

Request for Additional Information

Inspection Procedures

1. Comment: Please provide additional information as to why the C-18 Pit area was not included on the annual site inspection transects.

Basis: Title 10, Code of Federal Regulations (CFR), Part 40, Appendix A, Criterion 12

Discussion: The Long-Term Surveillance Plan (LTSP) needs to include the C-18 Pit area into an inspection transect, or a discussion stating why the C-18 pit area has been excluded from annual inspections.

Groundwater

1. Comment: Please demonstrate that arsenic, beryllium, selenium, and thorium-230 are not capable of posing a substantial present or potential hazard to human health or the environment.

Basis: 10 CFR 40, Appendix A, Criterion 5B(3)

Discussion: The elimination of hazardous constituents are typically based on the criteria set forth in Criterion 5B(3). Please demonstrate that the proposed monitoring program in the draft LTSP will adequately determine the potential for exceedances related to arsenic, beryllium, selenium, and thorium-230 derived from the site, and ensures protection of human health and the environment.

2. Comment: Please change the terminology used in the LTSP from “Constituent of Potential Concern” to “hazardous constituent”.

Basis: 10 CFR 40, Appendix A, Criterion 5B(2)

Discussion: A constituent is considered to be a hazardous constituent when: (a) the constituent is reasonably expected to be in or derived from the byproduct material in the disposal area; (b) the constituent has been detected in the groundwater in the uppermost aquifer; and (c) the constituent is listed in 10 CFR 40, Appendix A, Criterion 13.

3. Comment: Please provide the basis for considering Well MWI64 as the point of compliance well (POC) and not Wells MW21A and MW1.

Basis: NRC Materials License, SUA-648, License Condition 35(B)

Discussion: In Umetco Minerals Corporation’s (Umetco) approved Final Application for Alternate Concentration limits, dated December 3, 2001 (Umetco 2001), Well MW1 is the closest well to the impoundment in the western flow regime. Per Section 2.2.4 “Model Development,” of Umetco’s 2001 submittal, it appears that the alternate concentration limit (ACL) values were initially modeled from Well MW21 towards the point of exposure. Please provide additional justification stating why considering Well MWI64 as the POC in lieu of Wells MW21A and MW1 will provide a similar level of assurance that site derived constituents at the point of exposure will remain within background values.

Enclosure

4. Comment: Please clarify the statement that an exceedance of an ACL at Well MWI64 on page D-10 of the draft LTSP would not be immediate cause for concern.

Basis: 10 CFR 40, Appendix A, Criterion 5D

Discussion: If Well MWI64 is accepted as a POC well, an ACL exceedance at any POC well would initiate the LTSP action items as discussed in Section 3.7.1.

5. Comment: Please provide the basis for excluding Well GW7 as a POC well.

Basis: NRC Materials License, SUA-648, License Condition 35(C)

Discussion: In Umetco's approved Final Application for Alternate Concentration limits (Umetco 2001), Well GW7 is shown to be the closest well to the impoundment in the southwestern flow regime. Per Section 2.2.4, "Model Development," of Umetco's submittal, it appears that the ACL values were initially modeled from Well GW7 towards the point of exposure. Please provide additional justification that the exclusion of Well GW7 will provide adequate monitoring of the aquifer.

6. Comment: In Section 3.7.1, "Groundwater Monitoring," of the draft LTSP, please modify the first sentence in the section to reflect that the models for ACL values were shown to attenuate to within the range of background levels at the point of exposure. Additionally, Table 3-4 of the draft LTSP should also reflect this comment.

Basis: Final Application for Alternate Concentration Limits (Umetco 2001)

Discussion: In the first sentence of Section 3.7.1, "Groundwater Monitoring" of the draft LTSP, it is inferred that the protective value, as demonstrated by Umetco, would be the Wyoming Class III standards, while the approved ACL values were shown to attenuate to within the range of background values.

Clarifying Comments:

1. Uranium concentrations were discussed on page D-10 of the draft LTSP as displaying an upward trend for Well MW1. Umetco's 2009 Annual Report (Umetco 2009) illustrated in Figure 11 that uranium concentrations have been decreasing since mid-2007. Please clarify this.
2. Table 3-3 in the draft LTSP lists Well GW8 as a southwestern flow regime trend well, not a POC well as stated on page 3-9. Please clarify this.
3. NUREG-1620, Appendix D specifies that American Society for Testing and Materials standards, or equivalent be used for water quality sampling and analysis procedures. Please clarify the sampling and analysis procedures that are to be implemented at the East Gas Hills site.

4. Please note that on page 2-3 of the draft LTSP, only one final status survey report was discussed as having been approved by NRC. However, the completion of decommissioning was demonstrated by the following submittals: (1) Final Status Survey Report (Umetco 2003); (2) Addendum I (Umetco 2004); (3) Addendum II (Umetco 2005); and (4) Addendum III (Umetco 2007). Addendum III of the Final Status Survey Report was submitted by the licensee and approved by the NRC in 2007 (NRC, 2007), and subsequently re-reviewed by NRC in 2008 to include additional documentation. Please clarify this in the LTSP.

5. On page 3-12 of the draft LTSP, please modify the last sentence of the second paragraph to reflect that NRC staff will only allow the discontinuation of groundwater monitoring after NRC technical review and concurrence.

References:

Umetco Minerals Corporation, 2001, Gas Hills, Wyoming License Number SUA-648, Docket #40-0299 ACL Application Revisions, December 3, 2001 [**ADAMS Accession No. ML0200201334**].

Umetco Minerals Corporation, 2003, Gas Hills, License Number SUA-648; Docket #40-0299 Final Status Survey Report, October 27, 2003 [**ADAMS Accession No. ML033080312**].

Umetco Minerals Corporation, 2004, Final Status Survey Report Addendum I, April 16, 2004 [**ADAMS Accession No. ML041140539**].

Umetco Minerals Corporation, 2005, Final Status Survey Report Addendum II, May 11, 2005 [**ADAMS Accession No. ML0513304833**].

Umetco Minerals Corporation, 2007, Final Status Survey Report Addendum III, January 22, 2007 [**ADAMS Accession No. ML070310589**].

Umetco Minerals Corporation (Umetco), 2009. Nuclear Regulatory Commission Annual Report, Umetco Minerals Corporation Gas Hills, Wyoming Site, For the report period July 2008 through June 2009.. [**ADAMS Accession No. ML0929600760**].

U.S. Nuclear Regulatory Commission, 2007, The Umetco Minerals Corporation's Final Survey, July 30, 2007 [**ADAMS Accession No. ML072130140**].