AUG 18 1988

URFO:RSH
Docket No. 40-1162
SUA-56, Amendment No. 47
04001162350R

Western Nuclear, Inc.
ATTN: Ms. Stephanie Baker
11111 West 8th Avenue
Lakewood, Colorado 80215

Ladies and Gentlemen:

The Uranium Recovery Field Office (URFO) staff has completed the review of your application dated May 5, 1988. Based on this review we have revised License Condition Nos. 28 B and C, to reflect the changes to your decommissioning schedule that was requested. However, your request to change License Condition No. 33 B is not acceptable to the staff. It is necessary to have a defined (projected) completion date specified in the license in order to ensure a target date for placement of interim soil cover. This is necessary to reasonably project costs of decommissioning and reclamation on an annual basis. It is also deemed important that a licensee who is in a declared reclamation status complete interim stabilization in a timely manner as particular site conditions warrant.

Therefore, pursuant to Title 10, Code of Federal Regulations, Part 40, Source Material License SUA-56 is hereby amended by revising License Condition Nos. 28 B and C to read as follows:

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 USNRC 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.

All other conditions of this license shall remain the same. The effect of this amendment is to incorporate the revision to the decommissioning plan schedule into your license. This license is being reissued in its entirety to incorporate the revisions specified above.

The issuance of this amendment was discussed via telecon between Ms. Baker of WNI and Mr. Ralph S. Heyer of my staff on August 3, 1988.

FOR THE NUCLEAR REGULATORY COMMISSION

/S/

R. Dale Smith, Director
Uranium Recovery Field Office
Region IV

Enclosure: Source Material License SUA-56

Case Closed: 04001162350R

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, 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. Western Nuclear, Inc.	3. License number: SUA-56, Amendment No. 47
2. 11111 West 8th Avenue Lakewood, Colorado 80215	4. Expiration date: Until terminated.
	5. Docket or Reference No.: 40-1162

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 license 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.

10. Authorized Places of Use: The licensee's uranium milling facilities located approximately two (2) miles north of Jeffrey City, Wyoming.

Authorized For Possession Only: (a) The licensee's Day-Loma and Bullrush heap leach sites located approximately twenty-five (25) miles northeast of Jeffrey City, Wyoming, and (b) the licensee's Frazier-Lomac and Rox mine sites, also located approximately twenty-five (25) miles northeast of Jeffrey City, Wyoming.

11. For use in accordance with statements, representations, and conditions contained in Section 5 and subsections 3.1.3, except for the referenced figures, 3.1.4 and 3.1.5 of the licensee's revised license renewal application dated March 1, 1980, as modified by letters dated August 12, 1981, November 23, 1981, November 11, 1983, and April 17, 1984, from G. Bogden to H. Pettengill and by letters dated March 9, 1987, and April 3, 1987. Whenever the word "will" is used in the sections specified above, it shall denote a requirement. In addition, where the word "comparable" is used in Section 3.1.5, it shall be defined as at least meeting the design specifications specified in that section.

Notwithstanding statements to the contrary in the March 9, 1987 letter, the licensee shall:

A. perform surface contamination surveys in areas used for offices, change rooms, and eating areas on a biweekly schedule;

B. continue to use the Graham Ranch sampling location as the background monitoring site instead of the location southwest of the site boundary, which may be deleted.

12. Any changes in the Split Rock mill flowsheet as shown on Figure 3.1-1 of the licensee's revised renewal application or the Green Mountain Ion-Exchange facility flow sheet as shown on Figure 3.2.1-3 of the revised application shall require approval by the NRC in the form of a license amendment. In addition, notwithstanding any conflicting statements on Figure 3.1-1, there shall be no treatment of tails pulp prior to discharge, unless specifically approved by the NRC in a license amendment.

13. The maximum mill throughput shall not exceed 850 metric tons of yellowcake per year.

14. Wet scrubber systems meeting the design efficiencies specified in Appendix B of Section 4 of the licensee's revised renewal application shall be maintained on the yellowcake packaging and dryer stacks. Operations shall be immediately suspended in the affected areas of the mill if any of the emission control equipment for the yellowcake drying or packaging areas specified above is inoperative.

15. The licensee shall implement a program to minimize dispersal of dust from the ore piles by water sprinkling or other dust suppression techniques, unless a documented weekly inspection indicates that the moisture content of the ore and/or weather conditions are controlling dusting. This program shall include the use of written operating procedures that specify the use of specific control methods for all conditions.

