

Garrett, Betty

From: Linton, Ron
Sent: Friday, September 21, 2012 6:32 PM
To: Jon Winter (USA - Casper)
Subject: Responses to U1 draft license responses
Attachments: WC 1st draft license Response Table (landscape)v4.docx

Jon:
Attached are NRC responses to U1's responses to the 1st draft license. This has not gone through legal or management review. The purpose of these responses is to foster continued discussion on the license conditions. These conditions may change as they undergo further review.
Ron

Section 9: Administrative Conditions	Uranium One Comment
<p>9.1 The authorized place of use shall be the licensee's Irigaray and Christensen Ranch Satellite facilities in Johnson and Campbell Counties, Wyoming.</p>	<p>No U1 Comment</p>
<p>9.2 All written notices and reports to the Nuclear Regulatory Commission (NRC) required under this license, shall be sent to the following address: 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, Washington, DC 20555-0001, Mail Stop T-8-F5, or by express delivery to 11545 Rockville Pike, Rockville, Maryland 20852-2738.</p> <p>Required telephone notification shall be made to the NRC Operations Center at (301) 816-5100, unless otherwise specified in license conditions.</p>	<p>No U1 Comment</p>
<p>9.3 The licensee shall conduct operations in accordance with the commitments, representations, and statements contained in the following:</p> <ul style="list-style-type: none"> • License Renewal Application (LRA), May 30, 2008, NRC Agencywide Documents Access and Management System (ADAMS) Accession Package Number ML081850689 • LRA Revision, October 31, 2008, ADAMS Accession Number ML083110405 • LRA Revision, July 17, 2009, ADAMS Accession Package Number ML092110700 • LRA Revision, November 19, 2010, ADAMS Accession Number ML103280266. 	<p>No U1 Comment</p> <p>NRC changed to add additional ML#'s.</p>

<ul style="list-style-type: none"> • LRA Revision, March 7, 2012, ADAMS Accession Package Number ML120820095. • LRA Revision, July 10, 2012, ADAMS Accession Number ML12206A436. <p>The approved license application is hereby incorporated by reference except where superseded by license conditions below. The land and structures will be decommissioned according to the Decommissioning Plan submitted December 19, 2000, as revised by submittals dated June 15, June 18, and August 31, 2001 and in accordance with 10 CFR 40.42. Whenever the word "will" is used in the above referenced documents, it shall denote a requirement.</p>	
<p>9.4 Change, Test and Experiment License Condition</p> <p>a) The licensee may, without obtaining a license amendment pursuant to 10 CFR 40.44, and subject to conditions specified in paragraph (b) of this condition:</p> <ul style="list-style-type: none"> (i) Make changes in the project as described in the license application (as updated); and (ii) Make changes in the procedures as described in the license application (as updated); and (iii) Conduct tests or experiments not described in the license application (as updated). <p>b) The licensee shall obtain a license amendment pursuant to 10 CFR 40.44 prior to implementing a proposed change, test, or experiment if the change, test, or experiment would:</p> <ul style="list-style-type: none"> (i) Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the license application (as updated); 	<p>1. RE: Proposed Condition 9.4 b),(vii) - Performance Based License Condition, Reference to EIS</p> <p>Uranium One Comment:</p> <p>It does not appear that NRC should reference an EIS for the Willow Creek Project Renewal as the last License Renewal was completed under an EA.</p> <p>NRC Response:</p> <p>The current EA references the past environmental reviews; therefore the reference to an ES is appropriate. See Section 1.6.2 Basis for Review, of the 2011 EA.</p> <p>The EA stated, "The conclusions presented in this EA are based on all aspects of the proposed action and the affected environment, including those that have been evaluated in previous environmental documents. However, in order to limit redundancy and to focus this EA on issues that have not been previously evaluated, the reader might be asked to refer to past environmental review documents for more detailed descriptions of those aspects of analysis that remain unchanged."</p> <p>Changed EIS to ES. Also, additional minor changes made after</p>

- (ii) Result in more than a minimal increase in the likelihood of occurrence of a malfunction of a project structure, equipment, or monitoring system (SEMS) important to safety previously evaluated in the license application (as updated);
- (iii) Result in more than a minimal increase in the consequences of an accident previously evaluated in the license application (as updated);
- (iv) Result in more than a minimal increase in the consequences of a malfunction of an SEMS 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 SEMS 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), environmental statement (ES), environmental assessment (EA) or technical evaluation reports (TERs) or other analyses and evaluations for license amendments.

For purposes of this paragraph as applied to this license, SEMS means any SEMS that has been

additional review.

referenced in a staff SER, TER, EA, or ES and supplements and amendments thereof.

- c) The licensee is not required to obtain a license amendment if a proposed change, test, or experiment is consistent with NRC's previous conclusions, or the basis of, or analysis leading to, the conclusions of actions, designs, or design configurations analyzed and selected in the site or project SER, TER, ES, or EA. This would include all supplements and amendments to this license, and the TERs, EAs, EISs issued with those amendments.
- d) The licensee's determinations concerning whether a proposed change, test, or experiment meets the criteria in paragraphs (b) or (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 ground water or 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

<p>and environmental evaluations made by the SERP that provide the basis for determining changes are in compliance with paragraph (b) of this condition. The licensee shall furnish, in an annual report to the NRC, a description of each change, test, or experiment, including a summary of the safety and environmental evaluation made under paragraph (d) of this condition. In addition, the licensee shall annually submit to the NRC changed pages to the approved LRA, 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.</p>	
<p>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 costs, if accomplished by a third party, for decommissioning and decontamination, offsite disposal of radioactive solid process or evaporation pond residues, and ground-water restoration as warranted. The surety shall also include the costs associated with all soil and water sampling analyses necessary to confirm the accomplishment of decontamination.</p> <p>Within 3 months of NRC approval of a revised 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 in the newly approved Decommissioning Plan exceed the amount covered in the existing financial surety. The revised surety shall then be in effect within 3 months of written NRC approval.</p> <p>Proposed annual updates to the surety amount, required by 10 CFR 40, Appendix A, Criterion 9, shall be provided to the</p>	<p>No U1 Comment</p>

NRC by August 18 of each year. Financial surety coverage for the full amount of the NRC-approved decommissioning cost estimate shall not lapse for any time period prior to license termination. If the 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, 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 the 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 must also ensure that the surety, where authorized to be held by the State, expressly identifies the NRC-related portion of the surety and covers the cost of above-ground decommissioning and decontamination, offsite disposal, 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. The reclamation/decommissioning plan, cost estimates, and annual updates should follow the outline in the Appendix C to NUREG-1569 (NRC, 2003), entitled, "Recommended Outline for Site-Specific *In Situ* Leach Facility Reclamation and Stabilization Cost Estimates."

<p>The licensee's currently approved surety, Irrevocable Standby Letter of Credit issued in favor of the State of Wyoming, Department of Environmental Quality (WDEQ) shall be continuously maintained in an amount no less than \$16,308,890, 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.</p>	
<p>9.6 Written standard operating procedures (SOPs) shall be established and followed for all operational process activities involving radioactive materials that are handled, processed, stored, or transported by the licensee at or between the Irigaray and Christensen Ranch sites. SOPs for operational activities shall enumerate pertinent radiation safety practices to be followed in accordance with 10 CFR Part 20. Additionally, written procedures shall be established and followed for non-operational activities to include in-plant and environmental monitoring, bioassay analyses, and instrument calibrations. An approved, up-to-date copy of each written procedure shall be kept in specified locations in the process area to which it applies.</p> <p>All written procedures for both operational and non-operational activities shall be reviewed and approved in writing by the RSO before implementation and whenever a change in a procedure is proposed to ensure that proper radiation protection principles are being applied. Additionally, the RSO shall perform a documented review of all operating procedures at least annually.</p>	<p>No U1 Comment</p>
<p>9.7 The licensee shall dispose of Atomic Energy Act, as amended (AEA), Section 11e.(2) byproduct material, including evaporation pond residues, from the Irigaray and Christensen Ranch Satellite facilities at a site licensed by the NRC or an NRC Agreement State to receive AEA 11e.(2) byproduct material. The licensee shall identify the disposal facility to the NRC in writing. The licensee's approved waste disposal</p>	<p>No U1 Comment</p>

