

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. Gas Hills Project
American Nuclear Corporation

2. 314 W. Midwest Ave.
Casper, Wyoming 82601

3. License number

SUA-667, Amendment No. 23

4. Expiration date

Until NRC determines that
decommissioning is adequate

5. Docket or
Reference No.

40-4492

6. Byproduct, source, and/or
special nuclear material

Natural Uranium

7. Chemical and/or physical
form

Any

8. Maximum amount that licensee
may possess at any one time
under this license

Residual contamination from
previously licensed activities

9. Authorized Place of Use: The licensee's facility located in Gas Hills, Wyoming.

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 USNRC, Uranium Recovery Field Office.

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

12. The licensee shall monitor piezometers and settlement monuments semiannually.

13. During the temporary period of mill decommissioning, the effluent and environmental monitoring program shall be conducted as specified in Attachment No. 1 to SUA-667, with the exception that sampling need not be conducted at the Puddle Springs Ranch or Loco Shop Station. In addition, the licensee shall utilize lower limits of detection in accordance with Section 5 of Regulatory Guide 4.14 for all effluent and environmental monitoring.

The result of all effluent and environmental monitoring required by this license shall be reported in accordance with 10 CFR 40, Section 40.65 with copies of the report sent directly to the USNRC, Uranium Recovery Field Office, P.O. Box 25325, Denver, CO 80225. Monitoring data shall be reported in the format shown in Attachment No. 2 to SUA-667, "Sample Format for Reporting Monitoring Data."

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14. A. The licensee shall perform reclamation of Tailings Ponds 1 and 2 at the Gas Hills site in accordance with the following documents:

1. "Interim Stabilization, Operational, Decommissioning and Reclamation of the Federal-American Partners' Mill and Tailings Facilities, Gas Hills, Wyoming," Federal-American Partners, May 18, 1982.
2. "The Development of Hydraulic Designs to Reroute Willow Springs Draw Near Federal-American Partners Uranium Mining Facilities at West Gas Hills, Wyoming," Dames and Moore, July 30, 1982.

Further, the reclamation plan specified in the above documents shall be modified in accordance with the licensee's submittal dated May 2, 1984, with the exception that grouted riprap need not be installed.

In addition, within six (6) months of final cessation of operations or a determination that one or both tailings ponds will not be used for future tailings disposal, the licensee shall provide for USNRC review and approval a schedule for reclamation activities, including a program for interim stabilization and regrading to prevent ponding of water and for monitoring the degree of consolidation of slimes areas of the tailings pond(s) to determine (1) when initial reclamation activities may proceed and (2) when settlement due to the initial reclamation activities is sufficiently complete to allow final reclamation cover placement and recontouring.

- B. The licensee shall place no additional tailings or other wastes in either tailings pond until the licensee receives approval in the form of a license amendment from the NRC.
 - C. The reclamation of Tailings Pond No. 1 shall begin by July 1, 1987, and interim stabilization activities shall be completed by October 1, 1986.
15. The licensee shall, by January 1, 1987, submit a detailed decommissioning plan to the Uranium Recovery Field Office, USNRC, for review and approval in the form of a license amendment.
16. The licensee shall maintain a USNRC approved surety arrangement adequate to cover tailings stabilization and reclamation, mill decommissioning, mill site reclamation, long term maintenance and monitoring, and ground water restoration as warranted. The licensee shall submit for USNRC review and approval a proposed revision to the surety arrangement within six (6) months of USNRC approval of a revised tailings area reclamation plan or approval of or revision to any ground water protection program. The revised surety shall be in effect within three (3) months of written USNRC approval. Furthermore, the licensee shall submit for USNRC review any proposed revision or update to the surety arrangement at least two (2) months prior to the proposed effective date. Along with each proposed revision or update and at least annually, the licensee shall submit documentation showing a breakdown of the costs and the cost basis for tailings stabilization and

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reclamation, mill decommissioning, mill site reclamation, long term maintenance and monitoring, and ground water restoration as warranted.

17. The Radiation Safety Officer (RSO) for the site shall possess qualifications in accordance with Section 2.4.1 of Regulatory Guide 8.31. The RSO need not remain onsite, but shall be available for all required activities.
18. All mill entries shall be conducted under a Radiation Work Permit (RWP) issued by the RSO. The RWP shall at least describe the following:
 - 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 the access. Work generating airborne radioactivity shall require the use of continuous breathing zone monitoring.

The Radiation Safety Officer (RSO) shall indicate by signature the review and approval of each RWP prior to the initiation of work. The work shall be carried out in strict adherence to the conditions of the RWP.

19. The licensee shall conduct and document at least one inspection of the tailings pond embankments per week.
20. Bioassay testing shall be conducted as specified in Radiation Work Permits issued for non-routine maintenance tasks. Action levels shall be as follows:
 - A. 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 submitted with the semiannual 10 CFR 40.65 report.
 - B. Anytime an action level of 30 ug/l for four consecutive specimens or 130 ug/l uranium for one specimen for urinalysis or 16 nCi uranium for an in-vivo measurement is reached or exceeded, the licensee shall provide documentation within one (1) month to the USNRC, Uranium Recovery Field Office, indicating what corrective actions have been performed to satisfy the requirements of Regulatory Guide 8.22.
21. Release of equipment or packages from the restricted area shall be in accordance with Attachment No. 3 to SUA-667, "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.

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22. Mill tailings other than samples for research shall not be transferred from the site without specific prior approval of the USNRC, Uranium Recovery Field Office, in the form of a license amendment. The licensee shall maintain a permanent record of all transfers made under the provisions of this condition.
23. 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 USNRC regulations, all such documentation shall be maintained for a period of at least five (5) years.
24. Prior to termination of this license, the licensee shall provide for transfer of title to byproduct material and land, including any interests therein (other than land owned by the United States or the State of Wyoming), 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 Wyoming, at the State's option.
25. Occupational exposure calculations shall be performed and documented within one week of the end of the regulatory compliance period as specified in 10 CFR 20.103(b)(2). Non-routine samples shall be analyzed and the results reviewed by the RSO within two working days after sample collection.
26. 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 USNRC, Uranium Recovery Field Office, and no such disturbance shall occur until the licensee has received authorization from the USNRC to proceed.

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

27. The licensee shall conduct an annual survey of land use (private residences, grazing areas, private and public potable water and agricultural wells, and non-residential structures and uses) in the area within five (5) miles of any portion of the restricted area boundary and submit a report of this survey to the USNRC, Uranium Recovery Field Office. This report shall indicate any differences in land use from that described in the last report.
28. Before engaging in any activity not previously assessed by the USNRC, the licensee shall prepare and record an environmental evaluation of such activity. When the evaluation indicates that such activity may result in a significant adverse environmental impact that was not assessed or that is greater than that assessed, the licensee shall provide a written evaluation of such activities and obtain prior

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approval of the USNRC, Uranium Recovery Field Office, in the form of a license amendment.

29. The licensee shall implement a groundwater detection monitoring program to ensure compliance to 40 CFR 192.32(a)(2) which includes the following elements:
- A. The licensee shall monitor at the point of compliance and background wells for the following indicator parameters: Arsenic, Selenium, and pH. The licensee shall utilize analytical techniques capable of providing lower limits of detection of 0.005 mg/l and 0.001 mg/l for arsenic and selenium, respectively. Measurements of pH shall be reported to the nearest 1/10 standard unit.
 - B. The determination of compliance shall be based upon sampling Well R-6 for Tailings Pond No. 1 and Well TP2-2 for Tailings Pond No. 2.
 - C. The determination of background levels for the parameters specified in subsection (A) shall be defined by sampling Well TP2-3.
 - D. The licensee shall sample for those parameters specified in subsection (A) at those wells designated in subsections (B) and (C) on a monthly basis for a period of one (1) year and at least twice annually thereafter. The first monthly sample shall be taken within 30 days of the date of this Order. All semiannual samples shall be taken at least four months apart.
 - E. The licensee shall, within 60 days of collection of the last of the 12 monthly samples, propose for USNRC review and approval in the form of a license amendment background levels for indicator parameters and a statistical procedure for identifying significant changes (95% confidence level) between data from the wells specified in subsections (B) and (C).
 - F. The licensee shall report the data required by subsection (D) above semiannually along with those data required by License Condition No. 18 in accordance to the reporting format, Attachment No. 4 to SUA-667, "Sample Format for Reporting Detection Monitoring Data." These monitoring requirements are in addition to the requirements specified in License Condition No. 18.
 - G. The licensee shall report at least annually in accordance to reporting requirements specified in subsection (F) the rate and direction of ground water flow under the tailings impoundments.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

/s/

Date OCT 01 1985

BY

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

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