16. The licensee shall implement a tailings embankment inspection program as specified in their May 15, 1980 submittal entitled "Operational Inspection and Surveillance of Embankment Retention System."

    In addition, notwithstanding the names of responsible personnel indicated in the May 15, 1980 submittal, the qualifications of the professional personnel who will perform the technical evaluation of the existing conditions of the retention system must meet the minimum requirements specified in Regulatory Guide 3.11.1.

    A copy of each technical evaluation specified in Section 3 of the May 15, 1980 submittal shall be submitted to the USNRC, Uranium Recovery Field Office, by July 1 of each year.

17. Deleted by Amendment No. 33.

18. The licensee shall maintain a minimum of 10 feet of freeboard between the top of the tailings retention embankment and the operating pond level.

19. The tailings discharge line from the mill to the tailings pond shall be enclosed in an open four-foot wide launder from a point 200 feet downstream from the nearest point on the embankment crest to past the upstream edge of the crest.

20. Notwithstanding the sensitivity levels specified in Table 5.5.7-2 of the licensee's revised renewal application for Th-230 and Pb-210 in air, sensitivity levels for those two radionuclides shall be as follows:

    (1) Th-230 in air - 1×10^{-16} uCi/ml

    (2) Pb-210 in air - 2×10^{-15} uCi/ml

21. The licensee shall have in operation, at all times tailings are being discharged to the tailings impoundment, instrumentation to detect ruptures of the tailings discharge line. Indications of a possible rupture of the tailings line shall result in activation of an alarm indicator at the guard shack. The instrumentation shall be tested daily, and testing documented, to ensure proper operation.

22. In addition to the embankment inspection program specified in Condition No. 16, the licensee shall perform documented monthly readings of embankment piezometers. The licensee shall also perform documented quarterly readings of the horizontal and vertical movement markers. All instrumentation readings shall be maintained onsite in graphical form. Action levels for embankment instrumentation readings shall be as follows:

    A. For piezometric readings, any change in water levels which indicates increased seepage in the debris zone;

    B. For settlement readings, any change as specified in the letter from J. Nelson and M. Taylor to G. Bogden dated March 20, 1981.

    Readings exceeding the above action levels shall result in immediate notification of the USNRC, Uranium Recovery Field Office, by telephone and shall be confirmed in writing within seven (7) days.

23. DELETED by Amendment No. 33.

24. The licensee shall implement the environmental monitoring program summarized in Table 5.5.7-1 of their revised renewal application dated March 1, 1980, as revised by Table 2 of their letter dated August 14, 1985. The data obtained from this monitoring program shall be reported semiannually to the USNRC, Uranium Recovery Field Office, in accordance with requirements of 10 CFR 40.65.

    Notwithstanding the ground water and surface water monitoring requirements specified in Table 5.5.7-1 and in Table 2, the licensee shall conduct a compliance monitoring program as specified in License Condition No. 74.

Additionally, the licensee shall implement and maintain the enhanced evaporation system as described in their report submitted by cover letter dated April 8, 1988.

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 semi-annual audit of the environmental and in-plant monitoring programs. Any changes to the "Environmental Monitoring Manual" or the "In-plant Monitoring Manual" as submitted on March 25, 1981, shall be reported to the NRC.

26. The licensee shall install and maintain a meteorological monitoring station in the immediate vicinity of the mill site, such as Jeffrey City, to measure the parameters specified in Section 6.1 of the FES. The data obtained from this station shall be tabulated and made available for NRC inspection. The station shall be installed by April 1, 1981.

    Data collected shall be reduced to the format specified in Regulatory Guide 1.23, "Onsite Meteorological Programs," with the following exceptions:

    A. The lowest wind speed category shall be 0-3 mph (no separate category for calms).

    B. The atmospheric stability classification of "moderately stable" and "extremely stable" shall be combined into one classification.

    Data shall be presented as a fraction of the total number of observations used.

27. The licensee shall reclaim the tailings management system with an impoundment height of 6410 feet above mean sea level in accordance with their June 1981 submittal and associated revisions dated February 19, 1982, February 22, 1982, March 22, 1982 and March 10, 1983 with the following additions:

    A. The gravel blanket covering the top of the pile shall be extended under the riprap around the margins of the reclaimed tailings.

    B. The 12-inch gravel blanket covering the dam face shall be extended through cross section Bc. The gravel shall be placed for a minimal distance of 200 feet either side of the center line of the improved channel.

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.

C. A final mill site decommissioning report shall be submitted for USNRC 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.

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 three (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 three (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 three (3) months prior to the anniversary of the effective date of the existing surety instrument. 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 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, if applicable. 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, soil and water sample analyses to confirm decontamination, 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. The attachment 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 estimates. Reclamation/decommissioning plans and annual updates should follow this outline.

Western Nuclear's currently approved surety, a performance bond No. 8060-9852, issued by Federal Insurance Company in favor of the State of Wyoming, shall be continuously maintained in an amount no less than $12,282,243 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. December 30 is designated as the anniversary date discussed in paragraph one above. At least 90 days prior to this date in successive years WNI shall submit, in the form of a request for an amendment, the required annual update information.

30. The licensee shall perform an annual assessment of seepage control measures as well as the effects of discontinuing seepage collection and submit it to the USNRC, Uranium Recovery Field Office for review by July 1.

The licensee is authorized to discontinue seepage collection efforts from the industrial well and wells A, B, and C, subject to the following:

A. Seepage recovery from the acid plant cooling pond shall continue to be returned to the tailings impoundment at a nominal rate of 400 gpm to the maximum extent achievable.

B. The NRC may require the licensee to reactivate the pumpback system.

C. Ground water restoration will be required in all affected areas to the extent required by law.

D. Any parameter from any monitor well which exceeds WDEQ Class I standards will be reported within 48 hours to the USNRC, Uranium Recovery Field Office.

E. If water quality is degraded to a lower class of use, additional monitor wells may be required.

F. WNI shall submit a ground-water restoration plan and schedules for dewatering as well as reclaiming the tailings impoundment for review and approval by July 1, 1987.

31. DELETED by Amendment No. 46.

32. A. The licensee shall, by December 31, 1985, complete repair to the reclamation cover of the Day Loma heap leach site as described in the Energy Fuels Nuclear, Inc. submittal dated January 7, 1985.

B. The licensee shall, by April 1, 1982, submit to the USNRC, Uranium Recovery Field Office, Denver, Colorado, formal detailed plans for reclamation and decommissioning of the Bullrush site.

33. The licensee is authorized to implement the stabilization program as prescribed in its January 29, 1987 submittal with the additions prescribed below.

A. The licensee shall complete cleanup of all areas of windblown tailings as defined in the survey submitted March 1, 1988 by January 1, 1990.

B. The licensee shall complete regrading of the tailings impoundments and the placement of an interim soil cover to minimize recharge and prevent blowing of tailings no later than October 1, 1990.

C. The licensee shall submit a verification survey to include soil sampling results of the cleanup of windblown tailings by May 1, 1990.

D. The licensee shall submit a construction completion report describing the interim stabilization of the tailings area by January 1, 1991.

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.

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. If unexpected harmful effects or evidence of irreversible damage not otherwise identified in the environmental statement are detected during operations, the licensee shall provide to the NRC an acceptable analysis of the problem and a plan of action to eliminate or reduce the harmful effects or damage.

37. The licensee is hereby exempted from the requirements of Section 20.203(e)(2) of 10 CFR Part 20 for areas within the mill, provided that all entrances to the mill are conspicuously posted in accordance with Section 20.203(e)(2) and with words, "Any area within this mill may contain radioactive material."

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. The licensee shall conduct an annual survey of land use (grazing, residences, wells, etc.) in the area within five miles of the mill and submit a report of this survey annually to the USNRC, Uranium Recovery Field Office, Denver, Colorado. This report shall indicate any differences in land use from that described in the FES (NUREG-0639) or the previous annual report. The first annual report shall be submitted by July 1, 1981, and by July 1 each year thereafter.

40. The licensee shall conduct and document at least one inspection of the tailings embankment per day and shall immediately notify the USNRC, Uranium Recovery Field Office, by telephone and telegraph of any failure in the dam retention system or tailings discharge system which results in a release of radioactive material to unrestricted areas/or of 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.

41. Release of equipment or packages from the restricted area shall be in accordance with the attachment to SUA-56 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 semi-annual report and recommendations by the ALARA Committee to the Resident Manager shall include a determination of the following: (1) if there are any upward trends developing in personnel exposures for identifiable categories of workers or types of operations or effluent releases, (2) if exposures and effluents might be lowered under the concept of as low as reasonably achievable, and (3) if equipment for effluent and exposure control is being properly used, maintained, and inspected. In addition, the RSO must be one of the members of the semi-annual Audit Committee.

    In addition, a copy of the semiannual ALARA report containing results of the semiannual audit and recommendations by the ALARA committee shall be submitted to the USNRC, Uranium Recovery Field Office.

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 to in Sections of the licensee's application, listed in Condition No. 11, 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.

44. The licensee shall maintain a management control program which shall include written operating procedures, reviewed and approved by the Radiation Safety

Officer, for all aspects of mill operations, including the radiation safety program and the environmental monitoring and control program. Approval by the RSO will be indicated by the signature of the RSO on the procedure. Written operating procedures pertaining to all activities carried on in an area shall be available in each area where radioactive material is processed, handled, or stored by April 1, 1981, and shall be reviewed at least annually by the RSO. For any work or maintenance for which there is no effective operating procedure, and for any non-routine maintenance or repair work, a radiation work permit signed by the radiation safety staff must be prepared and used for performing these activities. In addition, for any maintenance or repair work which involves the semi-autogenous grinder, the yellowcake dryer or packaging area, or any vessel which routinely contains radioactive material, continuous sampling for airborne uranium or daughters shall be performed until the work has been completed.

45. In-plant airborne monitoring, committed to in Section 5 of the licensee's application, shall be performed under conditions typical of employee exposures. Along with results of airborne radioactivity, a record of the state of operation of both process and effluent control equipment and ventilation conditions shall be kept.

46. All monitoring and exposure data shall be reviewed monthly 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 Safety Director or RSO and reviewed by the Resident Manager and all department heads. 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.

47. A weekly documented inspection shall be performed by the RSO or a member of the radiation safety staff of all work and storage areas and a report submitted to the Safety Director on any items of non-compliance with operating procedures, license requirements, or safety practices affecting radiological safety. In addition, the monthly inspections conducted by the Safety Director or his designate, described in Section 5.1.3 of the renewal application, shall be documented.

48. In addition to the qualifications specified in Section 5 of the licensee's revised renewal application, the Safety Director and Radiation Safety Technician (Mill RSO) must have specialized formalized training of at least four (4) weeks duration in radiation protection, including the biological effects of uranium and its daughters. At least one week of the formalized training must be specifically applicable to uranium milling. The Safety Director and RSO must attend, at least bi-annually, a refresher course. They must have one year of previous supervisory experience, one year of applied health physics experience, and a thorough knowledge of instrumental and analytical procedures used for monitoring radiological effluent releases and personnel exposure.

49. The worker radiation training program shall be administered by the RSO. Training shall include a written examination. Employees and their supervisors shall sign a statement that the employee received radiation protection training, successfully completed testing of that training, and the date the training was received. Each worker must be provided a formalized refresher training course each year. Retraining shall include problems that have arisen during the year and changes in regulations, license conditions, or mill operating procedures that have radiation safety significance.

50. All new workers, including supervisors, shall also be given on the job training on health and safety aspects of their jobs or all jobs under their supervision. This training shall be documented and conducted annually. Supervisors shall be provided additional training on their supervisory responsibilities in the area of worker protection. All workers shall attend a mill safety meeting bi-monthly, with at least a portion of the meeting devoted to radiological safety.

51. Oral and demonstration tests shall be given annually to technicians performing radiation protection duties to evaluate the technician's job performance. Documentation of training specified in Section 5.3.3 of the renewal application shall include written examinations kept in the employee's personnel folder. In addition, the assistant radiation safety technician under the supervision of the RSO shall have the following minimum qualifications of education, training, and experience:

    A. Education: An associate degree in the physical sciences, engineering or a health-related field. Alternatively, a high school diploma plus 2 years of relevant work experience in applied radiation protection are acceptable.

    B. General experience: One year of previous work experience in a uranium mill or related industry involving radiation protection.

    C. Health physics experience: One year of work experience using sampling and analytical laboratory procedures that involve health physics, industrial hygiene, or industrial safety measures to be applied in a uranium mill.

    D. Specialized training: At least 4 weeks of formalized training of health physics instruments used in the mill, surveying and sampling techniques, and personnel dosimetry requirements.

52. Personnel dosimeters shall be exchanged and read quarterly.

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. In addition to the airborne monitoring program in Section 5 of the licensee's revised renewal application, the licensee shall: (1) collect airborne

particulate samples in January and July of each year in representative areas of the grinding area and analyze for Ra-226 and Th-230; (2) sample for airborne particulates weekly in all "airborne radioactivity areas" as defined in 10 CFR 20.203(d); (3) sample weekly for radon daughters in mill areas exceeding 0.08 WL with continued weekly samples until four consecutive samples are less than 0.08 WL; and (4) run all samples for in-plant airborne particulate monitoring for at least 30 minutes.

55. The licensee shall implement a bioassay program as follows:

A. Notwithstanding any conflicting statement in Section 5.5.4 of the licensee's revised renewal application, in vivo (lung) measurements for uranium shall be performed at least bi-annually on all permanent mill workers. In vivo measurements shall be performed on at least one half of the mill workers each year. Also, any permanent mill worker whose exposure to radioactive material exceeds 25% of MPC based on a time weighted exposure (TWE) averaged over a period of one calendar quarter since their last routine in vivo measurement, shall be provided an in vivo measurement on an annual basis. Additionally, any temporary mill worker that exceeds a 25% TWE averaged over their period of assignment at the mill shall be provide an in vivo measurement.

B. With the exception of the frequency for routine in vivo testing, the licensee shall conduct a bioassay program in accordance with Regulatory Guide 8.22. Anywhere the words "would" or "should" are used in the regulatory guide, it shall denote a requirement.

C. Anytime an action level of 15 ug/l uranium for urinalysis or 9 nCi of natural uranium for in vivo measurement is reached or exceeded, the licensee shall provide documentation to the USNRC, Uranium Recovery Field Office, indicating what corrective actions have been performed to satisfy the requirements of Regulatory Guide 8.22. This documentation shall be included and submitted with the semi-annual ALARA report required by License Condition No. 42.

Anytime an action level of 30 ug/l uranium for four consecutive specimens for urinalysis or 16 nCi uranium for an in vivo measurement is reached or exceeded, the licensee shall provide documentation within 30 days to the USNRC, Uranium Recovery Field Office, indicating what corrective actions have been performed to satisfy the requirements of Regulatory Guide 8.22.

56. All liquid effluents from new construction, including sink and shower discharges and laundry wastes from the mill process building and change or shower rooms, with the exception of sanitary wastes, shall be returned to the mill circuit or discharged to the tailings impoundment.

57. DELETED by Amendment No. 33.

58. DELETED by Amendment No. 37.

59. Access to any "Airborne Radioactivity Area" as defined by 10 CFR 20.203(d) shall be controlled by caution signs and operating procedures or security locks.

60. Whenever bioassay analyses are performed, the laboratory surfaces shall be decontaminated prior to sample analyses when surface contamination exceeds 10 dpm (removable) alpha/100 square cm.

61. If an employee reaches an action level of 25 percent of MPC based on TWE (time weighted exposure) over a period of one quarter of one week, depending on material solubility, the RSO or Safety Director shall institute an investigation of the employee's work record and exposure history to identify any problem areas. In addition, if any airborne radioactivity sample, except for those taken in a controlled "airborne radioactivity area", exceeds the values in Table 1 of Appendix B to 10 CFR 20, the RSO or Safety Director shall institute an investigation. If any problem areas are noted, they shall be studied and necessary corrective measures taken to ensure that exposure is as low as reasonably achievable. These evaluations shall be documented, maintained on file for five years, and included in the monthly audit required by Condition 46 of this license.

62. Employee exposure calculations based on results of the continuous sampling with portable air pumps shall be correlated with results of employee exposure calculations based on fixed location air sampling, with the higher dose assigned the worker.

63. Maintenance and operation of the tailings dam shall be in accordance with the guidelines, specifications, representations, and commitments contained in the following documents.

    A. "Engineer's Report, Report 1, Tailings Management, Split Rock Mill, Jeffrey City, Wyoming," submitted by letter dated September 15, 1977, from M. J. Taylor, D'Appolonia, to L. C. Rouse, NRC.

    B. "Partial Response to NRC Questions, Tailings Management Report 1," submitted by letter dated February 16, 1978, from M. J. Taylor, D;Appolonia, to R. A. Scarano, NRC.

    C. Enclosure B of information submitted by letter dated February 5, 1979, from J. W. Ransone, Western Nuclear, to R. A. Scarano, NRC.

    D. Letter from G. Bogden, Western Nuclear, to J. Linehan, NRC, dated June 9, 1979, providing details of beach erosion protection.

    E. Letter from G. Bogden, Western Nuclear, to J. Linehan, NRC, dated June 14, 1979, providing specifications for the toe drain.

F. Letter from G. Bogden, Western Nuclear, to J. Linehan, NRC, dated July 27, 1979, providing specifications for the pipe to be used in the toe drain.

Additionally, the licensee shall not expand the tailings disposal area without prior approval of the NRC obtained through application for amendment of this license.

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. Notwithstanding any conflicting provisions in Section 5 of the licensee's revised renewal application, the licensee shall either (a) sample continuously for radon at the seven environmental locations specified in Table 5.5.7-1, or (b) sample for one week per calendar month at each location and perform a correlation with meteorological data obtained from the station required by Condition No. 26. This information shall be submitted to NRC as part of the report required by Condition No. 24.

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. All process tanks must either (a) be surrounded by dikes or curbs capable of holding the contents of the tanks, or (b) have any spillage directed to sumps, where it will be collected and discharged back to the mill circuit.

71. For a period of four (4) calendar quarters from the resumption of full milling operations after June 19, 1981, the sampling and analysis results of the Environmental Monitoring Program, as required by License Condition No. 24, shall be reported to the USNRC, Uranium Recovery Field Office, Denver, Colorado, within 60 days of the end of each calendar quarter in accordance with the format in the attachment to SUA-56 entitled, "Sample Format for Reporting Monitoring Data." Dose evaluations based on this actual environmental monitoring program data and the dose conversion factors as given in Attachment A of "Compliance Determination Procedures for Environmental Radiation Protection Standards for Uranium Recovery Facilities - 40 CFR 190" shall be included in the report.

72. The requirement in 10 CFR 20.405(c) for notification of levels of radiation or releases of radioactive materials in excess of the limits specified in 40 CFR 190 shall be suspended during the period that the four quarterly environmental

monitoring reports are being submitted as required in License Condition No. 71 above.

73. Disposal in soil of material consisting of trash from the ore pad and mill-feed shoot, worn out parts and other miscellaneous trash such as waste paper, bottles, and rags, shall be as described in revised Section 4.3 of the renewal application, submitted by letter dated April 3, 1981. Any waste taken out of the process circuit between the ore crushing and the drying operations shall be disposed of in the tailings retention area. Disposal in tailings shall be done at least 50 feet from the retention embankment.

The static water levels in piezometers WN-13H and WN-14H shall be measured and recorded at least semiannually. If the water level is within 10 feet of the bottom of the burial trench, then the USNRC, Uranium Recovery Field Office, shall be notified within seven (7) days.

Each burial site shall be reclaimed and maintained in accordance with the Interim Stabilization Program contained in Section 5.7 of the renewal application dated March 1, 1980. Any impact upon the reclaimed land due to disposal operations and judged by the NRC to be undesirable shall be corrected by the licensee.

74. The licensee shall implement a compliance monitoring program containing the following:

A. Sample Southwest Valley Wells 9, 1, A, B, C, 3, 21, 24, 25, 16, 15 and Northwest Valley Wells 4, 7, 5, 2, 17, 18, 19, 23, 26 and 27, on a quarterly frequency for chloride, nitrate, sulfate, pH, TDS and water level, and on a semiannual frequency for arsenic, barium, beryllium, cadmium, chromium, lead, molybdenum, nickel, radium-226 and 228, selenium, silver, thorium-230 and uranium.

B. Comply with the following ground-water protection standards at point of compliance well Nos. 4 and 9, with background being recognized in well No. 15:

arsenic = 0.05 mg/l, barium = 1.0 mg/l, beryllium = 0.05 mg/l, cadmium = 0.01 mg/l, chromium = 0.05 mg/l, lead = 0.05 mg/l, mercury = 0.002 mg/l, molybdenum = 0.05 mg/l, nickel = 0.05 mg/l, radium-226 and 228 = 5 pCi/l, selenium = 0.013 mg/l, silver = 0.05 mg/l, thorium-230 = 0.95 pCi/l and uranium = 0.16 mg/l.

C. Implement a corrective action program due to exceedance of ground-water protection standards with the objective of returning the concentrations of beryllium, cadmium, nickel, combined radium-226 and 228, selenium, thorium-230 and uranium to the concentration limits specified in Subsection (B).

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number SUA-56

Docket or Reference number 40-1162

The corrective action program shall be proposed as designated in Criterion 5D, Appendix A, 10 CFR Part 40. Accordingly, the licensee shall submit to the Uranium Recovery Field Office a proposed corrective action program and supporting rationale for Commission approval by January 1, 1989. The corrective action program shall be fully operational by January 31, 1990.

FOR THE NUCLEAR REGULATORY COMMISSION

Date AUG 18 1988

R. Dale Smith, Director
Uranium Recovery Field Office
Region IV

40-1162/RSH/88/08/16/0

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