

**TECHNICAL EVALUATION REPORT FOR UMETCO MINERALS CORPORATION'S
PROPOSED 2015 FINANCIAL ASSURANCE SURETY UPDATE FOR THEIR GAS HILLS
URANIUM TAILINGS SITE, FREMONT AND NATRONA COUNTIES, WYOMING**

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

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PROJECT MANAGER: Dominick Orlando

SUMMARY AND CONCLUSIONS

By letter dated June 9, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession Number ML15167A212), Umetco Minerals Corporation (Umetco) submitted its 2015 annual financial assurance surety update for its Gas Hills uranium tailings site in Fremont and Natrona Counties, Wyoming. On July 13, 2015, the U.S. Nuclear Regulatory Commission (NRC) staff requested additional information regarding the financial assurance information submitted by Umetco in its June 9, 2015, letter (ML15188A480). On August 6, 2015, Umetco provided additional information, including revised cost and annual property tax estimates, and an Agreement for Services from a third party contractor¹. On November 16, 2015, Umetco confirmed that the property tax estimates provided by Umetco were based on 2015 tax rates. The NRC staff also requested the analytical laboratory rates from Umetco's contract laboratories, Test America and ACZ Laboratories. On November 19, 2015, and December 21, 2015, Umetco provided additional information relating to analytical laboratory rates from Test America and ACZ Laboratories (ML15329A189) and a revised legal expense estimate (ML16005A428).

The NRC staff reviewed the 2015 surety update, in the amount of \$1,423,985.67, for Umetco's Gas Hills site. The NRC staff has determined that the 2015 annual surety update meets the NRC's regulatory requirements in Title 10 of the Code of Federal Regulations (10 CFR), Part 40, Appendix A, Criterion 9. Therefore, the NRC staff finds that the annual surety update is acceptable, pending Umetco's submittal of a revised Standby Trust Agreement and Surety Bond to increase the coverage amount of the previously approved 2014 surety amount from \$1,161,638 to \$1,423,985.67.

BACKGROUND

The Umetco Gas Hills site is located in a remote area of Wyoming, in Fremont and Natrona counties, approximately 60 miles east of Riverton, Wyoming. The restricted area of the site consists of approximately 542 acres, of which Umetco owns 280 acres. The remainder of the site is under the jurisdiction of the U.S. Bureau of Land Management. The mill was constructed in 1959 and was shut down in 1984. Mill building decommissioning was completed in 1993.

¹ This Information is withheld as non-public pursuant to 10 CFR 2.390 because it contains proprietary information

Site reclamation was completed in 2006 and approved by the NRC in 2008. During field inspections of the tailings and pile in 2009, Umetco identified incisions and rills on the tailings pile cover. Umetco determined that the incisions and rills were due to a deficiency in the design of the erosion protection system for the cover. In December 2010, Umetco proposed a solution to the deficiency and the NRC approved Umetco's proposed Erosion Protection Enhancement in August 2011. The Erosion Protection Enhancement work was completed in 2011 and approved by the NRC in 2012.

In 2001, Umetco submitted an application for Alternate Concentration Limits (ACLs) to address groundwater constituents-of-concern derived from historical milling operations at the site (ML011440258). The ACL application was supported by groundwater flow, solute transport, and geochemical models. To help validate these models, and provide ACL constituent attenuation information, Umetco prepared and implemented a groundwater monitoring plan that required the comparison of groundwater chloride and sulfate sampling results to corresponding model-predicted concentrations at four model validation wells. Between 2010 and 2012, measured concentrations of chloride and sulfate exceeded model predictions in monitoring well MW28, located along the groundwater flow path between the Western Flow Regime (WFR) Point of Compliance and the Point of Exposure. In addition, sampling results raised concerns that Radium-226 and Radium-228 were not attenuating as predicted in the model. Based on the sampling results, Umetco agreed to perform a groundwater evaluation of the WFR (ML14106A615).

TECHNICAL EVALUATION

The NRC staff evaluated the surety update in accordance with the regulations in 10 CFR Part 40, Appendix A, Criterion 9 and the guidance in NUREG-1620, Rev. 1, Appendix C. The staff finds that the licensee has met the requirement to submit its annual surety update three months prior to the annual due date of September 13. The staff finds that the revised cost estimate is based on the costs of a third party contractor decommissioning the site, and includes a 15 percent contingency factor. The licensee proposes to adjust its financial assurance from \$1,161,638 to \$1,423,985.67. The staff finds that the licensee relied on costs from a third party contractor, revisions to the groundwater monitoring plan, installation of four new wells, efficiency gains from prior groundwater evaluations, and re-baselining estimates, to reflect updated comparable industry cost estimates for the radiation officer, current property tax rates, and the Consumer Price Index (CPI) applied to legal expenses and long-term surveillance.

GROUNDWATER MONITORING

Umetco requested, and was authorized to use, ACL's 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, four additional wells, additional constituents, and the proposed modifications to the monitoring plan (semi-annual to annual sampling), is estimated to decrease from \$105,948 to \$48,260.08 (plus a 15 percent contingency factor). The staff finds that the groundwater monitoring costs are based on the costs of a third party contractor, four additional wells, additional constituents, and modified monitoring plan (semi-annual to annual sampling) and are acceptable.

INSTALLATION OF NEW WELLS

Umetco has proposed the installation of four additional monitoring wells to address the NRC concerns regarding constituent attenuation and groundwater model predictions. The installation of four new wells (including field oversight and related reporting), based on a third party subcontractor quote, is estimated to be \$101,946.32 (plus a 15 percent contingency factor). The staff finds that the costs of the installation of four additional monitoring wells are based on a third party sub-contractor and are acceptable.

GROUNDWATER EVALUATION

Groundwater evaluations, as required by license condition, based on the costs of a third party contractor and efficiencies gained from previous database development and systematic tools, is estimated to decrease from \$133,117 to \$57,040 (plus 15 percent contingency). The staff finds that the groundwater evaluation costs are based on the costs of a third party contractor and efficiencies gained from previous database development and systematic tools and are acceptable.

MISCELLANEOUS COSTS

Umetco estimated the aggregate costs of site property taxes, legal expenses related to the land transfer and the salary of the radiation safety officer to decrease from \$133,117 to \$126,588.83 (plus a 15 percent contingency factor). The staff finds that these miscellaneous costs are based on the cost of legal fees increasing from \$86,140 to \$86,235.83 (plus 15 percent contingency), proportional to the change in the CPI, a decrease in property taxes from \$4,307 to \$3,500 (plus a 15 percent contingency factor) consistent with current billing rates, and a decrease in radiation safety office rates from a total cost of \$42,670 to \$36,853 (plus a 15 percent contingency factor) based on the status of completed reclamation efforts and recent experience, and reflective of current comparable industry rates. The staff finds that Umetco's miscellaneous cost estimates are reasonable and acceptable.

LONG-TERM SURVEILLANCE FEE

The Long-Term Surveillance (LTS) Fee was escalated from \$875,451 to \$881,233.38 (plus a 15 percent contingency factor), proportional to the change in the CPI. In 2010, the U.S. Department of Energy submitted a draft Long-Term Surveillance Plan (LTSP) to the NRC for the Umetco Gas Hills site. The NRC staff is currently reviewing the draft LTSP.

PROPOSED LICENSE CONDITION CHANGE

Revise License Condition 55 to state: Umetco Gas Hills' currently approved surety instruments, a surety bond held by the Liberty Mutual Insurance Company and a standby trust agreement that is accessible to the NRC, shall be continuously maintained in an amount no less than \$1,423,985.67 for the purpose of complying with 10 CFR 40, Appendix A, Criteria 9 and 10, until a replacement is authorized by the NRC.