire embankment crest. The licensee noted that the blanket has been effective, but that the downslope edge of the blanket has been undercut by the wind in several areas. As a result, new erosion control blankets were placed on the scoured areas to provide stabilization. Sprinkler systems have been placed on all beaches of the tailings retention system. The systems operate at all times that weather conditions permit. Chemical stabilizer was applied to exposed tailings surfaces during August 1990. The application concentrated on depositional areas and beach areas outside the influence of the sprinkler system and inside the erosion control blanket.

Homestake performed a soil sampling and gamma survey program in the 16 compass directions from the center of the tailings impoundment. Survey results are shown on the map accompanying the September 28 submittal. Samples were analyzed using a multi-channel analyzer at the Homestake site. In addition, approximately 40 percent of the samples were split and a composite sent to Barringer Laboratories for confirmatory analysis using wet chemistry. In general, the split sample analysis indicated good correlation.

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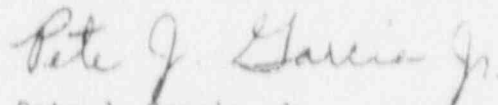
Several sample results in the September 28, 1990, submittal indicated readings above the 10.5 pCi/g Ra-226 action level. This action level is 5 pCi/g above the previously established background level of 5.5 pCi/g, as specified in Criterion 6 of Appendix A to 10 CFR 40. As a result of the elevated readings, Homestake performed resampling of the areas indicating high results.

All resampling results but one were under the 10.5 pCi/g action level. The results were discussed with Mark Hiles, Radiation Safety Officer at the Milan Mill, via telecon on December 27, 1990. Mr. Hiles stated that Homestake believed that the difference in results was attributable to poor technique used in collecting the original samples. Mr. Hiles believes that samples of less than 15 centimeter depth were collected, resulting in an average concentration which is overly influenced by the higher surface concentrations.

The area which indicated results above the 10.5 pCi/g action level was located northwest of the tailings pile. After resampling, the sample result for the area was 11.3 pCi/g for the site analysis and 16.0 pCi/g for the Barringer analysis. The area was scraped to remove the top layer of soil, and was resampled. Mr. Hiles indicated during the December 27, 1990, telecon that the Homestake analysis showed a result of 10.0 pCi/g. The result from Barringer had not been received by Homestake. This value, while below the action level, is still relatively high. Since the area was scraped, Mr. Hiles believes the concentration may result from naturally-occurring mineralization.

Conclusion

The staff review of the licensee's September 28 and November 29, 1990, submittals indicates that the licensee has performed an acceptable soil sampling and gamma survey program to evaluate the effectiveness of measures implemented to control blowing. No further action is therefore necessary.



Pete J. Garcia, Jr.
Project Manager

Case Closed: 04008903380E

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