

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. Power Resources, Inc.	3. License Number SUA-1548, Amendment No. 15
2. P.O. Box 1210 Glenrock, WY 82637	4. Expiration Date September 30, 2010
	5. Docket No. 40-8964 Reference No.

6. Byproduct Source, and/or Special Nuclear Material  Natural Uranium Byproduct material as as defined in 10 CFR 40.4	7. Chemical and/or Physical Form  a. Any b. Unspecified	8. Maximum amount that Licensee May Possess at Any One Time Under This License  a. Unlimited b. Quantity generated under operations authorized by this license
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**9. ADMINISTRATIVE CONDITIONS**

9.1 The authorized places of use shall be the licensee's Smith Ranch-Highland Uranium Project (SR-HUP), which is the primary processing facility located in Converse County, Wyoming; Highland In-situ Leach (ISL) Satellite facility located in Converse County, Wyoming; Ruth ISL Satellite facility located in Johnson County, Wyoming; North Butte ISL Satellite facility located in Campbell County, Wyoming; Gas Hills ISL Satellite facility located in Fremont and Natrona Counties, Wyoming; and Reynolds Ranch Satellite ISL facility located in Converse County, Wyoming. As satellite facilities, operations at the Highland, Ruth, North Butte, Gas Hills, and Reynolds Ranch facilities shall be limited to shipments of loaded ion exchange (ix) resin or yellowcake slurry which will be transported to the central processing plant at Smith Ranch, as further explained in the commitments, representations, and statements listed in License Condition 9.3.

[Applicable Amendments: 4, 5, 6, 11]

9.2 All written notices and reports to NRC required under this license shall be addressed to: ATTN: Document Control Desk, 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, Mailstop T8 F5, U. S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by express delivery to 11545 Rockville Pike, Two White Flint North, Rockville, MD 20852-2738.

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Required telephone notification shall be made to the NRC Operations Center at (301) 816-5100, unless otherwise specified in license conditions.

[Applicable Amendment: 11, 13]

- 9.3 The licensee shall conduct operations in accordance with the commitments, representations, and statements contained in the license application and/or amendments for each facility, which are hereby incorporated by reference. These submittals include the following: Smith Ranch and Highland Uranium Project dated November 15, 1999, and May 14, 1993, respectively, as amended by submittals dated September 27, 2000, and October 12, 2000, September 27, 2001, October 18, 2001, October 22, 2001, and February 28, 2002, May 6, 2003, July 09, 2003; October 11, 2006, and December 28, 2006. Ruth/North Butte license application dated April 1, 1992, as amended by submittals dated March 7, 1989, and October 3, 1988, September 24, 1999, and November 11, 1999; Gas Hills Project application dated June 24, 1998, as amended by submittals dated September 24, 1999, November 11, 1999, May 3, 2002, October 10, 2003, October 22, 2004, and Reynolds Ranch dated January 14, 2005, as amended by submittals dated April 7, 2005, March 15, 2006, September 19, 2006, and March 20, 2008, which are hereby incorporated by reference, except where superseded by license conditions below.

[Applicable Amendments: 5, 6, 9, 11, 12, 13]

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

9.4 (New) Change, Test and Experiment License Condition

- 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),
  - 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);

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- 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 analyses 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 Safety Evaluation Report, 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, tests, 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

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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 Amendments: 2, 3]

- 9.5 The licensee shall maintain an NRC-approved financial surety arrangement, consistent with 10 CFR 40, Appendix A, Criterion 9, adequate to cover the estimated reclamation and closure costs, if accomplished by a third party, for all existing operations and any planned expansions or operational changes for the upcoming year. Reclamation includes all cited activities and groundwater restoration, as well as off-site disposal of all 11e.(2) byproduct material.

Within three months of NRC approval of a revised closure (decommissioning) plan and its cost estimate, the licensee shall submit, for NRC review and approval, a proposed revision to the financial surety arrangement if estimated costs exceed the amount covered in the existing financial surety. The revised surety instrument shall then be in effect within 30 days of written NRC approval of the surety documents.

