

November 19, 1997

Ms. Stephanie J. Baker
Westerr Nuclear, Inc.
Union Plaza Suite 300
200 Union Boulevard
Lakewood, CO 80228

SUBJECT: AMENDMENT REQUEST OF LICENSE CONDITION NO. 33 OF SOURCE MATERIAL
LICENSE SUA-56 - AMENDMENT 83

Dear Ms. Baker:

The U.S. Nuclear Regulatory Commission has completed its review of Western Nuclear, Inc.'s (WNI) request to amend License Condition No. 33 of its Source Material License SUA-56, submitted on March 31, 1997. WNI has proposed to cease clean-up and verification of radium in the soil at several areas on and around its Split Rock, Wyoming site. In conducting its review, the staff considered the original amendment request, the results of conversations and meetings between NRC and WNI staff, and additional information provided in a WNI letter dated August 14, 1997.

Based on the results of this review, the NRC staff concludes that the actions proposed in the amendment are protective of public health and safety and the environment, and therefore concurs with the proposed action. The enclosed Technical Evaluation Report documents the NRC staff's review and conclusions. An environmental review was not performed since this action is categorically excluded under 10 CFR 51.22(c)(11).

The enclosed license SUA-56 has been amended to incorporate the modification to License Condition No. 33. All other conditions of this license shall remain the same. If you have any questions concerning this subject, please contact Mr. Robert Carlson of my staff at (301) 415-8165.

Sincerely,

(Original signed by)

Joseph J. Holonich, Chief
Uranium Recovery Branch
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards

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Enclosures: As stated

Docket No. 40-1162
License No. SUA-56, Amendment 83

CASE CLOSED: L51560

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OFC	URB	URB	URB					
NAME	* RCarlson	* DGillen	JHolonich					
DATE	11/12/97	11/ /97	11/14/97					

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 Western Nuclear, Inc.
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 Lakewood, CO 80228

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TECHNICAL EVALUATION REPORT

DATE: November 4, 1997
DOCKET NO: 40-1162
LICENSE NO.: SUA-56 (Amendment 83)
LICENSEE: Western Nuclear, Inc. (WNI)
PROJECT MANAGER: Robert D. Carlson
TECHNICAL REVIEWER: James Weldy-Health Physicist [Center for Nuclear Waste Regulatory Analyses (CNWRA)]

SUMMARY AND CONCLUSIONS:

License Condition No. 33 requires clean-up of all areas of windblown tailings, according to the Radiological Verification Program submitted to the Nuclear Regulatory Commission (NRC) by letter dated December 15, 1995, as supplemented and revised by letters dated February 23, March 20, May 1, and May 29, 1996. WNI has proposed to cease clean-up and verification of radium in the soil at several areas on and around the Split Rock site. These consist of the Granite Mountain, remote dune, rock stockpile, administration roadway, and Ore Haul Road areas, as described in the WNI March 31, 1997, amendment request for License Conditions No. 27 and 33, and as supplemented in an August 14, 1997, submittal. The staff has reviewed these documents and concludes that the proposed cessation of clean-up and verification of radium in the soil for these areas are acceptable and will not endanger the health and safety of the public and the environment.

AMENDMENT REQUEST:

WNI submitted an amendment request for License Condition No. 33 to cease clean-up and verification of radium in the soil at several areas on the Split Rock Mill site by letter dated March 31, 1997. Pursuant to meetings and discussions with the NRC, WNI revised the amendment request on August 14, 1997. Considering the potential for injury to workers, possible damage to the environment, excessive costs, and a lack of threat to the health and safety of the public or the environment, WNI has proposed to cease clean-up and verification of radium in the soil at the Granite Mountain, remote dune, rock stockpile, administration roadway, and Ore Haul Road areas.

