

June 30, 2010

MEMORANDUM TO: Bill Von Till, Chief  
Uranium Recovery Licensing Branch  
Division of Waste Management  
and Environmental Protection  
Office of Federal and State Materials  
and Environmental Management Programs

FROM: Douglas Mandeville, Project Manager **/RA/**  
Uranium Recovery Licensing Branch  
Division of Waste Management  
and Environmental Protection  
Office of Federal and State Materials  
and Environmental Management Programs

DATE/TIME: July 14, 2010  
1:30 p.m. - 5:30 p.m.

LOCATION: U.S. Nuclear Regulatory Commission  
Two White Flint North, Room T8 C5  
11545 Rockville Pike  
Rockville, MD 20852

Newly scheduled       Revised       Canceled

APPLICANT: Uranium One/Moore Ranch ISR

DOCKET: 04009073

PURPOSE: Meeting to Discuss Draft License for Moore Ranch ISR Facility

PARTICIPANTS:	<u>NRC Offices</u>	<u>Applicant</u>
	Douglas Mandeville	Jon Winter
	Stephen Cohen	Donna Wichers
	Elise Striz	Mike Griffin
	James Webb	et al.
	et al.	

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CATEGORY: Category 1. The public is invited to observe this meeting and will have opportunities to communicate with the NRC staff after the business portion, but before the meeting is adjourned. **Interested members of the public can participate in this meeting via a toll-free teleconference. For details, please call the NRC meeting contact by July 9, 2010.**

ENCLOSURE:           Agenda

NOTE:                   The NRC's Policy Statement "Enhanced Public Participation in NRC Meetings," May 28, 2002, applies to this meeting. The Policy Statement may be found on the NRC Web site, [www.nrc.gov](http://www.nrc.gov), and contains information regarding visitors and security.

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DISTRIBUTION:

Meeting Attendees

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LGersey/RIV

PMNS

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Office	DWMEP	DWMEP	DWMEP	DWMEP
Name	DMandeville	BGarrett	SCohen	DMandeville
Date	06/29 /10	06/29/10	06/30 /'0	06/29 /10

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MEETING AGENDA  
Uranium One/Moore Ranch ISR  
July 14, 2010

MEETING PURPOSE: Discuss Draft License for Moore Ranch ISR Facility

MEETING PROCESS:

<u>Time</u>	<u>Topic</u>	<u>Lead</u>
1:30 p.m.	Introductions	All
	Review of Draft License Conditions (draft license attached)	All
	Discussion of Draft License Conditions	All
	Summary of Action Items	Moderator
	Public Comment/Questions	Moderator
5:30 p.m.	Adjourn	

Enclosure

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. Uranium One Americas, Inc.	3. License Number SUA-1596
2. 907 North Poplar Street, Suite 260 Casper, WY 82601	4. Expiration Date July 25, 2020
	5. Docket No. 40-9073 Reference No.

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

**SECTION 9: Administrative Conditions**

9.1 The authorized place of use shall be the licensee's Moore Ranch Uranium Project in Campbell County, Wyoming. The licensee shall conduct operations within the license area boundaries shown in Figure 2.1-2 of the approved license application.

9.2 The licensee shall conduct operations in accordance with the commitments, representations, and statements contained in the license application dated **month and year, MLXXXXXXXXXX**, which are hereby incorporated by reference, except where superseded by specific conditions in this license.

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

9.3 All written notices and reports sent to the Nuclear Regulatory Commission (NRC) as required under this license and by regulation shall be addressed as follows: ATTN: Document Control Desk, Director, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. An additional copy shall be submitted to: 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, U.S. Nuclear Regulatory Commission, Mail Stop T-8F5, 11545 Rockville Pike, Two White Flint North, Rockville, MD 20852-2738. Incidents and events that require telephone notification shall be made to the NRC Operations Center at (301) 816-5100 (collect calls accepted).

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Docket or Reference Number  
40-90739.4 Performance Based License Condition

A) The licensee may, without prior NRC review or approval: (i) make changes in the Moore Ranch Project facilities or processes as described in application; (ii) make changes in its standard operating procedures; and (iii) conduct tests or experiments, if the licensee ensures that the following conditions are met:

- (1) the change, test, or experiment does not conflict with any requirement specifically stated in this license, or impair the licensee's ability to meet all applicable NRC regulations;
- (2) there is no degradation in the safety or environmental commitments made in the Moore Ranch application or in the approved ground water quality, surface reclamation, or facility decommissioning plans for the Moore Ranch Project; and
- (3) the change, test, or experiment is consistent with NRC's findings in NUREG-1910, the Supplemental Environmental Impact Statement (SEIS) (MLXXXXXXXXXX) and the Safety Evaluation Report (SER) (MLXXXXXXXXXX) for the Moore Ranch Project.