<p>agreement must be maintained onsite. In the event the agreement expires or is terminated, the licensee shall notify the NRC in writing, in accordance with License Condition 9.2, within 7 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. If the licensee is not able to secure this agreement, then the licensee must increase the surety to include disposal at a commercial AEA 11e.(2) disposal facility.</p>	
<p>9.8 Release of surface contaminated equipment, materials, or packages from restricted areas shall be in accordance with the NRC guidance document "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 (ADAMS Accession No. ML003745526) (the Guidelines) or suitable alternative procedures approved by NRC prior to any such release (NRC, 1993), or in accordance with Section 5.1 of the approved Decommissioning Plan.</p> <p>The Guidelines shall also apply to the removal of equipment, materials, or packages from restricted areas that have the potential for accessible surface contamination levels above background, regardless of the intent to release these items for unrestricted use. The licensee shall document its survey of equipment, materials, or packages prior to removing them from a restricted area.</p> <p>Personnel performing the contamination surveys for items released for unrestricted use or from restricted areas shall meet the qualifications of RSO or Health Physics Technician as defined in Regulatory Guide 8.31, as revised, "Information Relevant to Ensuring that Occupational Radiation Exposure at Uranium Recovery Facilities will be As Low As Is Reasonably Achievable (ALARA)," . Personal effects (e.g., notebooks and flashlights) that are hand carried need not be subjected to the</p>	<p>2. RE: Proposed Condition 9.8 - Release of Equipment</p> <p>Uranium One Comment:</p> <p>NRC has added wording to License Condition 9.8 that states</p> <p>"The Guidelines shall apply to the removal of equipment, materials, or packages from restricted areas that have the potential for accessible surface contamination levels above background regardless of the intent to release these items for unrestricted use. The licensee shall document its survey of equipment, materials, or packages prior to removing them from a restricted area."</p> <p>Uranium One requests clarification on the intent of this condition as it appears to contradict a common practice of allowing tools with minimal potential for contamination to be utilized on site at non connected restricted areas without having to survey upon exit, as long as said tools or equipment remain in the control of the licensee. This is particularly important for common tools that are used at headerhouses which are considered Restricted Areas. Headerhouses are located at isolated places within wellfield areas. Wellfield areas are considered Controlled Areas. The new wording added to License Condition 9.8 would potentially create an undue burden on the licensee and provide little benefit in a reduction in potential radiological exposure to site personnel or the public. Uranium One would request that the added language to License Condition 9.8 be deleted or modified.</p>

<p>qualified individual's survey or evaluation, but these items should be subjected to the same survey requirements as the individual possessing the items.</p> <p>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.</p>	<p>NRC staff understands the 2nd paragraph of this LC has is subject to additional discussion by Uranium One and NRC staff.</p> <p>The following LC's were removed from LC's 9.12 & 11.9 to LC 9.8 to be consistent with other NRC licenses.</p> <p>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.</p> <p>Personnel performing the contamination surveys for items released for unrestricted use or from restricted areas shall meet the qualifications of RSO or Health Physics Technician as defined in Regulatory Guide 8.31, "Information Relevant to Ensuring that Occupational Radiation Exposure at Uranium Recovery Facilities will be As Low As Is Reasonably Achievable (ALARA)," as revised. Personal effects (e.g., notebooks and flashlights) that are hand carried need not be subjected to the qualified individual survey or evaluation, but these items should be subjected to the same survey requirements as the individual possessing the items.</p>
<p>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 of 1966 (as amended) and its implementing regulations (36 CFR Part 800), and the Archaeological Resources Protection Act of 1979 (as amended) and its implementing regulations (43 CFR Part 7).</p> <p>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 shall occur until the licensee has received authorization from the NRC to proceed.</p>	<p>No U1 Comment</p>

<p>9.10 The licensee shall maintain restricted area boundaries at the Irigaray and Christensen Ranch facilities as described in Section 5.8.1 of the approved license application. Additionally, the Irigaray and Christensen Ranch well field buildings shall be restricted, if required, based on the results of radiological surveys.</p>	<p>No U1 Comment</p>
<p>9.11 The licensee is hereby exempted from the requirements of Section 20.1902(e) of 10 CFR 20 for areas within the Irigaray and Christensen Ranch facilities, provided that all entrances to the facility are conspicuously posted in accordance with Section 20.1902(e) and with the words, "ANY AREA WITHIN THIS FACILITY MAY CONTAIN RADIOACTIVE MATERIAL."</p>	<p>No U1 Comment</p>
<p>9.12 The RSO shall have the health physics authorities, responsibilities, and technical qualifications identified in Regulatory Guide 8.31, as revised. Health Physics Technicians or Radiation Safety Technicians should have qualifications that are equal or equivalent to those specified in Regulatory Guide 8.31, as revised.</p> <p>The licensee shall follow the guidance set forth in Regulatory Guide 8.30, as revised, "Health Physics Surveys in Uranium Recovery Facilities," or NRC-approved equivalent with the following exception:</p> <p>Within 90 days of license renewal, the licensee will develop an SOP and specific training for personnel that do not meet the qualifications of RSO or Health Physics Technician, as defined in Regulatory Guide 8.31, as revised, that are designated to survey resin trucks leaving a restricted area and traveling to another restricted area authorized by the license. The SOP and training shall be submitted to the NRC for review and verification.</p> <p>The licensee shall follow the guidance set forth in Regulatory Guide 8.31, as revised, or NRC-approved equivalent with the</p>	<p>3. RE: Proposed Condition 9.12 - RSO Qualifications etc.</p> <p>Uranium One Comment 2.A: This proposed license condition requires the submittal of two SOPs to NRC for review and approval. The Willow Creek Project has operated under an NRC license for over 30 years and historically the submittal of SOP's to the NRC for "review and verification" was not required. Uranium One requests why this action is now required at an operating facility which is subject to at least two routine NRC inspections each year and was subject to preoperational inspections as well.</p> <p>This LC requested an SOP to address RG 8.31 guidance for the conduct of (1) daily inspections and (weekly inspections and (2) resin truck radiation surveys. U1 requested alternatives to RG 8.31 for the conduct of daily and weekly inspections. The licensee did not provide specific information on the training and qualifications of personnel to conduct these inspections. NRC has requested an SOP for the licensee to provide this information.</p> <p>Do we need to add, The licensee shall follow the guidance set forth in Regulatory Guide 8.30, "Health Physics Surveys in Uranium Recovery Facilities," Table 5.10 of the approved LRA, or NRC-approved</p>

following exception:

The licensee shall describe in an SOP the training provided and procedures used by the RSO designate to conduct daily inspections in the temporary absence of the RSO or Radiation Safety Technician. The SOP for the conduct of daily inspections and training requirements shall be submitted to the NRC for review and written verification. Weekly inspections shall be performed by the RSO and follow the recommendations of Regulatory Guide 8.31, as revised. The licensee shall describe in an SOP the procedures used to conduct weekly inspections in the temporary absence of the RSO. The SOP for the conduct of weekly inspections shall be submitted to the NRC for review and written verification.