TECHNICAL EVALUATION:

Granite Mountain Areas

The areas surrounding the tailings impoundment consist of very steep granite mountains that contain narrow cracks and other areas inaccessible by conventional excavation equipment that are contaminated with windblown tailings. Because of the potential for injury to workers and excessive cost of cleaning these areas, WNI has evaluated the potential risk to the public

from leaving the contamination in place. The assumed maximally exposed individual is a recreational rock climber who spends 12 hr each day for 1 wk climbing these surfaces. This is an acceptable assumption for the maximally exposed individual because, due to the steep slope of the rock and the lack of water, it is unlikely that a permanent residence would be established in this area. WNI calculated the average radium concentration in the Granite Mountain soil to be 7.4 pCi/g, based on the average values of surrounding soils that were contaminated to levels above the NRC's 10 CFR Part 40, Appendix A clean-up requirements of 5 pCi/g. Exposure rate measurements made on the rock formations generally confirm this value for soil contamination, although readings above cracks in the rocks corresponded to up to 100 pCi/g radium contamination. The average value of radium concentration in the Granite Mountain soil, 7.4 pCi/g, is considered acceptable because the cracks that may contain windblown tailings represent a small fraction of the total area of the rock formations, and the average level of contamination for all soils impacted by windblown tailings ranges from 2 to 6 pCi/g.

WNI calculated the maximum dose to the maximally exposed individual as 0.84 mrem due to direct exposure, inhalation of resuspended particulates, and ingestion from soil pathways. All other pathways were neglected, due either to a negligible effect on the total dose, or to extreme unlikelihood. The selection of pathways for the dose calculation is considered acceptable. NRC staff identified an error in the calculation of dose from inhalation of resuspended particles, which increased the dose estimate to 0.95 mrem. Conservatively assuming an individual participates in three of these trips in a year, this dose corresponds to an increased annual dose of 2.85 mrem. This is well below the NRC dose limit to a member of the public of 100 mrem stated in 10 CFR 20.1301(a)(1). The NRC staff has further concluded that reducing the radium concentrations in the Granite Mountain soil from 7.4 pCi/g to 5 pCi/g would result in a negligible decrease in the corresponding annual dose to the hypothetical rock climber. Additionally, because of the expense and risk of injury to workers and the environment, the NRC staff finds that the cessation of clean-up and verification activities in these areas to be in accordance with its "as low as reasonably achievable" (ALARA) principles.

NRC staff concludes that the cessation of cleanup and reclamation of radium in the soil for the Granite Mountain areas is acceptable and will not impose an undue threat to the health and safety of the public, or to the environment.

Remote Dune Areas

In several isolated pockets within the remote dune areas, elevated radium concentrations (up to 12.35 pCi/g) have been found in the upper 1 in. (2.54 cm) of soil. Considering the expense, possible environmental damage, and danger to workers from moving construction equipment to these areas for cleanup, and because these areas are not inhabited or easily accessible to members of the public, WNI proposes to cease remediation activities in these areas. The contamination exists in only the upper 1 in. of soil, and the average radium concentration over the upper 6 in. (15 cm) is less than 3.5 pCi/g. NRC staff finds the cessation of clean-up and verification for radium in the soil in these areas to be acceptable because the radium concentration averaged over the top 15 cm of soil is less than 5 pCi/g above

background. Therefore, the areas are in compliance with 10 CFR Part 40, Appendix A requirements for the unrestricted release of land. Because of the expense and risk of injury to workers and the environment, NRC staff finds the cessation of clean-up and verification activities in these areas to be in accordance with ALARA principles.

NRC staff concludes that the cessation of clean-up and reclamation of radium in the soil for the remote dune areas is acceptable and will not impose an undue threat to the health and safety of the public, or to the environment.

Rock Stockpile Area

In 1989, prior to placement of the rock stockpile, the area was excavated to a depth of 3-4 ft and a survey was conducted which demonstrated that the soil radium concentration was less than 5 pCi/g above background levels at all locations. Surveys conducted in 1994, immediately prior to placement of the rock stockpiles, showed that the soil radium concentration in the area approximated background levels. Additionally, no on-site activity has occurred since 1994 that would have resulted in increased radium levels in the soil. Accordingly, the staff has concluded that this area meets the clean-up requirements for unrestricted release in accordance with 10 CFR Part 40, Appendix A, Criterion 6(6). Furthermore, this area is to be maintained under perpetual care by the government, and there is no potential for constructing residential buildings at this site in the future. Due to the lack of threat to the health and safety of the public, WNI proposes to cease additional verification and clean-up of radium in the soil for this area.