If any of these conditions are not met for the change, test, or experiment under consideration, the licensee is required to submit a license amendment application for NRC review and approval prior to the change, test, or experiment. The licensee's determinations as to whether the above conditions are met will be made by a Safety and Environmental Review Panel (SERP). The licensee shall make such determinations prior to submitting a license amendment request to the NRC. All such determinations shall be documented, and the records kept until license termination. All such determinations shall be reported annually to the NRC, pursuant to LC 9.9. The retained records shall include written safety and environmental evaluations, made by the SERP, that provide the basis for determining whether or not the conditions are met.

B) The SERP shall consist of a minimum of three individuals employed by the licensee, and one of these shall be designated the SERP chairman. One member of the SERP shall have expertise in management and shall be responsible for managerial and financial approval 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, with the responsibility of ensuring that changes conform to radiation safety and environmental requirements. Additional members may be included in the SERP, as appropriate, to address technical aspects such as health physics, ground water 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.

9.5 Financial Assurance The licensee shall maintain an NRC-approved financial assurance arrangement, consistent with 10 CFR Part 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 solid byproduct material.

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Proposed annual updates to the financial assurance amount, consistent with Criterion 9 of Appendix A to 10 CFR Part 40, shall be provided to the NRC 90 days prior to the anniversary date (e.g., renewal date of the financial assurance instrument/vehicle). The financial assurance update renewal date for Moore Ranch will be determined following consultation with Uranium One and the State of Wyoming. If the NRC has not approved a proposed revision 30 days prior to the expiration date of the existing financial assurance arrangement, the licensee shall extend the existing arrangement, prior to expiration, for 1 year. Along with each proposed revision or annual update of the financial assurance estimate, 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 the estimated costs for site closure. All costs will be third-party costs and documented by industry invoices or proposals.

Within 90 days 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 assurance arrangement if estimated costs exceed the amount covered in the existing arrangement. The revised financial assurance instrument shall then be in effect within 30 days of written NRC approval of the documents.

At least 90 days prior to beginning construction associated with any planned expansion or operational change that was not included in the annual financial assurance update, the licensee shall provide, for NRC approval, an updated estimate to cover the expansion or change. The licensee shall also provide the NRC with copies of financial assurance-related correspondence submitted to the State of Wyoming, a copy of the State's financial assurance review, and the final approved financial assurance arrangement. The licensee also must ensure that the financial assurance instrument, where authorized to be held by the State, identifies the NRC-related portion of the instrument and covers the aboveground decommissioning and decontamination, the cost of offsite disposal of solid byproduct material, soil and water sample analyses, and ground water 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."

Uranium One shall continuously maintain an approved surety instrument for the Moore Ranch project, in favor of the State of Wyoming, in the amount of no less than \$XX,XXX,XXX, 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 NRC.

- 9.6 Release of superficially contaminated equipment, materials, or packages for unrestricted use shall be in accordance with the NRC guidance document entitled "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material," dated April, 1993, or suitable alternative procedures approved by NRC prior to any such release. This guidance does not apply to volumetrically contaminated equipment, materials, or packages.

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Where surface contamination by both alpha- and beta-gamma-emitting nuclides exists, the limits established for alpha- and beta-gamma-emitting nuclides shall apply independently.

- 9.7 The licensee shall follow the guidance set forth in U.S. Nuclear Regulatory Commission, Regulatory Guides (as revised) 8.22, Bioassay at Uranium Recovery Facilities, 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 Cultural Resources. 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).
- 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.
- 9.9 An annual report will be submitted to the NRC that includes the ALARA audit report, land use survey, monitoring data, corrective action program report, one of the semiannual effluent and environmental monitoring reports, and the SERP information required under LC 9.4.
- 9.10 The licensee shall dispose of solid byproduct material from the Moore Ranch operations at a site that is authorized by the NRC or an NRC Agreement State to receive byproduct material. The licensee's approved solid byproduct material disposal agreement must be maintained on site. In the event that the agreement expires or is terminated, the licensee shall notify the NRC within 7 working days after the date of expiration or termination. A new agreement shall be submitted for NRC approval within 90 days after expiration or termination, or the licensee will be prohibited from further lixiviant injection
- 9.11 The results of the following activities, operations, or actions shall be documented: sampling; analyses; surveys or monitoring; survey/ monitoring equipment calibrations; reports on audits and inspections; emergency generator use and maintenance records; all meetings and training courses required by this license; and any subsequent reviews, investigations, or corrective actions. Unless otherwise specified in a license condition or applicable NRC regulation, all documentation required by this license shall be maintained until license termination, and is subject to NRC review and inspection.

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40-9073**SECTION 10: Operations, Controls, Limits, and Restrictions***Standard Conditions*

- 10.1 The licensee shall use a lixiviant composed of native ground water, carbon dioxide gas or sodium bicarbonate, and dissolved oxygen, as specified in the approved license application.
- 10.2 Facility Throughput. The plant throughput shall not exceed a maximum flow rate of 3,000 gallons per minute, excluding restoration flow. Annual dried yellowcake production shall not exceed 3 million pounds.
- 10.3 Emission controls (dryer). The licensee shall maintain effluent control systems as specified in Section 4.1 of the approved license application.
- 10.4 Radiation Work Permits. The licensee shall use a Radiation Work Permit (RWP) for all work or non-routine maintenance jobs where the potential for significant exposure to radioactive material exists and for which no standard written operating procedure exists. All RWPs shall be accompanied by a breathing zone air sample or applicable area air sample. The RWP shall be issued by the radiation safety officer (RSO) or designee, qualified by way of specialized radiation protection training, and RWPs shall include, as a minimum, the information described in Section 2.2 of Regulatory Guide 8.31.
- 10.5 Equipment Calibration. All radiation monitoring, sampling, and detection equipment shall be recalibrated after each repair and as recommended by the manufacturer, or at least annually, whichever is more frequent. In addition, all radiation survey instruments shall be operationally checked and documented with a radiation source each day when in use.
- 10.6 The licensee shall implement and maintain a training program for all site employees, as described in Regulatory Guide 8.31 and as detailed in the approved license application. All training materials shall incorporate the information from current versions of 10 CFR Part 19 and 10 CFR Part 20. Additionally, classroom training shall include the subjects described in Section 2.5 of Regulatory Guide 8.31. All personnel shall attend annual refresher training, and the licensee shall conduct regular safety meetings on at least a bi-monthly basis, as described in Section 2.5 of Regulatory Guide 8.31.
- 10.7 The Radiation Safety Officer (RSO), or his designee, shall have the education, training and experience as specified in Regulatory Guide 8.31. A Radiation Safety Technician (RST) shall have the qualifications specified in Regulatory Guide 8.31. Any person newly hired as an RST shall have all work reviewed and approved by the RSO as part of a comprehensive training program until appropriate course training is completed, and at least for 6 months from the date of appointment.
- 10.8 The licensee shall develop and implement written standard operating procedures (SOPs) for: (1) all operational activities involving radioactive and non-radioactive materials that are handled, processed, stored, or transported by employees; (2) all non-operational activities involving radioactive and non-radioactive materials including in-plant radiation protection and environmental

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monitoring; and (3) emergency procedures for potential accident/unusual occurrences including significant equipment or facility damage, pipe breaks and spills, loss or theft of yellowcake or sealed sources, significant fires, and other natural disasters. The SOPs shall include appropriate radiation safety practices to be followed in accordance with 10 CFR Part 20. SOPs for operational activities shall enumerate pertinent radiation safety practices to be followed. A copy of the current written procedures shall be kept in the area(s) of the production facility where they are utilized.

- 10.9 Mechanical Integrity Tests. The licensee shall construct all wells in accordance with methods described in Section 3.1.2.4 of the approved license application. Mechanical integrity tests shall be performed on each injection and production well before the wells are utilized and on wells that have been serviced with equipment or procedures that could damage the well casing. Additionally, each well shall be retested at least once each five (5) years it is in use. The integrity test shall pressurize the well to 125 percent of the maximum operating pressure and shall maintain 90 percent of this pressure for 10 minutes to pass the test. A single point resistance test may be used only in conjunction with another approved well integrity testing method. If any well casing failing the integrity test cannot be repaired, the well shall be plugged and abandoned.

*Facility Specific Conditions*

- 10.10 Well Field Packages. For Well Field 1, the licensee shall submit a hydrologic test data package to the NRC. For Well Field 2, the licensee shall submit a hydrologic test data package to the NRC for review and approval. For both Well Field 1 and Well Field 2, the hydrologic test packages shall be submitted at least 60 days prior to the planned start date of lixiviant injection.
- 10.11 Ground Water Restoration. The licensee shall conduct ground water restoration activities in accordance with the approved license application. Permanent cessation of lixiviant injection in a well field would signify the licensee's intent to shift from the principal activity of uranium production to the initiation of groundwater restoration. Prior to initiation of ground water restoration activities, the licensee shall determine the restoration schedule. If the licensee determines that these activities are expected to exceed 24 months, then the licensee shall submit an alternate schedule request that meets the requirements of 10 CFR Part 40.42.

Ground water shall be restored to the ground water protection standards presented in 10 CFR 40, Appendix A, Criterion 5(B)(5) on a parameter-by-parameter basis. If the restoration activities are unable to achieve the background or maximum contaminant levels (whichever is greater) in Criterion 5(B)(5), the licensee shall submit a license amendment application request for NRC approval of alternate concentration limits (ACLs).

Changes to ground water restoration or post-restoration monitoring plans shall be submitted to the NRC for review and approval at least 60 days prior to ground water restoration in a well field.

- 10.12 The licensee shall maintain an inward hydraulic gradient in each individual well field, starting when lixiviant is first injected into the production zone and continuing until the restoration target values (RTVs) have been reached.
- 10.13 All liquid effluents from process buildings and other process waste streams, with the exception of sanitary wastes, shall be returned to the process circuit, or disposed of as allowed by NRC

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regulations. Additionally, the licensee is authorized to dispose of process solutions, injection bleed, and restoration brine in the following wells:

Deep Disposal Well No. X  
Deep Disposal Well No. X  
Deep Disposal Well No. X  
Deep Disposal Well No. X

The licensee shall maintain a record of the volumes of solution disposed in these wells and submit this information in the annual monitoring report.

- 10.14 At least 12 months prior to initiation of any planned final site decommissioning, the licensee shall submit a detailed decommissioning plan for NRC review and approval. The plan shall represent as-built conditions at the Moore Ranch facility.

**SECTION 11: Monitoring, Recording, and Bookkeeping Requirements***Standard Conditions*

- 11.1 The licensee shall submit semi-annual effluent monitoring reports as required by 10 CFR 40.65. The reports shall discuss operational aspects of the facility, such as the status of well fields in operation, status of well fields in restoration, demonstration of dose to members of the public and status of any long term excursions.
- 11.2 Flow rates on each injection and production well, and injection manifold pressures on the entire system, shall be measured and recorded daily.
- 11.3 Background Monitoring. Prior to injection of lixiviant in a well field, the licensee shall establish background pre-operational ground water quality data for the overlying and underlying aquifers and restoration target values (RTVs) for the ore zone aquifers for all well fields. Background water quality sampling shall provide representative pre-operational ground water quality data and restoration criteria as described in the approved license application.

The data for each well field shall consist, at a minimum, of the following sampling and analyses:

- A. **Ore Zone.** Samples shall be collected from production and injection wells at a minimum density of one production or injection well per 3 acres in the 70 sand. Samples shall also be collected from all perimeter monitor wells in the 70 sand.
- B. **Overlying and Underlying Aquifers.** Samples shall be collected from all monitoring wells in the 72 sand, 68 sand, and 60 sand (in areas where the 68 and 70 sand coalesce in Well Field 2) at a minimum density of one well per 4 acres.
- C. **Four samples shall be collected from each well. Consecutive sampling events shall be at least 14 days apart.**

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D. The samples shall be analyzed for ammonia, nitrate, bicarbonate, boron, carbonate, fluoride, sulfate, total dissolved solids, dissolved arsenic, dissolved cadmium, dissolved calcium, dissolved chloride, dissolved chromium, total and dissolved iron, dissolved magnesium, total manganese, dissolved molybdenum, dissolved potassium, dissolved selenium, dissolved sodium, dissolved zinc, radium-226, radium-228, gross alpha, gross beta, uranium, and vanadium.

E. Ground water RTVs for the ore zone aquifer shall be established on a parameter-by-parameter basis on either a well field average or well specific basis for all constituents.

11.4 Establishment of UCLs. Prior to injection of lixiviant into a well field, the licensee shall establish upper control limits (UCLs) in designated overlying and underlying aquifer and perimeter monitoring wells. The UCLs shall be established by collecting and analyzing ground water samples from those designated wells according to the following criteria:

A. Four samples shall be independently collected from each designated monitoring well at a minimum density of: 1) one upper and lower aquifer monitoring well per 5 acres of well field area, and 2) all perimeter monitoring wells. These samples shall be collected at least 14 days apart. The results of these analyses shall constitute the background per the approved license application.

B. The samples shall be analyzed for the following indicator parameters: chloride, conductivity, and total alkalinity.

C. The concentrations of these UCLs shall be established for each well field by calculating the background mean concentration and adding 5 standard deviations.

11.5 Excursion Monitoring. Monitoring for excursions shall occur twice monthly and at least 10 days apart. An excursion shall have occurred if, in any monitor well: (a) any two UCL parameters exceed their respective UCLs; or (b) a single UCL parameter exceeds its UCL by 20 percent. A verification sample shall be taken within 48 hours after results of the first analyses are received. If the second sample shows that either of the excursion criteria in (a) or (b) are present, an excursion shall be confirmed. If the second sample does not show that the excursion criteria in (a) or (b) are present, a third sample shall be taken within 48 hours after the second set of sampling data was acquired. If the third sample shows that either of the excursion criteria in (a) or (b) are present, an excursion shall be confirmed. If the third sample does not show that the excursion criteria in (a) or (b) are present, the first sample shall be considered to be an error and the well is removed from excursion status.

Upon confirmation of an excursion, the licensee shall notify NRC, implement corrective action, and increase the sampling frequency for the indicator parameters at the excursion well to once every seven (7) days. Corrective actions for confirmed excursions may be, but are not limited to, those described in Section 5.7.9.6 of the approved license application. An excursion is considered corrected when the concentrations of the indicator parameters are below the concentration levels defining an excursion for three (3) consecutive weekly samples.

If an excursion is not corrected within 60 days of confirmation, the licensee shall either: (a) terminate injection of lixiviant within the well field until aquifer cleanup is complete; or (b) increase the surety in an amount to cover the full third-party cost of correcting and cleaning

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up the excursion. The surety increase shall remain in force until the NRC has verified that the excursion has been corrected and cleaned up. The written 60-day excursion report shall identify which course of action the licensee is taking. Under no circumstances does this condition eliminate the requirement that the licensee must remediate the excursion to meet ground water protection standards as required by LC 10.11 for all constituents established per LC 11.3.

The licensee shall notify the NRC Project Manager (PM) by telephone within 24 hrs of confirming a lixiviant excursion, and by letter within 7 days from the time the excursion is confirmed, pursuant to LC 11.6. A written report describing the excursion event, corrective actions taken, and the corrective action results shall be submitted to the NRC within 60 days of the excursion confirmation. If wells are still on excursion when the report is submitted, the report shall also contain a schedule for submitting additional reports to the NRC describing the excursion event, corrective actions taken, and results obtained. The report shall also contain a projected completion date for characterization of the extent of the vertical excursion. The licensee shall also submit a report on a quarterly basis during the period that an excursion is undergoing corrective actions.

- 11.6 Until license termination, the licensee shall maintain documentation on spills of source or byproduct materials (including process 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), a map showing the spill location and the impacted area, and an evaluation of NRC reporting criteria.

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 well field excursions and spills of source, byproduct material, and process chemicals that may have an impact on the environment, or any other incidents/events, to State or Federal Agencies, a report shall be made to the NRC Headquarters 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 9.3, detailing the conditions leading to the spill or incident/event, corrective actions taken, and results achieved.

*Facility Specific Conditions*

- 11.7 The licensee will conduct isotopic airborne sampling at each in-plant air particulate sampling location at a frequency of once every 6 months for the first two years and annually thereafter to ensure compliance with 10 CFR 20.1204(g). Licensee shall also evaluate changes to plant operations to determine if more frequent isotopic analyses are required for compliance with 10 CFR 20.1204(g).
- 11.8 Personnel conducting contamination surveys for release of equipment and materials to unrestricted areas, including resin trucks on off hours as well as other health physics duties and responsibilities shall have the minimum qualifications as defined in Regulatory Position 2.4, "Technical Qualifications of Health Physics Staff," of Regulatory Guide 8.31.

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- 11.9 The licensee shall observe and document gas breakout events in individual production wells during monitoring, sampling, inspection, or routine work over of equipment in well fields and header houses. The licensee shall also document changes in well operation or well field piping, pumps, and gauges caused by free gas phase in well field fluids.

## **SECTION 12.0: Preoperational Conditions**

### *Standard Conditions*

- 12.1 Prior to commencement of operations in any well field, the licensee shall obtain all necessary permits and licenses from the appropriate regulatory authorities. The licensee shall also submit a copy of its Class I and Class III underground injection control permits, including the aquifer exemption boundary, to the NRC.
- 12.2 Prior to commencement of operations, the licensee shall have all applicable Memoranda of Agreements (MOAs) between the licensee and local authorities, the fire department, medical facilities, and other emergency services, ratified and in effect. At a minimum, the MOAs shall identify individual party responsibilities, coordination requirements, and reporting procedures for all emergency incident responses.
- 12.3 The licensee shall not commence operations until the NRC performs a preoperational inspection to confirm, in part, that operating procedures and approved radiation safety and environmental monitoring programs are in place, and that preoperational testing is complete.

The licensee should, at least 90 days prior to the expected commencement of operations, inform the NRC to allow for sufficient time to plan and perform the preoperational inspection.

### *Facility Specific Conditions*

Prior to the commencement of operations, the license shall be amended to address the following items in LC 12.4 to LC 12.15.

- 12.4 The licensee shall install a meteorological station within the permit area and collect meteorological data for a period of 1 year at a data recovery rate of 90 percent. The data collected shall include, at a minimum, temperature, precipitation, wind speed, wind direction, and an annual wind rose. The submittal shall include a summary of the stability classification.
- 12.5 The licensee shall submit a preoperational radiological environmental monitoring program report for NRC approval that will include all environmental results for all media, as described in Regulatory Guide 4.14.
- 12.6 The licensee shall submit to the NRC the manner in which it will ensure that unmonitored

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employees will not exceed 10 percent of the dose limit.

- 12.7 The licensee shall submit an updated decommissioning cost estimate covering activities planned for the first year of operation upon which the financial assurance instrument will be established. The licensee shall also provide a copy of the surety instrument.
- 12.8 The licensee shall provide the following information for the airborne effluent and environmental monitoring program:
- A. Discuss how, in accordance with 10 CFR 40.65, the quantity of the principal radionuclides from all point and diffuse sources will be accounted for, and verified by, surveys and/or monitoring.
  - B. Evaluate the member(s) of the public likely to receive the highest exposures from licensed operations consistent with 10 CFR 20.1302.
  - C. Discuss and identify how radon (Radon-222) progeny will be factored into analyzing potential public dose from operations consistent with 10 CFR Part 20, Appendix B, Table 2.
  - D. Discuss how, in accordance with 10 CFR 20.1501, the occupational dose (gaseous and particulate) received throughout the entire Permit Area from licensed operations will be accounted for, and verified by, surveys and/or monitoring.
- 12.9 The licensee shall submit an updated organizational chart identifying the QA manager position.
- 12.10 The licensee shall submit a copy of the solid byproduct material disposal agreement to the NRC.
- 12.11 Consistent with Regulatory Guide 4.14, the licensee shall establish air particulate sampling stations in the three sectors with the highest predicted concentration and collocate radon air samplers and direct radiation and soil sampling with the air particulate sampling stations.
- 12.12 Consistent with Regulatory Guide 4.14, the licensee shall establish an air particulate sampling location at the nearest residence or occupiable structure. In conjunction with the air particulate sampling location, the licensee shall collocate passive radon monitors with the air particulate sampling location. The air particulate sampling location and other collocated sampling media must be operational prior to commencement of operations. The licensee must notify the NRC in writing upon establishing an operational air particulate sampling location and include the sector and distance from the CPP.
- 12.13 The licensee shall develop a program for detecting beta/gamma contamination for releasing equipment for unrestricted use and for personnel contamination monitoring from restricted areas, and detecting beta/gamma contamination in unrestricted and restricted areas that will meet the requirements of 10 CFR Part 20 Subpart F.

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License Number SUA-1596

Docket or Reference Number  
40-9073

12.14 The licensee will identify a qualified designee(s) to perform daily inspections in the occasional absence of the RSO or health physics technician (HPT). The qualified designee(s) will have health physics training, and such training program will be specified by the licensee. Furthermore, the qualified designee(s) may perform daily inspections no more than 2 days per week, and those reports will be reviewed by health physics staff within 48 hours of completing the report. The licensee will also have a health physics staff member available by telephone while the qualified designee(s) is performing the daily inspections.

FOR THE NUCLEAR REGULATORY COMMISSION

Dated: \_\_\_\_\_

\_\_\_\_\_  
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