Proposed annual updates to the surety amount, required by 10 CFR 40, Appendix A, Criterion 9, shall be provided to NRC 90 days prior to the anniversary date (e.g., renewal date of the surety instrument/vehicle) of September 30 of each year for Smith Ranch-Highland Uranium Project, March 26 for Ruth, April 30 for North Butte, August 7 for the Gas Hills Project. The surety update renewal date for Reynolds Ranch will be determined following consultation with PRI and the State of Wyoming. If NRC has not approved a proposed revision 30 days prior to the expiration date of the existing surety arrangement, the licensee shall extend the existing arrangement, prior to expiration, for one year. Along with each proposed revision or annual update of the surety, 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, changes in engineering plans, activities performed, and any other conditions affecting estimated costs for site closure.

At least 90 days prior to beginning construction associated with any planned expansion or operational change which was not included in the annual surety update, the licensee shall provide, for NRC approval, an updated surety to cover the expansion or change. The licensee shall also provide NRC with copies of surety-related correspondence submitted to the State of Wyoming, a copy of the State's surety review, and the final approved surety arrangement. The licensee also must ensure that the surety, where authorized to be held by the State, identifies the NRC-related portion of the surety and covers the above-ground decommissioning and decontamination, the cost of offsite disposal of 11e.(2) byproduct material, soil and water sample analyses, and groundwater restoration associated with the site. The basis for the cost estimate is the NRC-approved site closure plan or the NRC-approved revisions to the plan. Reclamation or decommissioning plan cost estimates, and annual updates, should follow the outline in Appendix E to NUREG-1569 (NRC, 2003), entitled "Recommended Outline for Site-Specific *In Situ* Leach Facility Reclamation and Stabilization Cost Estimates.

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Power Resources, Inc., shall continuously maintain an approved surety instrument for the Smith Ranch Project, in favor of the State of Wyoming, in the amount of no less than \$14,456,300.00, for the purpose of complying with 10 CFR 40, Appendix A, Criterion 9, until a replacement is authorized by both the State of Wyoming and the NRC.

The licensee shall continuously maintain an approved surety instrument for the Highland Uranium Project in the amount of no less than \$21,278,100.00, in favor of the State of Wyoming, for the purpose of complying with 10 CFR 40, Appendix A, Criterion 9, until a replacement is authorized by both the State of Wyoming and the NRC.

The licensee shall continuously maintain an NRC-approved surety instrument for the current non-operational Ruth facility in the amount of no less than \$102,300.00, in favor of the State of Wyoming, for the purpose of complying with 10 CFR 40, Appendix A, Criterion 9, until a replacement is authorized by both the State of Wyoming and the NRC.

The licensee shall continuously maintain an NRC-approved surety instrument for the current non-operational North Butte facility in the amount of no less than \$55,400.00, in favor of the State of Wyoming, for the purpose of complying with 10 CFR 40, Appendix A, Criterion 9, until a replacement is authorized by both the State of Wyoming and the NRC.

The licensee shall continuously maintain an NRC-approved surety instrument for the current non-operational Gas Hills Project facility in the amount of no less than \$4,054,800 in favor of the State of Wyoming, for the purpose of complying with 10 CFR 40, Appendix A, Criterion 9, until a replacement is authorized by both the State of Wyoming and the NRC.

The licensee shall continuously maintain an approved surety instrument for the current non-operational Reynolds Ranch ISL satellite facility in the amount of no less than \$3,331,600.00, in favor of the State of Wyoming, for the purpose of complying with 10 CFR 40, Appendix A, Criterion 9, until a replacement is authorized by both the State of Wyoming and the NRC.

At least six months prior to the expected commencement of construction of a commercial facility at the Ruth, North Butte, Gas Hills Project, and Reynolds Ranch sites, the licensee shall submit for NRC and State approval, an itemized cost estimate for implementation of the NRC-approved decommissioning/restoration plan for the commercial facility. Site construction activities shall not commence until the NRC and State approve the surety amount and accept the surety arrangement. This surety shall be written in favor of the State of Wyoming or the NRC for the purposes of complying with 10 CFR 40, Appendix A, Criterion 9, and shall be continuously maintained until a replacement is authorized by both the State of Wyoming and the NRC.

