NRC FORM 374

U.S. NUCLEAR REGULATORY COMMISSION

MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and the applicable parts of Title 10, Code of Federal Regulations, Chapter I, Parts 19, 20, 30, 31, 32, 33, 34, 35, 36, 39, 40, 51, 70, and 71, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee	
1. Umetco Minerals Corporation	3. License Number SUA-648 Amendment No. 58
2. P.O. Box 1029 Grand Junction, Colorado 81502	4. Expiration Date Until terminated 5. Docket No. 40-0299 Reference No.

6. Byproduct Source, and/or Special Nuclear Material	7. Chemical and/or Physical Form	8. Maximum amount that Licensee May Possess at Any One Time Under This License
Natural Uranium	Any	Unlimited

9. Authorized place of use: The licensee's uranium milling and heap leach facilities located in Natrona County, Wyoming.

10. The licensee shall:

A. Issue a Radiation Work Permit (RWP) for non-routine work which may, by the determination of the Radiation Safety Officer (RSO), result in significant exposure to radioactive materials. The RWP shall at a minimum describe the scope of work to be performed, any precautions necessary to reduce exposure, and the necessary supplemental monitoring and sampling.

B. Provide by a current organizational chart and details of the authority and responsibility of each level of management, noting any changes. This submittal will be included in the ground water monitoring review, due each September 30th.

C. Perform a semi annual documented visual inspection of the evaporation pond (GHP No. 2). If pond solution levels increase to contact the south or west embankment, quarterly inspections will be performed. If solutions are actively being transferred into the pond, weekly inspections will be performed, but may be postponed due to adverse weather conditions. Pond inspections may be terminated once GHP No. 2 reclamation activities are initiated.

D. Conduct training for site personnel, contractors, and visitors in accordance with the requirements of 10 CFR 19.12 “Instruction to Workers” on the following frequencies.

1) Site personnel shall receive radiation and safety training initially and radiation/safety refresher training on an annual basis.

2) Visitors are required to register at the office and are not permitted inside the facility restricted area without visitor training unless escorted by trained personnel.

3) Contractors having work assignments inside the restricted area are given radiation and safety training prior to performing their duties.

E. Control access to the site restricted area through the use of physical barriers and use of site personnel during scheduled work hours.

[Applicable Amendments: 22, 40, 48, 50, 51, 53]

11. DELETED by Amendment No. 22.

12. DELETED by Amendment No. 22.

13. The licensee is hereby exempted from the requirements of 10 CFR 20.1902(e) for areas within the site, provided that all entrances to the site are conspicuously posted in accordance with Section 20.1902(e) and with the words, "Any area within this site may contain radioactive material."

[Applicable Amendment: 35]

14. The RSO shall meet the minimum qualifications specified in Section 2.4.1 of Regulatory Guide 8.31, Rev. 1, dated May 2002.

[Applicable Amendment: 53]

15. Written procedures shall be established for non-operational activities to include environmental monitoring and instrument calibrations. An up-to-date copy of each written procedure shall be kept in the area to which it applies.

All written procedures shall be maintained on site and shall be reviewed and approved in writing by the RSO before implementation, and whenever a change in procedure is proposed, to ensure that proper radiation protection principles are being applied. In addition, the RSO shall perform a documented review of existing procedures at least annually.

[Applicable Amendments: 22, 40]

16. The licensee shall conduct an annual ALARA audit. A copy of the annual ALARA audit report shall be retained at the site and shall be available for NRC review.

In addition, the licensee shall review the environmental monitoring program annually and provide a report that summarizes environmental monitoring conducted at the site and include the dose assessment for individual members of the public. A copy of the annual environmental monitoring audit report shall be available at the site for NRC review.

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[Applicable Amendments: 22, 35, 40]

17. DELETED by Amendment No. 40.

18. DELETED by Amendment No. 22.

19. DELETED by Amendment No. 35.

20. Calibration of equipment utilized for radiation surveys shall be performed annually. Air sampling equipment shall be calibrated at least quarterly or prior to use if utilized less frequently than on a quarterly basis.

