

MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, 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.	Sohio Western Mining Company [Applicable Amendments: 4, 16]	3. License Number	SUA-1472, Amendment No. 31
2.	c/o Kennecott Energy 505 South Gillette Avenue Caller Box 3009 Gillette, WY 82717-3009	4. Expiration Date	Until NRC determines site reclamation is adequate
		5. Docket or Reference No.	40-8904
6. Byproduct, Source, and/or Special Nuclear Material	[Applicable Amendments: 4, 5, 16, 28]	7. Chemical and/or Physical Form	8. Maximum Amount that Licensee May Possess at Any One Time Under This License
Uranium byproducts		Any	Unlimited
9. Authorized place of use: The licensee's uranium milling facilities located in Cibola County, New Mexico			
10. The licensee is hereby authorized to possess byproduct material in the form of uranium waste tailings and other byproduct wastes generated by the licensee's past milling operations. The licensee is not authorized to produce uranium concentrate without a license amendment approved by the Chief, Uranium Recovery Branch, Division of Waste Management, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555. [Applicable Amendments: 24]			
11. Release of equipment or packages from the restricted area shall be in accordance with the report, "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct or Source Materials," dated September, 1984. [Applicable Amendments: 24]			
12. The results of all effluent and environmental monitoring required by this license, including groundwater monitoring results as specified in License Condition 31 of this license, shall be reported in accordance with 10 CFR 40, Section 40.65, with copies of the report sent to the Chief, Uranium Recovery Branch, Division of Waste Management, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555.			
[Applicable Amendments 12, 24, 28]			

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13. Before engaging in any activity not previously assessed 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 previously assessed or that is greater than that previously assessed, the licensee shall provide a written evaluation of such activities and obtain prior approval of the NRC in the form of a license amendment.
14. 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 New Mexico), which 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 the State of New Mexico, at the State's option.
15. DELETED by Amendment No. 7.
16. DELETED by Amendment No. 16.
17. Deleted by Amendment 28.
18. The results of sampling, analyses, surveys and monitoring, the results of calibration of equipment, reports on audits and inspections, all meetings and training courses required by this license and any subsequent reviews, investigations, and corrective actions, shall be documented. Unless otherwise specified in the NRC regulations all such documentation shall be maintained for a period of at least five years.
19. The Radiation Safety Officer (RSO), who is responsible for radiation safety aspects of the mill site decommissioning shall possess the minimum qualifications as specified in Section 2.4.1 of Regulatory Guide 8.31, "Information Relevant to Ensuring that Occupational Radiation Exposures at Uranium Mills will be As Low As is Reasonably Achievable." For the purposes of this license condition, reference to "uranium mill" or "milling" in Regulatory Guide 8.31 shall mean "uranium mill site reclamation."
[Applicable Amendments: 8]
20. Written procedures shall be established for site reclamation activities to include personnel and environmental monitoring, and survey instrument calibrations. These procedures 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 all existing site procedures at least annually. Construction and inspection records may be transferred to the Duke Engineering & Services, Inc. offices in Austin, Texas.

[Applicable Amendments 7, 16, 28]
21. The licensee shall be required to use a Radiation Work Permit (RWP) for all site work activities where the potential for significant exposure to radioactive material exists and for which no standard written procedure already exists. The RWP shall be issued by the RSO or his designate, qualified by way of specialized radiation protection training, and shall at least describe the following:

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- A. The scope of the work to be performed.
- B. Any precautions necessary to reduce exposure to uranium and its daughters.
- C. The supplemental radiological monitoring and sampling necessary prior to, during, and following completion of the work.

[Applicable Amendments: 7]

- 22. Occupational Exposure calculations shall be performed and documented within one (1) week of the end of each regulatory compliance period as specified in 10 CFR 20.103(a)(2) and 10 CFR 20.103(b)(2). [Applicable Amendments: 7, 16]
- 23. DELETED by Amendment No. 16.
- 24. All liquid effluents from site reclamation activities, with the exception of sanitary wastes, shall be discharged to the tailings impoundment.
[Applicable Amendments: 7]
- 25. 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 reclamation of any tailings or waste disposal area, groundwater restoration as warranted, and the long-term surveillance fee.

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 December 30 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 1 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 minimum 15 percent contingency fee, changes in engineering plans, activities performed, and any other conditions affecting estimated costs for site closure. The basis for the cost estimate is the NRC-approved reclamation plan or NRC-approved revisions to the plan. The report, "Recommended Outline for Site Specific Reclamation and Stabilization Cost Estimates," outlines the minimum considerations used by the NRC in the review of site closure cost estimates. Reclamation plans and annual updates should follow this outline.

The licensee's currently approved financial surety shall be continuously maintained in an amount not less than \$3,424,795 for the purpose of complying with 10 CFR 40, Appendix A, Criteria 9 and 10, until a replacement is authorized by the NRC.

[Applicable Amendments: 14, 16, 20, 23, 24, 25, 26, 27, 30]

- 26. DELETED by Amendment No. 6.
- 27. The licensee shall provide management oversight and control of site reclamation activities required under this license in accordance with the following organization structure throughout reclamation:

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- L-Bar Project Manager - Sohio Western Mining Company
- Site Contractor - Duke Engineering & Services, Inc.

[Applicable Amendments: 3, 4, 16, 28]

28. DELETED by Amendment No. 19.
29. DELETED by Amendment No. 16.
30. DELETED by Amendment No. 9.
31. The licensee shall implement a groundwater compliance monitoring program containing the following: *[The changes to 31.B and C below, and the addition of 31.D, reflecting approval of alternate concentration limits, are effective only upon licensee acquisition of the property noted on page ii of its August 28, 1998, letter.]*
- A. Sample wells 29A, 17B, 1A, 69, and 81 on a semiannual frequency for nickel, selenium, uranium, combined radium-226 and -228, thorium-230, nitrate, chloride, sulfate, pH, electrical conductivity, and water level.
- Sample wells 2A, 3A, 14, 50, 57, 58, 61, 72, 76, 77, 78, and 79 on a semiannual frequency for chloride, sulfate, pH, electrical conductivity, and water level.
- On a semiannual frequency, sample well 2A for nitrates and well 50 for nitrates, selenium, and nickel.
- Sample wells 12A, 17, 51, 52, 53, 55, 60, 68, 73, 74, and 75 on an annual frequency for chloride, sulfate, pH, electrical conductivity, and water level.
- B. Comply with the following groundwater protection standards in mg/l (unless otherwise noted) at point of compliance wells 17B, 1A, 69, and 81, with background being recognized in well 29A:
- nickel = 0.05, selenium = 2.0, combined radium-226 and -228 = 11.01 pCi/l, thorium-230 = 3.12 pCi/l, and uranium = 13.0.
- C. DELETED By Amendment No. 31.
- D. In the event the limits for the constituents in Subsection B are exceeded, the licensee shall propose a new corrective program with the objective of returning concentrations of those constituents to the limits specified in Subsection B.

[Applicable Amendments: 6, 9, 12, 13, 17, 18, 22, 28, 31]

32. The licensee shall forward to the Chief, Uranium Recovery Branch, Division of Waste Management, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, copies of all correspondence with the State of New Mexico's Environment Department.

[Applicable Amendments: 9, 24, 28]

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33. The licensee shall reclaim the tailings impoundment as stated in its submittals dated February 27, and April 20, 1989, and March 5 and August 11, 1998, subject to the following:

Upon completion of settlement monitoring, a final report containing the settlement monitoring results and detailing the cover's performance must be submitted.

[Applicable Amendments: 11, 15, 16, 29]

34. The licensee shall complete site reclamation in accordance with the approved reclamation plan, groundwater corrective action plan, and submittals of March 5, April 8, and August 11, 1998, as authorized by License Conditions 31 and 33, 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) Windblown tailings retrieval and placement on the pile - complete.
 - (2) Placement of the Interim cover to decrease the potential for tailings dispersal and erosion - complete.
 - (3) Placement of final radon barrier designed and constructed to limit radon emissions to an average flux of no more than 20 pCi/m²/s above background - Complete by conditioned date; final approval pending completion of work to address degradation as outlined in submittals of April 8 and August 11, 1998.
- B. Reclamation, to ensure required longevity of the covered tailings and groundwater protection, shall be complete 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 - Completed by conditioned date; final approval pending acceptable repairs to degradation.
 - (2) Projected completion of groundwater corrective actions to meet performance objectives specified in the groundwater corrective action plan - December 31, 2016.
- 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 factor beyond the control of the licensee.

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[Applicable Amendments: 29]

FOR THE NUCLEAR REGULATORY COMMISSION

Date: 5/21/99

King Stablein
N. King Stablein, Acting Chief
Uranium Recovery and Low Level
Waste Branch
Division of Waste Management
Office of Nuclear Material Safety and
Safeguards

