November 06, 2014

Mr. Thomas Gieck, Reclamation Leader
Umetco Minerals Corporation
2754 Compass Drive, Suite 280
Grand Junction, CO 81506

SUBJECT: THE U.S. NUCLEAR REGULATORY COMMISSION STAFF REVIEW OF UMETCO MINERALS CORPORATION'S 2014 ANNUAL REPORT FOR UMETCO"S GAS HILLS, WYOMING, SITE (DOCKET 040-0299)

Dear Mr. Gieck:

I am writing in response to your letter dated September 26, 2014, in which you provided the annual report for Umetco Minerals Corporation's Gas Hills, Wyoming, site (Agency Document Access and Management System (ADMS) Accession Number ML14275A089).

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the 2014 annual report and has the following comments:

1. The NRC staff agrees that sampling for all of the Alternate Concentration Limit (ACL) constituents in the Western Flow Regime (WFR) and Southwestern Flow Regime (SWFR) monitoring wells provides a more definitive picture of plume migration. The Point of Exposure (POE) has been established at the proposed long-term care boundary and monitoring well 77 (MW77) is the closest monitoring point to the proposed long-term care boundary in the WFR.

   The concentration for nickel at MW77 during the June 2014 sampling event is reported as 0.531 milligrams per liter (mg/l), which is in excess of the POE value of 0.065 mg/l established in Umetco's ACL application (ML020020133). In addition, the concentration for beryllium at MW77 is reported as 0.01132 mg/l, which is also in excess of the POE value of 0.005 mg/l in Umetco's ACL application.

   The NRC staff is concerned that the concentrations of nickel and beryllium in MW77 could indicate that the concentrations of these materials at the site boundary are in excess of the value established in the ACL application and in excess of the groundwater model's predicted values. However, due to the lack of a monitoring well at the site boundary, the actual concentration of these materials cannot be verified.

2. The concentration of uranium at MW1 has declined over the last several years, from approximately 10 mg/l in 2004 to 4.3 mg/l now, while the uranium concentration at MW70A has remained relatively steady to slightly declining since 2003. The uranium concentration in MW70A reflects the migration of up gradient uranium in MW1. The staff is concerned that, while the uranium concentration in MW1 has declined,

the non-concurrent decrease in uranium at MW70A could indicate that the uranium concentration down gradient of MW70A is greater than anticipated.

3. MW71B continues to be questionable as a long-term monitoring well and for model validation since it is screened in the lower portion of the WFR. Groundwater concentrations of milling-related constituents were historically shown to decline rapidly with depth and are restricted to the upper 50 to 100 feet of the WFR beneath the Above Grade Tailings Impoundment. In addition chloride levels in particular were noted as being very low in most of the deeper wells.

4. The staff requests that Umetco provide the well completion information for the currently active wells at the site, such as the information contained in the report entitled "Drilling and Construction and Testing of Monitoring Wells MW70-A, MW70-B, MW71-A, MW-71B, MW-72, MW-73, MW-74 and Extraction Wells MW-78, MW-79, MW-80, MW-81 East Gas Hills, Wyoming" prepared for Umetco Minerals Corporation by U.S. Environmental Services in September 1997. We are requesting this information in order to better understand the model that Umetco has developed for the site and potential inconsistencies between the model's predicted results and the actual results at the site.

   For example, the model's predicted concentrations were for the upper portion of the WFR. MW28 is considered a deep well used to monitor vertical distributions of constituents. MW28 has shown high radium concentrations that may indicate attenuation is not proceeding as predicted because radium concentrations in the deeper portion of the wells in the WFR should be considerably lower than the radium concentrations in the upper portion of the wells in the WFR. However, this is not the case.

In summary, the continued exceedance of target level concentrations at the model validation wells and the concentrations of nickel and beryllium reported at the representative POE well for the WFR raise continued concerns about the accuracy of the ground water model for the site. Additional monitoring wells should be installed to verify the attenuation of ACL constituents and to verify that the ACL constitutients have not exceeded the POE values at the site boundary.

In accordance with 10 CFR 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of the NRC's ADAMS. ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html.

If you have any questions concerning the NRC comments please feel free to contact me at 301-415-6749 or at Dominick.Orlando@nrc.gov.

Sincerely,

/RA/

Dominick Orlando, Senior Project Manager
Materials Decommissioning Branch
Division of Decommissioning, Uranium Recovery,
and Waste Programs
Office of Nuclear Material Safety
and Safeguards

Docket No.: 040-00299
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