    [Applicable Amendment: 40]

21. DELETED by Amendment No. 40.

22. Release of equipment or packages from the restricted area shall be in accordance with "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct Materials," dated April 1993.

    [Applicable Amendments: 22, 40]

23. Mill tailings other than samples for research shall not be transferred from the site without specific prior approval of the NRC in the form of a license amendment. The licensee shall maintain a permanent record of all transfers made under the provisions of this condition.

24. DELETED by Amendment No. 22.

25. The licensee is hereby authorized to possess byproduct material in the form of uranium waste tailings generated by the licensee's former uranium recovery operations previously authorized under license SUA-648.

    [Applicable Amendment: 43]

26. DELETED by Amendment No. 22.

27. The results of sampling, analyses, surveys and monitoring, the results of calibration of equipment, reports on audits and inspections, and all meetings and training courses required by this license and any subsequent reviews, investigations, and corrective actions, shall be documented. Unless otherwise specified in NRC regulations, all such documentation shall be maintained for a period of at least 5 years.

28. The licensee shall immediately notify the NRC by telephone and facsimile transmission upon discovery in the tailings, heap leach or evaporation pond areas of any failure of structures or earthworks that results in a release of radioactive material and/or any unusual conditions which, if not corrected, could lead to such a failure. This requirement is in addition to the requirements of 10 CFR Part 20.

    [Applicable Amendments: 22, 31]

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29. DELETED by Amendment No. 22.

30. The licensee shall decommission the Umetco Gas Hills Uranium Mill in accordance with its submittals dated May 2 and June 18, 1990, as modified for soil cleanup by submittals dated September 15 and November 17, 2000. The decommissioning shall include disposal, in the A-9 pit, of all structures (e.g. maintenance shop building, and water tower), debris, and other wastes within or originating from the restricted area.

    A. DELETED by Amendment No. 24.

    B. DELETED by Amendment No. 44.

    C. DELETED by Amendment No. 53.

    [Applicable Amendments: 14, 16, 17, 22, 24, 31, 32, 44]

31. Before engaging in any activity not previously evaluated by the NRC, the licensee shall prepare and record an environmental evaluation of such activity. When the evaluation indicates that such activity may result in a significant adverse environmental impact that was not assessed or that is greater than assessed, the licensee shall provide a written evaluation of such activities and obtain prior approval from the NRC in the form of a license amendment.

32. The licensee shall conduct an annual survey of land use (private residences, grazing areas, private and public potable water and agricultural wells, and non-residential structures and uses) in the area within five (5) miles (8 km) of any portion of the restricted area boundary and submit a report of this survey to the NRC. This report shall indicate any differences in land use from that described in the last report.

    [Applicable Amendment: 32]

33. In order to ensure that no disturbance of cultural resources occurs in the future, the licensee shall have an archeological and historical artifact survey of areas of its property, not previously surveyed, performed prior to their disturbance, including borrow areas to be used for reclamation cover. These surveys must be submitted to the NRC and no such disturbance shall occur until the licensee has received authorization from the NRC to proceed.

    In addition, all work in the immediate vicinity of any buried cultural deposits unearthed during the disturbance shall cease until approval to proceed has been granted by the NRC.

    [Applicable Amendment: 40]

34. Air particulate sampling stations will be taken at: Tower 1 - Downwind; Tower 4 - Site Background; Tower 6 - Nearest Residence.

    A. Air particulate samplers will be operated during the site construction season or when the potential for airborne radioactivity concentrations due to site activities, as determined by the RSO, would be expected to exceed 10 percent of the effluent concentrations as listed in 10 CFR 20, Appendix B,

Table 2. Filters will be changed out at a maximum of every two weeks with filters composited and analyzed at a frequency to ensure results will meet LLD requirements, but not to exceed quarterly during continuous air particulate sampler operations.

During site operational periods, air particulate samplers will be operated continuously. Filters will be analyzed for the following radionuclides: U-natural, Thorium-230, Radium-226, and Lead-210.

B. Radon-222 monitoring will be performed at the air particulate monitoring locations. Radon-222 sampling devices will be exchanged at least semiannually.

C. Environmental gamma monitoring will be performed at the air particulate monitoring locations and certified gamma monitoring devices will be exchanged quarterly.

D. The licensee shall follow the lower limits of detection contained in Regulatory Guide 4.14, Section 5, and License Condition 35D, for the analysis of samples collected in conjunction with the environmental program.

[Applicable Amendments: 8, 22, 40, 43, 45]

35. The Alternate Concentration Limits (ACL) for ground water contained in Umetco's application dated May 11 and May 18, 2001, as revised by submittals of July 30, 2001, December 3, 2001, and March 4 and October 2, 2002, and June 17, 2005, have been approved for this site. The licensee shall implement a ground water compliance monitoring program that includes the following.

A. Conduct monitoring as described in the Ground Water Monitoring Plan (ACL application, Appendix M) in the January 5, 2004, submittal. The validation of ACL exceedance will be in accordance with Section 4 of Appendix M. The licensee shall submit this monitoring data to the NRC by September 30th of each year and include ground water contour maps, contamination iso-concentration maps, and trend graphs.

B. Comply with the following ACL in the western flow regime at Point of Compliance (POC) wells MW1 and MW21A: arsenic = 1.8 mg/L, beryllium = 1.64 mg/L, lead-210 = 35.4 pCi/L, nickel = 13.0 mg/L, combined radium-226 and 228 = 250 pCi/L, selenium = 0.161 mg/L, thorium-230 = 57.4 pCi/L, and uranium-natural = 11.9 mg/L.

C. Comply with the following ACL in the southwestern flow regime at POC wells GW7 and GW8: arsenic = 1.36 mg/L, beryllium = 1.70 mg/L, lead-210 = 189 pCi/L, nickel = 9.34 mg/L, combined radium-226 and 228 = 353 pCi/L, selenium = 0.53 mg/L, thorium-230 = 44.8 pCi/L, and uranium-natural = 34.1 mg/L.

D. The licensee shall use, at a minimum, the following lower limits of detection for water quality analysis in mg/l, unless otherwise noted: arsenic = 0.01, beryllium = 0.01, nickel = 0.01, selenium = 0.005, total dissolved solids = 10, sulfate = 1.0, chloride = 1.0, iron = 0.1, pH = 0.1 (standard units), natural uranium = 0.0015, combined radium-226 and 228 = 1.0 pCi/L, thorium-230 = 1.0 pCi/L, lead-210 = 1.0 pCi/L, and gross alpha = 5.0 pCi/L.

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E. The ACL for gross alpha for both flow regimes is based on the sum of its major contributors and not on a measured number. The ACL for gross alpha is considered to be met if the major contributing radionuclides (Th-230, Ra-226 + Ra-228, Pb-210) are all below their ACL.

[Applicable Amendments: 6, 8, 11, 15, 21, 31, 32, 34, 40, 41, 43, 48, 50, 53, 56]

36. DELETED by Amendment No. 53.

37. DELETED by Amendment No. 22.

38. DELETED by Amendment No. 40.

39. The results of all effluent and environmental monitoring required by this license shall be sent annually to the NRC.

[Applicable Amendment: 43]

40. DELETED by Amendment No. 35.

41. DELETED by Amendment No. 22.

42. DELETED by Amendment No. 35.

43. DELETED by Amendment No. 40.

44. DELETED by Amendment No. 1.

45. DELETED by Amendment No. 40.

46. DELETED by Amendment No. 1.

47. DELETED by Amendment No. 1.

48. DELETED by Amendment No. 35.

49. DELETED by Amendment No. 53.

50. DELETED by Amendment No. 35.

51. DELETED by Amendment No. 35.

52. DELETED by Amendment No. 31.

53. DELETED by Amendment No. 22.

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54. The final reclamation of the inactive above-grade tailings impoundment (includes experimental heap leach site) shall be in accordance with the December 18, 1980, Reclamation Plan and the April 19, 1979, and May 13, 1982, letters, except as superseded by the *Design for Enhancement of the Previously Approved Reclamation Plan for the Above-Grade Inactive Tailings Design Report* of October 6 and October 28, 1997, as modified by submittals dated May 22, June 26, July 20, July 28, September 8, September 15, and November 23, 1998, as well as April 9 and June 7, 1999 and December 20, 2000.

    A. DELETED by Amendment No. 53.

    B. DELETED by Amendment No. 53.

    C. DELETED by Amendment No. 53.

    D. DELETED by Amendment No. 53.

    E. DELETED by Amendment No. 45.

    F. DELETED by Amendment No. 53.

    [Applicable Amendments: 4, 6, 7, 32, 38, 41, 44]

55. The licensee shall maintain an NRC-approved financial surety arrangement, consistent with 10 CFR 40, Appendix A, Criteria 9 and 10, adequate to cover the estimated costs, if accomplished by a third party, for decommissioning and decontamination of the mill and mill site, reclamation of any tailings or waste disposal areas, ground water restoration as warranted and the long-term surveillance fee. With submittal of a revised reclamation/decommissioning plan, the licensee shall submit, for NRC review and approval, a proposed revision to the financial surety arrangement if estimated costs in the new plan exceed the amount covered in the existing financial surety. The surety shall then be revised to include that amount with the annual surety update.

    Annual updates to the surety amount, required by 10 CFR 40, Appendix A, Criteria 9 and 10, shall be submitted to the NRC at least 3 months prior to the anniversary date, which is designated as September 13 of each year. If the NRC has not approved a proposed revision to the surety coverage 30 days prior to the expiration date of the existing surety arrangement, the licensee shall extend the existing surety arrangement for one year. Along with each proposed revision or annual update, the licensee shall submit supporting documentation showing a breakdown of the costs and the basis for the cost estimates with adjustments for inflation, maintenance of a 15 percent contingency fee, changes in engineering plans, activities performed and any other conditions affecting estimated costs for site closure. The licensee shall also provide the NRC with all surety related correspondence submitted to the State of Wyoming, a copy of the State's surety review and the final approved surety arrangement. The licensee shall also ensure that the surety, where authorized to be held by the State, expressly identifies the NRC portion of the surety and covers the decommissioning and decontamination of the mill and mill site, reclamation of the tailings and waste disposal areas, ground water restoration, as warranted, and the transfer of the long-term surveillance fee to the U.S. General Treasury. The basis for the cost estimate is the NRC-approved reclamation/decommissioning plan or NRC-approved revisions to the plan.

Umetco Gas Hills' currently approved surety instrument, a surety bond held by the State of Wyoming, shall be continuously maintained in an amount no less than $9,662,086 (NRC portion) for the purpose of complying with 10 CFR 40, Appendix A, Criteria 9 and 10, until a replacement is authorized by both the State and NRC.

[Applicable Amendments: 1, 2, 13, 19, 20, 26, 27, 28, 33, 36, 39, 44, 46, 49, 52, 54, 55, 57]

56. Prior to termination of this license, the licensee shall provide for transfer of title to byproduct material and land, including any interests therein (other than land owned by the United States or the State of Wyoming) that is used for the disposal of such byproduct material or is essential to ensure the long-term stability of such disposal site to the United States or State of Wyoming, at the State's option.

57. The NRC will not terminate the license until final reclamation has been completed and meets all applicable NRC regulations.

58. For the A-9 cover, the top 2 feet of frost protection soil will contain an average Ra-226 concentration that does not exceed the NRC-approved Ra-226 value based on data for surface soil surrounding the site. Reclamation of the A-9 Repository, C-18 pit, and of the north and south evaporation ponds, and the site grading shall be in accordance with the “Design for Enhancement of the Previously Approved Reclamation Plan for the A-9 Repository” in the licensee’s submittal dated October 27, 1998, as modified by submittals dated December 10, 1998, March 29, 1999, and February 7, 2006.

    [Applicable Amendments: 42, 53, 58]

59. The licensee shall complete site reclamation in accordance with the approved reclamation plan, as authorized by License Condition Nos. 54 and 58, in accordance with the following schedules.

    A. To ensure timely compliance with target completion dates established in the Memorandum of Understanding with the Environmental Protection Agency (56 FR 55432, October 25, 1991), the licensee shall complete reclamation to control radon emissions as expeditiously as practicable, considering technological feasibility, in accordance with the following schedule:

        1) Remaining contaminated material retrieval and placement in the A-9 Repository- Complete

        2) Placement of the interim cover to decrease the potential for tailings dispersal and erosion:

            For the Inactive Impoundment - Complete

            For the A-9 Repository - Complete

            For the Heap Leach Impoundment - Complete

3) Placement of final radon barrier designed and constructed to limit radon emissions to an average flux of no more than 20 pCi/m^2/s above background:

For the Inactive Impoundment - Complete

For the A-9 Repository - Complete

For the Heap Leach Impoundment - Complete

B. Reclamation, to ensure required longevity of the covered tailings and ground-water protection, shall be completed as expeditiously as is reasonably achievable, in accordance with the following target dates for completion:

1) Placement of erosion protection as part of reclamation to comply with Criterion 6 of Appendix A of 10 CFR Part 40:

For the Inactive Impoundment - Complete

For the A-9 Repository - December 31, 2004, except for the portions requested in the submittal of January 5, 2004. This remaining work will be performed upon completion of the GHP No. 2 Reclamation Cover by December 31, 2005.

For the Heap Leach Impoundment - Complete

2) DELETED by Amendment No. 48.

C. Any license amendment request to revise the completion dates specified in Section A must demonstrate that compliance was not technologically feasible (including inclement weather, litigation which compels delay to reclamation, or other factors beyond the control of the licensee).

D. Any license amendment request to change the target dates in Section B above must address added risk to the public health and safety and the environment, with due consideration to the economic costs involved and other factors justifying the request such as delays caused by inclement weather, regulatory delays, litigation, and other factors beyond the control of the licensee.

[Applicable Amendments: 29, 30, 31, 37, 38, 40, 43, 47, 48, 50, 53]

60. Notification to NRC under 10 CFR 20.2202, 10 CFR 40.60, and specific license conditions should be made as follows:

Required written notice to NRC under this license should be given to: Deputy Director, Decommissioning and Uranium Licensing Directorate, Division of Waste Management and Environmental Protection, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Mail Stop T7E18, or by express delivery to 11545 Rockville Pike, Rockville, Maryland 20852. Required telephone notification shall be made to the NRC Operations Center at (301) 816-5100, unless otherwise specified.

[Applicabale Amendments: 32, 45, 53, 58]

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61. The final reclamation of the heap leach impoundment shall be in accordance with the reclamation plan submitted September 25, 1996, as supplemented or revised by submittals dated June 6, August 19, and October 15, 1997, and January 15, and February 11 and 13, 1998, and December 20, 2000.

    The reclamation of Pond No. 2 will be performed according to the final plan submitted on September 11, 2003, as supplemented by a revised submittal dated February 7, 2006. In addition, the Ra-226 data for the solidified pond sludge shall be submitted to the NRC, before radon barrier placement begins, to justify that the Ra-226 values used in the radon flux model are representative. If the measured values are significantly higher than the estimated values, Umetco will provide a revised radon flux model to demonstrate that the long-term radon flux from the cover should meet the limit in Criterion 6(1).

    [Applicable Amendments: 38, 44, 52, 58]

62. DELETED by Amendment No. 50.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Dated: 11/16/06

By: _____
Keith I. McConnell, Deputy Director
Decommissioning and Uranium Recovery
Licensing Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs