

**TECHNICAL EVALUATION REPORT FOR  
UMETCO MINERALS CORPORATION'S PROPOSED 2011 SURETY  
FOR THE GAS HILLS URANIUM TAILINGS SITE,  
FREMONT AND NATRONA COUNTIES, WYOMING**

**Docket No.:** 40-0299

**License No.:** SUA-648

**DATE:** August 22, 2011

**FACILITY:** UMETCO Minerals Corporation – Gas Hills Uranium Mill Tailings Site, Fremont and Natrona Counties, Wyoming

**TECHNICAL REVIEWERS:** Dominick Orlando, Roman Przygodzki

**PROJECT MANAGER:** Dominick Orlando

**SUMMARY AND CONCLUSIONS:**

By letter dated June 13, 2011 [ADAMS Accession No ML111670115], Umetco Minerals Corporation (Umetco) submitted the annual surety estimate for 2011 for its Gas Hills uranium mill tailings site in Fremont and Natrona counties, Wyoming. By letter dated July 13, 2011 (ML11199A048), and as supplemented by letter dated July 18, 2011 (ML11201A304), Umetco revised its cost estimate to include the costs associated with its requested change to the approach for completing erosion protection enhancements. The U.S. Nuclear Regulatory Commission (NRC) staff has completed its review of Umetco's surety estimate and finds that it is acceptable and includes the cost estimate for completing the erosion protection enhancements for the Gas Hills site. Based on this review the NRC staff has approved the revised surety amount of \$4,878,787.

**BACKGROUND:**

Umetco's Gas Hills Reclamation Project is located in the East Gas Hills area of central Wyoming, approximately 50 miles (80 kilometers) southeast of Riverton, Wyoming and west of East Canyon Creek. The Umetco site is licensed by the NRC under Source Materials License SUA-648 to possess byproduct material in the form of uranium mill tailings waste, as well as other radioactive wastes generated by past uranium milling operations.

The mill operated from 1960 to 1979 and has been dismantled. The current Umetco site consists of three primary tailings disposal areas on the 1,920 acre parcel – the 170 acre Above-Grade Tailings Impoundment (AGTI), the 55 acre A-9 Repository (A-9), and the 60 acre Heap Leach Area. In addition, the Gas Hills Pond No. 2 area, adjacent to the Heap Leach Area, also contains waste from heap leach operations. Recently, Umetco proposed enhancements to the AGTI and A-9 Repository (ML103640265) because of the identification of sub-grade erosion on several areas of the AGTI and A-9 Repository. The surety estimate was submitted to address the potential costs for completing the erosion protection enhancements.

**TECHNICAL EVALUATION:**

The NRC staff evaluated the surety estimate pursuant to the regulations in Title 10 of the *Code of Federal Regulations* (10 CFR), Part 40, Appendix A, Criteria 9 and 10. The review is also guided by the guidance in NUREG-1620, Rev 1, Appendix C. The staff notes that the licensee's July 13, 2011, submittal has met the license requirement to submit an annual update to the surety estimate 3 months prior to the anniversary date of September 13. The June 13, 2011, submittal also included the \$3,502,312.28 estimated third-party cost of completing erosion enhancements. The licensee proposes to escalate its financial assurance proportional to the change in the Consumer Price Index (CPI) to an amount of \$4,612,641. The staff finds that the licensee relied on the latest available CPI figure, which at the time of the submittal was the April 2011 figure, to escalate its costs.

By letter dated July 13, 2011, Umetco requested latitude in completing erosion protection enhancements. Specifically, for some or all areas previously identified to use a mechanical vibrator to move the bedding layer material under the Type C rock cover, Umetco sought to remove the Type C rock cover, lay down a bedding layer, and re-emplace the Type C rock cover. Umetco stated that the existing cost estimate for erosion protection enhancements is not affected by its request. In its Technical Evaluation Report (TER) with respect to the erosion protection enhancements, the staff found the technical aspects of Umetco's request acceptable (ML112060407). However, the staff was unable to verify Umetco's calculations in its July 13, 2011, submittal, and requested clarification.

By letter dated July 18, 2011, Umetco revised its cost estimate for completing erosion protection enhancements from \$3,502,312.28 to \$3,768,458.16. Relying on the site specific data contained in Umetco's May 10, 2011 submittal, (ML11132A154) and July 18, 2011 submittal, the staff verified Umetco's calculations supporting its cost estimate of \$3,768,458.16.

The staff finds that the July 18, 2011, cost estimate of \$4,878,787 is based on the costs of a third party contractor; includes a 15% contingency factor; includes the estimated third-party cost of completing erosion protection enhancements; and includes the below described estimated costs of remaining site closure activities. On the basis of the staff's review, the staff finds the cost estimate reasonable and is therefore acceptable.

**Groundwater Monitoring:**

UMETCO requested and was authorized to use Alternative Concentration Limits for groundwater in March 2002. Excess wells have been reclaimed. Groundwater monitoring, as required by license condition, based on the costs of a third party contractor and escalated to April 2011 United States Dollars (USD), is estimated to be \$44,704.

**Fencing:**

In January 2009 UMETCO stated that fencing to restrict site access has been completed. A cost of \$70,677 for fencing was included in the 2009 surety estimate; however, it is not included in the 2011 surety estimate because fencing has been completed.

**Miscellaneous Costs:**

The licensee estimates the aggregate costs of site taxes, legal expenses related to the land transfer and the salary of the radiation safety officer to be \$126,286. Additional costs for final completion were estimated to be \$108,815. The staff finds that these costs are based on costs of a third party contractor and are escalated to April 2011 USD.

**Long-Term Surveillance Fee:**

The Long-Term Surveillance (LTS) Fee was escalated to April 2011 USD to an amount of \$830,524. On August 6, 2009, the U.S. Department of Energy submitted a draft Long-Term Surveillance Plan (LTSP) to NRC for the UMETCO Gas Hills site [ML092250176]. The NRC staff is currently reviewing the draft LTSP. Until such time as the staff completes its review, it is not clear whether the LTSP fee will be adjusted.

**Proposed License Condition Change:**

Revise License Condition 55 to change the required surety amount to read: \$4,878,787.