NRC staff concludes that the cessation of clean-up and reclamation of radium in the soil for the rock stockpile area is acceptable and will not impose an undue threat to the health and safety of the public, or to the environment.

Administration Roadway Area

The office access road was excavated to a depth of 4-5 ft in 1994 and surveyed to determine that the soils in this area had radium concentrations which were less than 5 pCi/g above background levels. The road was then rebuilt to a thickness of 5-7 ft using reject material from the granite crushing operation for riprap production. Additionally, no on-site activity has occurred since 1994 that would have resulted in increased radium levels in the soil. Accordingly, the staff has concluded that this area meets the clean-up requirements for unrestricted release in accordance with 10 CFR Part 40, Appendix A, Criterion 6(6). Furthermore, this area is to be maintained under perpetual care by the government, and there is no potential for constructing residential buildings at this site in the future. Due to the lack of threat to the health and safety of the public, WNI proposes to cease additional verification and clean-up of radium in the soil for this area.

NRC staff concludes that the cessation of clean-up and reclamation of radium in the soil for the administration roadway area is acceptable and will not impose an undue threat to the health and safety of the public, or to the environment.

Ore Haul Road Area

The Ore Haul Road has been used by many mine operators since 1955 to transport ore from mining areas to processing areas. During this time, there has been spillage of ore onto the road which has since been mixed into the road base material. Since this ore is not byproduct material, as defined in 10 CFR 40.4, WNI is not required to remove this material from the road. It is possible that there are small quantities of windblown tailings that have been mixed into the road base material. Because the windblown tailings would constitute only a very small fraction of the total radioactivity in the road, and because it is impractical to distinguish the tailings material from the ore material, WNI proposes to cease clean-up and verification of radium in the soil for this area.

NRC staff concludes that the cessation of clean-up and reclamation of radium in the soil of the Ore Haul Road area is acceptable and will not impose an undue threat to the health and safety of the public, or to the environment.

RECOMMENDED LICENSE CHANGE:

The staff recommends that a change be made to Source Material License SUA-56, License Condition No. 33 to reflect the cessation of reclamation activities in the Granite Mountain, remote dunes, rock stockpile, administration roadway, and Ore Haul Road areas. The revised condition should be reworded as follows.

The clean-up and verification of radium in the soil of the Granite Mountain, remote dunes, rock stockpile, and administration roadway areas is not required, as described in the licensee's amendment request dated March 31, 1997, and supplemented with additional information provided in an August 14, 1997, submittal. These areas are considered as being in radiological compliance and releasable for unrestricted use. Additionally, the road designated as the Ore Haul Road will require neither verification, nor release, since elevated radionuclide concentrations on the road are attributable to non-byproduct material.

ENVIRONMENTAL IMPACT EVALUATION:

An environmental review was not performed, since this action is categorically excluded under 10 CFR 51.22(c)(11), and an environmental report from the licensee is not required by 10 CFR 51.60(a).

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.

<p style="text-align: center;">Licensee</p> <p>1. Western Nuclear, Inc.</p> <p>2. 200 Union Boulevard, Suite 300 Lakewood, Colorado 80228 [Applicable Amendments: 34, 52]</p>	<p>3. License Number SUA-56, Amendment No. 83</p> <p>4. Expiration Date Until terminated [Applicable Amendments: 31, 32, 38, 41]</p> <p>5. Docket or Reference No. 40-1162</p>
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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. The licensee is hereby authorized to possess byproduct material in the form of uranium waste tailings generated by the licensee's past milling operations authorized under SUA-56. [Applicable Amendments: 32, 46, 58]

10. Authorized Places of Use: The licensee's uranium milling facilities located approximately two miles north of Jeffrey City, Wyoming.
[Applicable Amendments 46, 50, 60, 82]

- 11. DELETED by Amendment No. 49.
- 12. DELETED by Amendment No. 49.
- 13. DELETED by Amendment No. 49.
- 14. DELETED by Amendment No. 49.
- 15. DELETED by Amendment No. 49.
- 16. DELETED by Amendment No. 54.
- 17. DELETED by Amendment No. 33.
- 18. DELETED by Amendment No. 49.
- 19. DELETED by Amendment No. 56.
- 20. DELETED by Amendment No. 49.

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- 21. DELETED by Amendment No. 56.
- 22. DELETED by Amendment No. 54.
- 23. DELETED by Amendment No. 33.
- 24. The licensee shall implement the environmental monitoring program outlined in Tables 1 and 2 of the previously provided guidance entitled "Current Environmental Monitoring Program." The data obtained from this monitoring program shall be reported semiannually to the NRC in accordance with requirements of 10 CFR 40.65.

[Applicable Amendments: 26, 28, 30, 44, 49, 56A]

- 25. The licensee shall conduct a quality assurance program as contained in their submittal dated March 25, 1981. In addition, the licensee shall be required to document the results and recommendations of each annual audit of the environmental monitoring program. Any requested changes to the "Environmental Monitoring Manual" submitted on March 23, 1981, as revised by letters dated March 27, 1991, January 28 and March 11, 1992, shall be in the form of a license amendment.

[Applicable Amendments: 49, 63]

- 26. DELETED by Amendment No. 49.
- 27. The licensee shall reclaim the tailings disposal areas in accordance with the Tables and Figures, and Sections 1 through 5 and Section 7 of their February 7, 1994, report titled, "Western Nuclear, Inc. Split Rock Mill, Addendum A (February 7, 1994) to Revision 5 to the June 30, 1987, Uranium Tailings Reclamation Plan," with the following exceptions:
 - A. If a rock source other than the on-site source is used, durability testing must be performed and the results submitted to the NRC for review and approval prior to placement of materials from the alternate source.
 - B. The preliminary radon attenuation barrier design for the Winter Storage Ponds (Area 2C, Figure 4, Drawing No. 91-225-E53 (Addendum A to Revision 5) consists of 6 inches of Cody Shale and 12 inches of Soil Borrow. This design is considered acceptable for estimating the surety amount. However, once the storage ponds are dismantled, the Licensee shall confirm the design and obtain NRC approval prior to placing the radon cover on the ponds.
 - C. A completion report including as-built drawings, verifying that reclamation of the site has been performed according to the approved reclamation plan shall be provided within 6 months after completion of construction. The

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report shall also include summaries of results of the quality assurance and control testing to demonstrate that approved specifications were met.

- D. One-point Proctor tests shall not be required during placement of the Cody shale.
- E. The soil component of the erosion protection layer, consisting of soil/rock matrix, is deleted. This erosion protection layer, to be placed over the final surface reclamation soil cover, will consist of a minimum 4-inch thickness of rock with a minimum D_{50} of 2-inches.
- F. For rock durability tests, the frequency, specified in Table 5, shall be one test series prior to placement and one test series for every 20,000 cubic yards of material from the rock source.
- G. For rock gradation tests, the frequency, specified in Table 5, shall be one test prior to placement and one test for every 10,000 cubic yards of each size of material produced, with a minimum of 3 tests for each material size. These gradation tests shall be performed as the material is being produced and prior to placement of material.
- H. The radon barrier for the northern portions of Area 1A and Area 1B shall be constructed in accordance with material types, thicknesses, and placement criteria described in the license amendment request, License Condition #27: Revisions to Surface Reclamation Design - License Condition #33: Addendum to Radiological Verification Program, dated March 31, 1997; and the supplemental information, dated May 12, 1997, and May 30, 1997.
- I. The thickness of the radon barrier in the 0.8 acre Area 2A shall be in accordance with the Western Nuclear, Inc. Western Nuclear Split Rock Site Redesign of Final Cover Thickness 0.8 Acre Area in Area 2A, transmitted to the NRC on July 25, 1997.

[Applicable Amendments: 22, 56, 68, 71, 74, 75, 80, 81]

- 28. The licensee shall decommission the Western Nuclear, Inc. Split Rock Mill in accordance with their submittal dated November 30, 1987. Notwithstanding any statements to the contrary in the document cited above the licensee shall:
 - A. Perform pre-surveys of all equipment and facilities being decommissioned to assure that appropriate protective measures are applied to protect workers from undue exposure to radioactive materials and any associated toxic materials.
 - B. All decommissioning wastes which are placed in the millsite "burial" area as described in the November 30, 1987, submittal shall be covered by a minimum 1 foot of soil cover no later than September 30, 1989.

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C. A final mill site decommissioning report shall be submitted for NRC review by January 1, 1990. The final decommissioning report shall include pre-survey data, post-survey data, and other radiation protection data collected during the decommissioning activities. The report shall also provide a summary of the major decommissioning activities.

[Applicable Amendments: 42, 47]

29. 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, for reclamation of any tailings or waste disposal areas, ground-water restoration as warranted and the long-term surveillance fee. Within 3 months of NRC approval 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 newly approved plan exceed the amount covered in the existing financial surety. The revised surety shall then be in effect within 3 months of written NRC approval.

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 licensee shall also provide the NRC with all surety related correspondence submitted to the State, 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. The basis for the cost estimate is the NRC approved reclamation/decommissioning plan or NRC approved revisions to the plan. The previously provided guidance entitled "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/decommissioning plans and annual updates should follow this outline.

Western Nuclear's currently approved surety, Performance Bond No. 500811204, issued by American Casualty Company in favor of the State of Wyoming, shall be continuously maintained in an amount no less than \$11,439,098 for the purpose of complying with 10 CFR 40, Appendix A, Criterion 9 and 10, until a replacement is authorized by both the State of Wyoming and the NRC.

[Applicable Amendments: 24, 45, 53, 64, 66, 70, 72, 76]

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- 30. DELETED by Amendment No. 69.
 - 31. DELETED by Amendment No. 46.
 - 32. A. DELETED by Amendment No. 56.
B. DELETED by Amendment No. 50.
 - 33. The licensee is authorized to regrade the disposal area to preclude ponding and to proceed with the interim stabilization cover placement described in its March 31, 1989, submittal of Revision No. 2 to the June 1987 Tailings Reclamation Plan as modified by Table A of the October 21, 1991, submittal with the additions listed below.
 - A. The licensee shall complete cleanup of all areas of windblown tailings as defined in the survey submitted March 1, 1988. Cleanup of radionuclide soil contamination (Ra-226, Th-230, U-238 and U-234) will be verified as meeting the applicable standards and guidelines according to the Radiological Verification Program submitted by letter dated December 15, 1995, as supplemented and revised by letters dated February 23, March 20, May 1, and May 29, 1996.
 - B. DELETED by Amendment No. 55.
 - C. DELETED by Amendment No. 78.
 - D. DELETED by Amendment No. 55.
 - E. The clean-up and verification of radium in the soil of the Granite Mountain, remote dunes, rock stockpile, and administration roadway areas is not required, as described in the licensee's amendment request dated March 31, 1997, and supplemented with additional information provided in an August 14, 1997, submittal. These areas are considered as being in radiological compliance and releasable for unrestricted use. Additionally, the road designated as the Ore Haul Road will require neither verification, nor release, since elevated radionuclide concentrations on the road are attributable to non-byproduct material
- [Applicable Amendments: 43, 57, 59, 78, 83]
- 34. 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.

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The licensee is authorized to excavate material from the proposed reclamation borrow areas as designated in the licensee's approved reclamation plan, provided that protection of the cultural resources is managed in accordance with statements and representation contained in the licensee's letter dated March 30, 1992.

[Applicable Amendment: 71]

35. Before engaging in any project-related activity not evaluated by the NRC, the licensee shall prepare and record an environmental evaluation of such activity. When the evaluation indicates such activity may result in a significant adverse environmental impact that was not evaluated, or an impact greater than that evaluated in the environmental statement, the licensee shall provide a written evaluation of such activity and obtain prior approval of the NRC for the activity.
36. DELETED by Amendment No. 49.
37. The licensee is hereby exempted from the requirements of Section 20.203(e)(2) of 10 CFR Part 20, provided that all entrances to the restricted area are conspicuously posted in accordance with Section 20.203(e)(2) and with words, "Any area within this facility may contain radioactive material."

[Applicable Amendment: 49]
38. Mill tailings other than samples for research shall not be transferred from the site without specific prior approval of the NRC obtained through application for amendment of this license. The licensee shall maintain a permanent record of all transfers made under the provisions of this condition.
39. DELETED by Amendment No. 50.
40. DELETED by Amendment No. 49.
41. Release of equipment or packages from the restricted area shall be in accordance with the previously provided guidance entitled, "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.
42. The annual report and recommendations by the ALARA Committee to the Resident Manager shall include a determination of the following: (1) if exposures and effluents might be lowered under the concept of as low as reasonably achievable, and (2) if equipment for effluent and exposure control is being properly used, maintained, and inspected. The Audit Committee will consist of at least one individual representing radiation health and environmental issues.

In addition, a copy of the annual ALARA report containing results of the annual audit and recommendations by the ALARA committee shall be submitted to the NRC.

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[Applicable Amendment: 49]

43. The results of sampling, analysis, surveys and monitoring, the calibration of equipment, reports on audits and inspections, and all meetings and training courses committed in the licensee's renewal application dated March 1, 1980, and in the additional conditions to this license, as well as 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.

[Applicable Amendment: 49]

44. 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 Site Radiation Safety Officer (RSO) before implementation and whenever a change in procedure is proposed to ensure that proper radiation protection principles are being applied. In addition, the Site RSO shall perform a documented review of all existing site procedures at least annually. An up-to-date copy of each written procedure shall be kept at the facility site.

[Applicable Amendments: 49, 56]

45. DELETED by Amendment No. 49.
46. All monitoring and exposure data shall be reviewed quarterly and any trends or deviations from the "as low as reasonably achievable" (ALARA) philosophy shall be addressed. A formal report shall be prepared by the Resident Manager. The report shall address any upward trends, unusual discharges, problem areas, monitoring data, items of regulatory non-compliance, and recommendations for necessary corrective actions. The report shall also include an evaluation of the adequacy of the implementation of license conditions.

[Applicable Amendment: 49]

47. DELETED by Amendment No. 49.
48. In addition to the qualifications specified in Section 5 of the licensee's revised renewal application, the Site RSO must have specialized training of at least 4 weeks of specialized classroom training in health physics specifically applicable to uranium milling. In addition, the RSO should attend refresher training on uranium mill health physics every 2 years.

[Applicable Amendments: 49, 50, 56]

49. DELETED by Amendment No. 49.
50. DELETED by Amendment No. 49.

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- 51. DELETED by Amendment No. 49.
- 52. DELETED by Amendment No. 49.
- 53. Radiation detection instruments shall be calibrated after repair and as recommended by the manufacturer or at intervals not to exceed six months, whichever is sooner.
- 54. DELETED by Amendment No. 49.
- 55. DELETED by Amendment No. 49.
- 56. DELETED by Amendment No. 49.
- 57. DELETED by Amendment No. 33.
- 58. DELETED by Amendment No. 37.
- 59. DELETED by Amendment No. 49.
- 60. DELETED by Amendment No. 49.
- 61. DELETED by Amendment No. 49.
- 62. DELETED by Amendment No. 49.
- 63. DELETED by Amendment No. 56.
- 64. The licensee shall control grazing to the N and NNE of the tailings impoundment by maintaining cattle guards at each end of the rock outcrops along the north side of the restricted area fence, as indicated on map A, submitted by letter dated August 18, 1978 from G. Fletcher to J. Linehan.
- 65. DELETED by Amendment No. 49.
- 66. DELETED by Amendment No. 33.
- 67. DELETED by Amendment No. 33.
- 68. DELETED by Amendment No. 46.
- 69. DELETED by Amendment No. 46.
- 70. DELETED by Amendment No. 49.
- 71. DELETED by Amendment No. 49.
- 72. DELETED by Amendment No. 49.

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73. DELETED by Amendment No. 54.
74. The licensee shall implement a compliance monitoring program containing the following:
- A. Sample Southwest Valley Wells 1, B, 21, 24, 25, 16, 15, and Northwest Valley Wells 4, 5, 17, 19, 23, and 27, on a semiannual frequency for chloride, nitrate, sulfate, pH, TDS, water level, beryllium, cadmium, chromium, lead, nickel, radium-226 and 228, selenium, thorium-230, and uranium.
 - B. Comply with the following ground-water protection standards at point of compliance Well No. 4 and 21, with background being recognized in Well No. 15:

beryllium = 0.05 mg/l, cadmium = 0.01 mg/l, chromium = 0.05 mg/l, lead = 0.05 mg/l, nickel = 0.05 mg/l, radium-226 and 228 = 5 pCi/l, selenium = 0.013 mg/l, thorium-230 = 0.95 pCi/l, and uranium = 0.16 mg/l.
 - C. Implement a corrective action program that shall annually recover and evaporate between 6 and 15 million gallons of contaminated water based upon minimizing recharge to the tailings. The program shall be constructed as described in the August 31, and September 28, 1989, submittals as modified by the licensee's April 3, 1990, January 13, 1992, September 23, 1993, and April 18, 1997, submittals. The objective of the program shall be to return the concentrations of beryllium, cadmium, nickel, radium-226 and 228, selenium, thorium-230, and uranium to the concentration limits specified in Subsection (8).
 - D. The licensee shall submit by December 15 of each year, a review of the corrective action program and its effect on the aquifer.
- [Applicable Amendments: 25, 27, 36, 39, 40, 44, 48, 51, 56, 58, 61, 62, 67, 69A, 79]
75. The licensee shall complete site reclamation in accordance with the approved reclamation plan and groundwater corrective action plan, as authorized by License Condition Nos. 27 and 74, respectively, 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.

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- (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 as described in WNI's submittal of June 14, 1994.
 - (a) For areas 3A and 3B - December 31, 1994 (complete).
 - (b) For area 2B - December 31, 1995 (complete).
 - (c) For area 1C - December 31, 1996.
 - (d) For areas 1A, 1B, 2A, and 2C - December 31, 1998.
- B. Reclamation, to ensure required longevity of the covered tailings and groundwater protection, shall be completed as expeditiously as is reasonably achievable, in accordance with the following target dates for completion and as described in WNI's submittal of June 14, 1994:
 - (1) Placement of erosion protection as part of reclamation to comply with Criterion 6 of Appendix A of 10 CFR Part 40.
 - (a) For areas 3A and 3B - June 30, 1995 (complete).
 - (b) For area 2B - June 30, 1996.
 - (c) For area 1C - June 30, 1997.
 - (d) For areas 1A, 1B, 2A, and 2C - June 30, 1999.
 - (2) Projected completion of groundwater corrective actions to meet performance objectives specified in the groundwater corrective action plan - December 31, 1998.
- 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 Amendment: 73, 77]

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76. 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: Chief, Uranium Recovery Branch, Division of Waste Management, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

[Applicable Amendment: 73]

FOR THE NUCLEAR REGULATORY COMMISSION

Date

Nov 19, 1997



Joseph J. Holonich, Chief
Uranium Recovery Branch
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards