NRC FORM 374

U.S. NUCLEAR REGULATORY COMMISSION

MATERIALS LICENSE

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

Licensee	
1. Kennecott Uranium Company Sweetwater Project	3. License Number SUA-1350, Amendment 28
2. P.O. Box 1500 Rawlins, Wyoming 82301-1500	4. Expiration Date November 10, 2014
	5. Docket No. 40-8584 Reference No.

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

Section 9: Administrative Conditions

9.1 The authorized place of use shall be the licensee's Sweetwater uranium milling facility, located in Township 24 North, Range 93W, Sweetwater County, Wyoming.

9.2 All written notices and reports to the Nuclear Regulatory Commission (NRC) required under this license, with the exception of incident and event notifications, shall be sent to the following address: ATTN: Document Control Desk, c/o Deputy Director, Decommissioning and Uranium Recovery Licensing Directorate, Division of Waste Management and Environmental Protection, Office of Federal and State Materials and Environmental Management Programs, Washington, DC 20555, Mail Stop T-8 F5, or by express delivery to 11545 Rockville Pike, Rockville, Maryland 20852-2738.

Incident and event notifications, which require telephone notification under 10 CFR 20.2202 and 10 CFR 40.60, shall be made to the NRC Operations Center at (301) 816-5100.

[Applicable Amendments: 16, 18, 25, 26]

9.3 Changes, Tests and Experiments

(a) The licensee may, without obtaining a license amendment pursuant to §40.44, and subject to conditions specified in (b) of this condition:

i. make changes in the facility as described in the license application (as updated),

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ii make changes in the procedures as described in the license application (as updated), and

iii conduct test or experiments not described in the license application (as updated).

(b) The licensee shall obtain a license amendment pursuant to §40.44 prior to implementing a proposed change, test or experiment if the change, test, or experiment would:

i Result in any appreciable increase in the frequency of occurrence of an accident previously evaluated in the license application (as updated);

ii Result in any appreciable increase in the likelihood of occurrence of a malfunction of a structure, system, or component (SSC) important to safety previously evaluated in the license application (as updated);

iii Result in any appreciable increase in the consequences of an accident previously evaluated in the license application (as updated);

iv Result in any appreciable increase in the consequences of a malfunction of an SSC previously evaluated in the license application (as updated);

v Create a possibility for an accident of a different type than any previously evaluated in the license application (as updated);

vi Create a possibility for a malfunction of an SSC with a different result than previously evaluated in the license application (as updated);

vii Result in a departure from the method of evaluation described in the license application (as updated) used in establishing the Final Safety Evaluation Report (FSER) or the Environmental Assessment (EA) or Technical Evaluation Reports (TERs) or other analysis and evaluations for license amendments;

viii For purposes of this paragraph as applied to this license, SSC means any SSC which has been referenced in a staff SER, TER, EA, or Environmental Impact Statement (EIS) and supplements and amendments thereof.

(c) Additionally, the licensee must obtain a license amendment unless the change, test, or experiment is consistent with the NRC conclusions, or the basis of, or analysis leading to, the conclusions of actions, designs, or design configurations analyzed and selected in the site or facility SER, TER, and EIS or EA. This would include all supplements and amendments, and TERs, EAs, EISs issued with amendments to this license.

d) The licensee's determinations concerning (b) and (c) of this condition shall be made by a Safety and Environmental Review Panel (SERP). The SERP shall consist of a minimum of three individuals. One member of the SERP shall have expertise in management (e.g., Plant Manager) and shall be responsible for financial approval for changes; one member shall have expertise in operations and/or construction and shall have responsibility for implementing any operational changes; and, one member shall be the radiation safety officer (RSO) or equivalent, with the responsibility of assuring changes

conform to radiation safety and environmental requirements. Additional members may be included in the SERP as appropriate, to address technical aspects such as groundwater, hydrology, surface-water hydrology, specific earth sciences, and other technical disciplines. Temporary members or permanent members, other than the three above-specified individuals, may be consultants.

e) The licensee shall maintain records of any changes made pursuant to this condition until license termination. These records shall include written safety and environmental evaluations made by the SERP that provide the basis for determining changes are in compliance with (b) of this condition. The licensee shall furnish, in an annual report to the NRC, a description of such changes, test, or experiments, including a summary of the safety and environmental evaluation of each. In addition, the licensee shall annually submit to the NRC changed pages, which shall include both a change indicator for the area changed, e.g., a bold line vertically drawn in the margin adjacent to the portion actually changed, and a page change identification (date of change or change number or both), to the operations plan and reclamation plan of the approved license application (as updated) to reflect changes made under this condition.

[Applicable Amendment: 18]

9.4 The licensee is hereby authorized to possess byproduct material in the form of uranium waste tailings and other uranium byproduct waste generated by the licensee's milling operations authorized by this license.

The licensee is authorized to operate an ion exchange (IX) uranium recovery facility in accordance with submittals dated September 27, 1989, and October 18, 1991. Contaminated liquid and solid wastes from the IX plant shall be placed in the tailings impoundment.

The licensee is not authorized to produce any other uranium concentrates until a pre-operational inspection has been completed and any safety issues resolved. The inspection should confirm, in part, that operating procedures and approved radiation safety and environmental monitoring programs are in place, and that pre-operational testing is complete.

For monitoring purposes, the standby mode of operation is applicable for any continuous 90-day or longer period when no yellowcake is produced by the mill. The NRC shall be notified at least ninety (90) days prior to any planned resumption of uranium milling operations.

9.5 The licensee shall conduct operations in accordance with statements, representations, and conditions contained in Sections 5.2, 5.3, 5.4, and 6.0 of the original license application as revised, dated August, 1978; in Sections 2.0, 3.0, and 4.0 of the renewal application dated March 1984, as supplemented by submittals dated April 3, 1983, and January 17, 1985; and the Final Design Volume VII of the license renewal application submitted September 18, 1997, with page changes submitted April 13, June 10, July 1, and July 20,1998, and March 25, 1999; and the renewal application dated May 25, 2004, except where superseded by license conditions below.

Whenever the word "will" is used in the above referenced submittals, it shall denote a requirement.

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9.6 Standard operating procedures (SOPs) shall be established and followed for all operational process activities involving radioactive materials that are handled, processed, or stored. These SOPs for operational activities shall enumerate pertinent radiation safety practices to be followed and will be available for the pre-operational inspection.

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

All SOPs (for both operational and non-operational activities) 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 operating procedures at least annually.

9.7 The licensee shall maintain an NRC-approved financial surety arrangement, consistent with 10 CFR 40, Appendix A, Criteria 9 and 10, adequate to cover the estimated costs, if accomplished by a third party, for decommissioning and decontamination of the mill and mill site, reclamation of any existing or approved tailings or waste disposal areas, reclamation of approved evaporation ponds, groundwater restoration, and the long-term surveillance fee. With submittal of a revised reclamation/decommissioning plan, the licensee shall submit, for NRC review and approval, a proposed revision to the financial surety arrangement, if estimated costs in the proposed plan exceed the amount covered in the existing financial surety. The NRC-approved revision to the cost estimate shall be incorporated into the next annual surety amount.

For the approved reclamation plan referenced in License Condition 10.5, the licensee shall provide the NRC-approved surety amount (adjusted for inflation) for reclamation of the proposed structures associated with resumption of mill operation (e.g., tailings impoundment, evaporation ponds, and diversion channels) before commencement of construction of any of these structures.

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 date (October 30) of the approved surety arrangement. If the NRC has not approved a proposed revision to the surety coverage thirty (30) days prior to the expiration date of the existing surety arrangement, the licensee shall extend the existing surety arrangement. The revised surety amount will be in effect within three (3) months of written NRC approval.

The licensee's currently NRC-approved surety (performance bond) shall be continuously maintained in an amount no less than $10,113,000 for the purpose of complying with 10 CFR 40, Appendix A, Criteria 9 and 10, for decommissioning costs related to the existing facility, until a replacement amount is authorized by the NRC.

[Applicable Amendments: 16, 17, 18, 19, 20, 23, 24, 26, 27, 28]

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9.8 The licensee shall have an archeological survey performed prior to disturbing any previously unsurveyed areas. Such surveys shall be submitted to the NRC and the State Historic Preservation Office (SHPO) for review and approval. No such disturbance shall occur until authorization to proceed has been granted by the NRC and SHPO. 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 NRC and SHPO.

9.9 The licensee is hereby exempted from the requirements of Section 20.1902(e) of 10 CFR Part 20 for areas within the mill buildings, provided that all entrances to the mill buildings are conspicuously posted in accordance with Section 20.1902(e) and with the words, "Any Area Within this Mill May Contain Radioactive Material."

9.10 Decommissioning of the facility shall be performed as presented in the Final Design, Volume VI, Part 2 - “Mill Decommissioning Addendum to the Existing Impoundment Reclamation Plan,” submitted May 28, 1998, as supplemented by the response to comments submitted February 3, 1999, and the catchment basin remediation plan dated May 12, 2004, as revised July 22, 2004, December 15, 2004, January 18, 2005, and October 3, 2006. The verification results of this remediation are to be submitted to NRC for approval, as soon as reasonably possible. The catchment basin verification report and NRC’s approval letter shall be referenced in the Final Status Survey Report. Residual contamination remaining under structural foundations after the catchment basin remediation shall be removed at the time the structures are decommissioned. The NRC shall be notified and detailed SOPs for decommissioning (land and buildings) shall be available for review at least three (3) months before decommissioning begins.

[Applicable Amendments: 21, 25]

Section 10: Operational Controls, Limits, and Restrictions

10.1 The mill production per calendar year shall not exceed 4,100,000 pounds of yellowcake, as referenced in the Revised Environmental Report, dated August 1994.

10.2 All liquid effluents from mill process buildings, with the exception of sanitary wastes, shall be returned to the mill circuit or discharged to the tailings impoundment.

10.3 The licensee shall construct and operate the proposed tailings impoundment, liner system, evaporation ponds, and tailings disposal system in compliance with Volumes III, IV, and VII of the Final Design application submitted by cover dated June 11, July 23, and September 18, 1997, including page changes submitted April 13, June 10, July 1, and July 20, 1998, and March 25, and June 21,1999.

The licensee is currently authorized to construct up to eight evaporation ponds and one new impoundment. An additional two evaporation ponds and an additional five impoundments, as described in the above documents, may be constructed after: 1) notification of NRC; 2) submittal of data confirming the proposed design; and 3) an increase in the surety amount, based on the NRC-approved cost estimate for reclaiming the additional structures.

[Applicable Amendment: 17]

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10.4 A detailed embankment monitoring program shall be submitted for NRC approval at least three (3) months prior to placing tailings effluent.

10.5 The existing tailings impoundment, the proposed tailings impoundments, and the proposed evaporation ponds shall be reclaimed in accordance with the Final Design Volumes V, VI, and VI Part 2 of the license renewal application submitted August 1, 1997, August 20, 1997, and May 28, 1998, with page changes submitted June 10, 1998, and supplements submitted February 3, February 25, and June 21, 1999.

10.6 During any period of mill standby, the licensee shall not add tailings or other solid wastes to the tailings impoundment, except byproduct material in the form of debris generated by routine site maintenance. The licensee may add a maximum of 2,800 cubic yards of 11e.(2) byproduct material generated by Crow Butte Resources, Inc. in the course of operating its Crow Butte In Situ Leach (ISL) facility that is licensed by SUA-1534 and solid and liquid wastes from the site's IX plant. Disposal of the Crow Butte ISL materials shall be in accordance with the licensee's submittal of July 9, 1996.

During any period of mill standby at least a weekly inspection of the tailings area shall be performed and documented.

[Applicable Amendment: 22]

Section 11: Monitoring and Recordkeeping Requirements

11.1 The results of sampling, analyses, surveys and monitoring, and of calibration of equipment, as well as reports on audits and inspections, and any subsequent reviews, investigations, and corrective actions, shall be documented. Unless otherwise specified in NRC regulations or this license, all such documentation shall be maintained for a period of at least five (5) years.

11.2 The licensee shall conduct an annual survey of land use (private residence, grazing areas, private and public potable water and agricultural wells, and nonresidential structures and uses) in the area within five (5) miles of any portion of the restricted area boundary.

11.3 The licensee shall conduct a corrective action program (CAP) with the objective of returning the ground-water concentrations of chromium, natural uranium, and combined radium-226/228 to the levels referenced in "Addendum to the Revised Environmental Report, Background Ground Water Quality and Detection Standards," January 1996, as revised by page changes January 8, 1998 (approved by the NRC letter of May 28, 1998), and the catchment basin ground-water corrective action plan dated May 12, 2004, as revised July 22, 2004, December 15, 2004, and January 18, 2005.

The ground-water protection standards at point of compliance (POC) wells TMW-15, 16, 17, and 18, with background being defined in the above Addendum are: arsenic = 0.05 mg/L, beryllium = 0.01 mg/L, cadmium = 0.01 mg/L, chromium = 0.05 mg/L, lead-210 = 8.9 pCi/L, nickel = 0.01 mg/L, combined radium-226/228 = 5.8 pCi/L, selenium = 0.01 mg/L, thorium-230 = 7.0 pCi/L, natural uranium = 36.0 pCi/L, and gross alpha = 15.0 pCi/L, manganese = 0.2 mg/L, and iron = 0.6 mg/L.

Pump-back wells may be added or removed from service with the goal of improving the performance of the CAP. POC, monitoring, and pump-back wells shall be sampled at the locations, at the frequency, and for the parameters provided in Table 5-1 (for existing impoundment) of the Final Design Volume VII, submitted (page change) June 21, 1999. Reporting limits for sampled constituents shall be as provided in Table 5-11 of the Final Design Volume VII, submitted April 13, 1998.

The catchment basin pump-back wells and monitoring wells TMW-92, 93, 94, 95, 97, 98, 99, 100, 101, 104, 111, 112, 113, and 115 will be sampled quarterly for diesel range and gasoline range organics and volatile organic compounds, in addition to the above constituents. The ground-water protection standards to be used to assess data from these wells are as follows: 1,1-dichloroethane = 3.0 mg/L, 1,1-dichloroethene = 0.007 mg/L, DRO = 10 mg/L, GRO = 10 mg/L, naphthalene = 1.5 mg/L, toluene = 1 mg/L, 1,1,1-trichloroethane = 0.20 mg/L, 1,2,4-trimethylbenzene = 0.012 mg/L, 1,3,5-trimethylbenzene = 0.012 mg/L, m+p xylenes = 10 mg/L, manganese = 0.2 mg/L, aluminum =1.8 mg/L, and iron = 0.6 mg/L.

[Applicable Amendments: 17, 21, 22]

11.4 Upon resumption of milling operations, the licensee shall implement a ground-water detection monitoring program for the tailings impoundment and evaporation ponds to ensure compliance with 10 CFR 40, Appendix A, in accordance with the "Addendum to the Revised Environmental Report, Background Ground Water Quality and Detection Standards," January 1996, as revised by the submittals of January 8, 1998, and March 25, 1999; and conduct an environmental monitoring program in accordance with on-file SOPs for environmental monitoring, and in accordance with Table 5-2 of the Final Design Volume VII, submitted (page change) June 21, 1999.

[Applicable Amendment: 17]

11.5 During any period of mill standby, the licensee shall conduct an environmental monitoring program in accordance with on-file SOPs for environmental monitoring, and in accordance with Table 5-1 of the Final Design Volume VII, submitted (page change) June 21, 1999, as revised January 18, 2005.

[Applicable Amendments: 17, 21]

Section 12: Reporting Requirements

12.1 An annual report of the review of all existing operating procedures, required to be performed by the RSO, shall be prepared and retained on site.

12.2 Spills, Pond Leaks, Excursions, and Incident/Event Reporting

Until license termination, the licensee shall maintain documentation on unplanned release of source or 11e.(2) byproduct materials and process chemicals. Documented information shall include, but not be limited to: date, volume, total activity of each radionuclide released, radiological survey results, soil sample results (if taken), corrective actions, results of post remediation surveys (if taken), and a map showing the spill location and the impacted area.

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The licensee shall have procedures which will evaluate the consequences of the spill or incident/event against 10 CFR 20, Subpart "M," and 10 CFR 40.60 reporting criteria. If the criteria are met, then report to the NRC Operations Center as required.

If the licensee is required to report any spills, pond leaks, excursions of source, 11e.(2) byproduct material, and process chemicals that may have an impact on the environment, or any other incidents/events to State or Federal Agencies, a notification shall be made to the NRC Headquarters Project Manager (PM) by telephone or electronic mail (e-mail) within 48 hours of the event. This notification shall be followed, within thirty (30) days of the notification, by submittal of a written report to NRC Headquarters PM as per License Condition 9.2, detailing the conditions leading to the spill, pond leak, excursion, or incident/event, corrective actions taken, and results achieved.

[Applicable Amendment: 18]

12.3 An annual report will be submitted to the NRC that includes: (1) description of changes, tests, or experiments approved by the SERP; (2) page changes to the approved license application made by the SERP; (3) a report of the annual land use survey indicating any differences in land use from that described in the previous report; (4) a ground-water CAP review, describing the progress toward attaining the ground-water protection standards including the areal extent and concentration of hazardous constituents and estimates of the time needed to obtain compliance; (5) the ground-water monitoring report for the year; and (6) the ALARA audit report.

12.4 A completion report(s), including as-built drawings, verifying that reclamation and decommissioning of the site has been performed according to the NRC-approved plans shall be provided within six (6) months of completion of the work. The report(s) shall also include summaries of results of the quality assurance and control testing to demonstrate that the approved specifications were met.

FOR THE NUCLEAR REGULATORY COMMISSION

Date: 12/23/2009

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