[Applicable Amendments: 1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 14]

- 9.6 The licensee shall dispose of 11e.(2) byproduct material from the Smith Ranch-Highland Uranium Project, Ruth, North Butte, Gas Hills Project, and Reynolds Ranch ISL facilities at a site licensed by NRC or an NRC Agreement State to receive 11e.(2) byproduct material. The licensee's approved waste disposal agreement must be maintained on-site. In the event the agreement expires or is terminated, the licensee shall notify NRC in writing, in accordance with License Condition 9.2, within 7

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days after the date of expiration or termination. A new agreement shall be submitted for NRC approval within 90 days after expiration or termination unless further delay is justified and approved, or the licensee will be prohibited from further lixiviant injection.

[Applicable Amendments: 4, 5, 6, 11]

- 9.7 In the conduct of its Radiation Protection Program, the licensee shall follow the guidance set forth in U.S. Nuclear Regulatory Commission, Regulatory Guides 8.22, "Bioassay at Uranium Mills," 8.30, "Health Physics Surveys in Uranium Recovery Facilities," and 8.31, "Information Relevant to Ensuring that Occupational Radiation Exposure at Uranium Recovery Facilities will be As Low as is Reasonably Achievable (ALARA)," or NRC-approved equivalent.
- 9.8 The licensee is hereby exempted from the requirements of 10 CFR §20.1902(e) for areas within the facility, provided that all entrances to the facility are conspicuously posted in accordance with §20.1902(e) and with the words, "ANY AREA WITHIN THIS FACILITY MAY CONTAIN RADIOACTIVE MATERIAL."
- 9.9 Before engaging in any developmental activity not previously assessed by the NRC, the licensee shall administer a cultural resource inventory. All disturbances associated with the proposed development will be completed in compliance with the National Historic Preservation Act (as amended) and its implementing regulations (36 CFR 800), and the Archaeological Resources Protection Act (as amended) and its implementing regulations (43 CFR 7).

Before engaging in any development activity in T35N, R74W that would physically disrupt or disturb inventoried cultural sites that have been designated eligible for the National Register of Historic Places, the licensee shall propose mitigation measures, for NRC review and approval, which will preserve the integrity of these sites, as defined by the Advisory Council on Historic Preservation. These include inventoried sites 48CO352, 48CO1288, 48CO1289, 48CO1291, 48CO2462, 48CO2463, and 48CO2464.

In order to ensure that no unapproved disturbance of cultural resources occurs, any work resulting in the discovery of previously unknown cultural artifacts shall cease. The artifacts shall be inventoried and evaluated in accordance with 36 CFR Part 800, and no disturbance of the area shall occur until the licensee has received authorization from the NRC to proceed.

For the Gas Hills Project, the licensee shall comply with the stipulations for cultural resource protection in the Programmatic Agreement provided in the NRC letter to the Advisory Council on Historic Preservation, dated December 16, 2003.

For the Reynolds Ranch Project, prior to any developmental activity conducted in the following list of Sections, the licensee shall administer a cultural resource inventory in any area of the Section not previously inventoried: T36N R73W Sec 5, Sec 7, Sec 17, and Sec 18; T36N R74W Sec 11, Sec 12, Sec 13, and Sec 14; and T37N, R73W Sec 30.

[Applicable Amendments: 6, 11, 12]

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- 9.10 The licensee shall provide buffer zones and construct its facilities in accordance with the recommendations made in its historical consultant's report submitted May 7, 1991, in order to prevent diverse effects upon historic and prehistoric resources found in the State permit area. Land disturbance plans and well-field facility design shall be coordinated with NRC and the Bureau of Land Management in Mills, Wyoming.
- 9.11 Final (detailed) decommissioning plan(s) for land (soil) or facilities will be submitted to the NRC for review and approval at least 12 months before the planned commencement of decommissioning of a wellfield or the processing facility.
- 9.12 [DELETED by Amendment 5]
- 9.13 Before engaging in any uranium recovery operations in an undeveloped area, the licensee shall submit a complete evaluation of the area's baseline radiological characteristics for NRC's review and approval.
- [Applicable Amendment: 11]

**10. OPERATIONAL LIMITS, CONTROLS, AND RESTRICTIONS**

**10.1 Smith Ranch-Highland Uranium Project (SR-HUP)**

- 10.1.1 Commercial processing plant operations for SR-HUP central processing plant and satellite facilities, shall not exceed an average monthly flow rate of 20,000 gallons per minute, exclusive of restoration flow. Annual yellowcake production shall not exceed 5.5 million pounds as  $U_3O_8$ .
- 10.1.2 The licensee shall maintain effluent control systems as specified in Section 4.1 of the license application dated September 27, 2000, May 6, 2000, and July 9, 2003, as amended, with the following additions:
- a. If during yellowcake drying operations any emission control equipment for the yellowcake drying or packaging areas is not performing within the operational specifications, the licensee shall not: (1) unload the dryer as part of the routine operations until the emission control equipment has been returned to service within operational specifications; or (2) reload the dryer with yellowcake until the emission control system has been returned to service within its operational specifications.
  - b. The licensee shall, during all periods of yellowcake drying operations, ensure that the specified operating pressure differential is maintained in the drying chamber. This shall be accomplished by either: (1) performing and documenting checks of air pressure differential approximately every 4 hours during operation; or (2) installing instrumentation that will signal an audible alarm if air pressure falls below the specified operating levels. If an audible alarm is used, its operation shall be checked and documented daily during dryer operations. Air pressure differential gauges for other emission control equipment shall be read and the readings documented at least once per shift during dryer operations.

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c. The NRC shall be notified prior to restart of the Highland dryer.

[Applicable Amendment: 5]

10.1.3 The licensee shall perform well integrity tests on each injection and production well before the wells are utilized and on wells that have been serviced using a downhole drill bit or underreaming. The integrity test shall be performed, using techniques approved in the Underground Injection Control program administered by the State of Wyoming and the operations plan of the approved license application. The integrity test shall be performed by pressurizing the well to 125 percent of the maximum operating wellhead casing pressure and shall maintain 90 percent of this pressure for 10 minutes to pass the test.

If any well casing failing the integrity test cannot be repaired, the well shall be plugged and abandoned. During wellfield operations, injection pressures shall not exceed the integrity test pressure at the injection well heads.

[Applicable Amendment: 5]

10.1.4 The licensee may utilize native groundwater, carbon dioxide, and sodium carbonate/bicarbonate as the lixiviant with an oxygen or hydrogen peroxide oxidant. Any variation from this combination shall require a license amendment.

10.1.5 The licensee is prohibited from constructing new Satellite Facilities or waste water evaporation ponds prior to NRC review and approval of designs and specifications. Pond design and operation shall allow for sufficient reserve capacity in the evaporation pond system to enable the transfer of the contents of any one pond to the other ponds. All retention ponds shall be designed to meet requirements of NRC Regulatory Guide 3.11.

0.1.6 Radium settling ponds for HUP shall have at least 3 feet of freeboard. The Satellite 1 and Satellite 2 purge storage reservoirs shall have at least 4 feet of freeboard. The licensee shall at all times maintain sufficient capacity in the Satellite 1 purge storage reservoirs to enable transferring the contents of any one radium settling pond to the reservoir. In the event of a radium settling pond leak and subsequent transfer of liquid, the freeboard requirements for the purge storage reservoir may be suspended during the repair period.

[Applicable Amendment: 5]

10.1.7 The licensee shall maintain an area within the restricted area boundary for storage of contaminated materials prior to their disposal. All contaminated wastes and evaporation pond residues shall be disposed at a licensed radioactive waste disposal site.

10.1.8 All liquid effluents stemming from commercial uranium recovery units, process buildings and process waste streams, with the exception of sanitary wastes, shall be returned to the process circuit, discharged to the solution evaporation ponds, pumped to the purge storage reservoirs for disposal via land application or deep well injected.

[Applicable Amendment: 5]



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10.1.9 Prior to uranium recovery operations, baseline groundwater quality data and restoration criteria shall be established for each uranium recovery unit as described in Chapter 5 in the approved license application. The number and location of Perimeter Monitor Wells, Production Zone Monitor Wells, and Upper and Lower Aquifer Monitor Wells shall be installed as described in section 5.1.2 (Monitor Well Spacing) of the License Application. Baseline water quality samples shall be obtained at these wells in accordance with Section 5.1.5.2 (Data Collection) of the License Application for each uranium recovery unit.

- a. Groundwater restoration goals shall be established on a parameter-by-parameter basis, and the primary goal of restoration shall be to return the groundwater quality, on a uranium recovery unit average, to baseline conditions. Should baseline conditions not be achieved after application of the Best Practicable Technology (BPT) available, the licensee shall commit to a secondary goal of returning the groundwater to a quality consistent with pre-uranium recovery use, or uses, for which the water was suitable prior to ISL uranium recovery activities.
- b. Prior to commencing ground-water restoration in each wellfield, the licensee shall, through the SERP process, add wellfields to the wellfield restoration plan in Chapter 6 of the application. The licensee shall be required to demonstrate baseline conditions are not achievable in order to apply any alternate standard of performance. Upon restoration completion of each wellfield, the licensee shall submit a wellfield completion report for NRC review and approval.

[Applicable Amendments: 2, 5]

- 10.1.10 The licensee is prohibited from conducting well-field installation in the southwestern part of the State of Wyoming permit area, T35N R74W, excluding Section 2, until aquifer characteristics have been tested, reviewed, and approved by NRC.
- 10.1.11 The licensee is prohibited from using hydrogen sulfide during aquifer restoration prior to implementation of an occupational safety plan using the SERP evaluation process.
- 10.1.12 The licensee may receive and process up to 365 toll shipments of loaded ion exchange (IX) resin at the Smith Ranch central processing plant per calendar year. The tolled IX resin must be generated at NRC licensed uranium recovery facilities located in the State of Wyoming. The activities will be performed in accordance with the submittals dated June 19, 2008, and October 1, 2008

[Applicable Amendment: 15]

## 10.2 Ruth and North Butte Facilities

- 10.2.1 Before engaging in any commercial *in situ* leach activity not previously assessed by the NRC, the licensee shall prepare a new operating plan in accordance with the guidance in NUREG-1569 (June 2003), for NRC review and approval, and shall prepare and record an environmental evaluation of such activity. When the evaluation indicates that such activity may result in a significant adverse environmental impact that was not previously assessed or that is greater than that previously assessed, the licensee shall provide a written evaluation of such activities and obtain prior approval of the NRC in the form of a license amendment.

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10.2.2 The licensee shall perform and document, at the Ruth site, visual inspections of the evaporation pond embankments, fences, and liners, as well as measurements of pond freeboard. The frequency of those inspections shall be quarterly. If a significant event occurs that adversely affects the integrity of the evaporation ponds and could result in a release of byproduct material to the environment, the NRC Project Manager shall be notified by telephone or e-mail within 24 hours of verification of such condition

A written report shall be filed with the NRC within 30 days of first notifying the NRC that a leak exists. This report shall include analytical data and describe the mitigative action and the results of that action.

[Applicable Amendments: 5, 6, 9]

### 10.3 Gas Hills Project

10.3.1 The licensee shall conduct additional surveys for prairie dog towns and mountain plover prior to the onset of construction activities. If the surveys indicate that prairie dog towns may be impacted by construction activities, the licensee shall consult with the U.S. Fish and Wildlife Service for guidance on conducting surveys for the black-footed ferret. The surveys for mountain plover shall be conducted between May 1 and June 15 (3 surveys at 14 day intervals), prior to construction to determine the absence/presence of plovers. If plover nests are detected, construction activity within one-quarter mile of the nest shall cease for at least 7 days after nestling hatching.

10.3.2 Prior to the onset of commercial *in situ* leach activities, the licensee shall prepare a new operations plan, in accordance with the guidance in NUREG-1569 (June 2003), for NRC review and approval.

10.3.3 Prior to the onset of commercial *in situ* leach activities, the licensee shall propose plans for the conduct of daily visual inspections of the Gas Hills Project evaporation pond embankments, fences, and liners, including measurements of pond freeboard and checks of the leak detection system. The licensee shall also describe the actions it will take for fluid detected in the leak detection system standpipe, including the sampling and analysis of standpipe fluids and plans for the transfer of the evaporation pond contents to an alternate cell for the conduct of evaporation pond repairs.

[Applicable Amendment: 6]

### 10.4 Reynolds Ranch

10.4.1 Processing operations for the Reynolds Ranch Satellite shall not exceed an average monthly flow rate of 4,500 gallons per minute, exclusive of restoration flow.

[Applicable Amendment: 11]

## 11. MONITORING, RECORDING, AND BOOKKEEPING REQUIREMENTS

11.1 The effluent and environmental monitoring report shall include injection rates, recovery rates, and injection trunk-line pressures for each satellite facility. This data will be provided as monthly averages for the reporting period.

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- 11.2 Any time uranium in a worker's urine specimen exceeds 15 micrograms per liter (ug/l), the annual ALARA audit will indicate what corrective actions were considered or performed.
- 11.3 Any time a uranium action level of 35 ug/l for two consecutive urine specimens or 130 ug/l for any one specimen is reached or exceeded, the licensee shall provide documentation within 30 days to the NRC indicating what corrective actions have been performed.
- 11.4 The licensee shall perform and document daily visual inspections of the Smith Ranch evaporation pond embankments, fences and liners, as well as measurements of pond freeboard and checks of the leak detection system. Any time 6 inches or more of fluid is in the leak detection system standpipes, it shall be analyzed for specific conductance and chloride. If, with a second sample, those parameters confirm pond leak, then appropriate actions will be taken as described in the approved license application. The pond level shall be lowered by transferring its contents into an alternate cell or to the plant for disposal through deep well injection, and repairs shall be undertaken.
- 11.5 Each monitor well shall be sampled and tested for chloride, conductivity, and bicarbonate or alkalinity on a twice per month basis. If two UCLs are exceeded in a well, the licensee shall take a confirmation water sample within 24 hours and analyze it for the excursion indicators. If the confirmation sample indicates that UCLs have been exceeded, the well in question shall be placed on excursion status. During excursion status, sampling and testing frequency shall be increased to weekly for the affected monitor wells until the excursion is controlled.
- 11.6 The licensee shall establish an effluent and environmental monitoring program in accordance with Section 5.3 of the application dated May 6, 2003, as amended.
- 11.7 During commercial production, the RSO, RST, or a trained designee shall perform and document a daily walk-through inspection of all operating areas. The inspection's purpose is to ensure that all radiation protection and monitoring requirements are being followed.

**12. REPORTING REQUIREMENTS**

**12.1 Spills, Pond Leaks, Leaks, Excursions, and Incident/Events Reporting**

Until license termination, the licensee shall maintain documentation on spills of source or 11e.(2) by product materials (including mining solutions) and process chemicals. Documented information shall include, but not be limited to: date, spill 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.

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 wellfield excursions and spills or pond leaks of source, 11e.(2) byproduct material, and process chemicals that may have an impact on the environment, or any other

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incidents/events, to State or Federal Agencies, a report shall be made to the NRC Headquarters Project Manager (PM) by telephone or electronic mail (e-mail) within 24 hours. This notification shall be followed, within thirty (30) days of the notification, by submittal of a written report to NRC Headquarters as per License Condition 9.2, detailing the conditions leading to the spill or incident/event, corrective actions taken, and results achieved.

12.2 An annual report will be submitted to the NRC that includes one of the semiannual effluent and environmental monitoring reports, and the SERP information required under LC 9.4(d).

FOR THE NUCLEAR REGULATORY COMMISSION

Dated: 09/15/2009

/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