equivalent with the following exception:

Uranium One Comment 2.B:

Third paragraph starting with "Within 90 days..." limits the transport of resin trucks to only the Willow Creek Project. This license condition needs to recognize that resin trucks will be going to and from other Satellite facilities such as the Moore Ranch and Ludeman projects. It is recommended that this paragraph be rewritten as follows:

"Within 90 days of license renewal, the licensee will develop an SOP and specific training for personnel that do not meet the qualifications of RSO or Health Physics Technician, as defined in Regulatory Guide 8.31, that are designated to survey resin trucks leaving a restricted area and traveling to another restricted area authorized by the License of the Willow Creek ISR Project."

The licensee explained that it intends to transfer resins amongst all its licensed facilities and the proposed license condition was too narrow in scope to allow these actions. Agree to add, authorized by the License.

Uranium One Comment 2.C:

It is recommended that the last paragraph of the proposed license condition be rewritten as follows:

"The licensee shall describe in an SOP the training provided and procedures used by the RSO designate to conduct daily inspections in the temporary absence of the RSO or Radiation Safety Technician. The SOP for the conduct of daily inspections and training requirements shall be submitted to the NRC for review and verification. Weekly inspections shall be performed by the RSO or his or her designate and follow the recommendations of Regulatory Guide 8.31. The licensee shall describe in an SOP the procedures used to conduct weekly inspections in the temporary absence of the RSO or the Health Physics Technician."

	<p>The NRC expectation is that the licensee provides an SOP that identifies the training and qualifications of personnel that conduct weekly inspections as recommended in RG 8.31 in the <i>temporary</i> absence of the RSO and Facility Foreman. The weekly inspection should not be permanently delegated.</p> <p>Uranium One Comment 2.D:</p> <p>Additionally, it should be noted that the first paragraph refers to the "RSO, Health Physics Technicians and Radiation Safety Technicians" while other similar references in this license condition only refer to the "RSO or Radiation Safety Technicians". It is suggested that NRC be consistent with these references.</p> <p>NRC response: RG 8.31 uses the term HPT's, whereas Willow Creek radiation safety program uses RST. Therefore, the references to either are appropriate. No change.</p> <p>This language moved from LC 9.12 to LC 9.8: Personnel performing the contamination surveys for items released for unrestricted use or from restricted areas shall meet the qualifications of RSO or Health Physics Technician as defined in Regulatory Guide 8.31. Personal effects (e.g., notebooks and flashlights) that are hand carried need not be subjected to the qualified individual survey or evaluation, but these items should be subjected to the same survey requirements as the individual possessing the items.</p>
<p>9.13 Sage Grouse leks at the Irigaray and Christensen Ranch sites shall be monitored on an annual basis. The licensee shall consult with the Fish and Wildlife Service or the Bureau of Land Management for mitigative measures to reduce potential impacts.</p>	<p>No U1 Comment</p>

<p>9.14 If any officer, director, board member, employee, or representative of a parent company of Uranium One, Inc., will be appointed, hired, or designated as an officer, board member, or director of the licensee under any NRC license held by Uranium One, Inc. or its subsidiaries, Uranium One, Inc. or its subsidiaries must provide written notice to NRC at least 30 days prior to such appointment, hiring, or designation.</p>	<p>No U1 Comment</p>
<p>9.15 The licensee shall review and compare the data collected from a regional weather station during the same period as the onsite meteorological data collected to the long-term data collected from the same regional weather station. The licensee shall determine if the data collected onsite is representative of long-term conditions. Justification of the similarity or validity of the data will include analysis of the statistical data presented to illustrate confidence in the representativeness of the data. The meteorological data will include wind speed, wind direction, an annual wind rose, and a summary of the stability classification. The licensee shall submit this review and comparison to NRC within 6 months of license renewal for NRC review and written verification that the onsite meteorological parameters previously collected will allow the licensee to demonstrate compliance with regulatory requirements of 10 CFR Part 20 and 40 CFR Part 190.</p>	<p>4. RE: Proposed Condition 9.15 - Onsite Meteorological Data</p> <p>Uranium One Comment: Uranium One requests justification for this new requirement as the Willow Creek Project has operated under an NRC license for over 30 years without an on-site meteorological station with no significant impacts to the public, employees, or the environment from airborne or other releases. Additionally, Uranium One does not intend to move any existing approved air monitoring stations as they have been used for many years and it is important that future data collection at these sites be comparable to historic data. Uranium One recommends that this license condition be deleted.</p> <p>NRC response: The NRC needs to determine that the year of data used to determine the location of monitoring points was taken during a statistically typical year. See RG 3.63 (C.) Regulatory Position, last paragraph, for reference. In other words, demonstrate that 1980-81, when original data was taken, was not a meteorological outlier year. NRC staff has not requested any monitoring stations be moved. No change.</p>
<p>9.16 reserved</p>	<p>No U1 Comment</p> <p>Removed. NRC staff has received the updated management information. NRC staff expects the organizational chart and management changes to be reviewed by the SERP and added to the approved License Renewal Application on an annual basis.</p>

<p>9.17 The security requirements and control of radioactive materials located outside restricted areas and during transportation activities by the licensee shall conform to the requirements of 10 CFR Part 20, Subpart I and 10 CFR 71.5. The licensee will develop SOPs or other plans to comply with 10 CFR Part 20, Subpart I and 10 CFR 71.5 requirements.</p>	<p>No U1 Comment</p>
<p>9.18 The SERP shall review annually LRA Section 7.5, Effects of Accidents, and update the LRA as necessary to reflect newly identified accident analyses based on industry experience or the licensee's lessons-learned.</p>	<p>No U1 Comment Minor changes made</p>
<p>Section 10: Operations, Controls, Limits, and Restrictions</p>	<p>Uranium One Comment</p>
<p>10.1 The licensee shall use a lixiviant composed of native groundwater, with added sodium bicarbonate and/or CO2 gas and oxygen or hydrogen peroxide, as described in the approved license application.</p> <p>The licensee shall maintain an inward hydraulic gradient by maintaining a bleed in each individual wellfield starting when lixiviant is first injected into the production zone and continuing until the ground water restoration stability monitoring has begun.</p>	<p>5. RE: Proposed Condition 10.1 - Inward Hydraulic Gradient</p> <p>Uranium One Comment:</p> <p>The new language added to this license condition "The licensee shall maintain an inward hydraulic gradient in each individual wellfield starting when lixiviant is first injected into the production zone and continuing until the ground water restoration stability monitoring has begun" is not consistent with historic practice and existing WDEQ regulations, and is difficult, or impossible to show/prove with wellfield monitoring data. It is possible to maintain and show/prove a wellfield bleed. Historically, the wellfields have been operated and monitored such that injection fluids and affected groundwater are retained within the monitor well ring and the aquifer exemption area. Uranium One recommends that this license condition be deleted or the term "inward hydraulic gradient" be changed to "bleed".</p> <p>NRC response: NRC staff will clarify the LC by adding the inward gradient will be</p>

<p>10.2 The licensee shall construct all wells in accordance with methods described in Section 3.3.2 of the approved license application.</p> <p>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 with equipment or procedures that could damage the well casing. Additionally, each well shall be retested at least once every five years. Integrity tests shall be performed in accordance with Section 3.3.2.2 of the approved license application. Any failed well casing that cannot be repaired to pass the integrity test shall be appropriately plugged and abandoned, using procedures set out in Section 3.3.2 of the approved license application.</p> <p>Mechanical integrity testing is required prior to returning to service any injection well suspected of having subsurface damage due to unusual operating conditions or unusual natural phenomenon.</p>	<p>maintained by maintaining a bleed.</p> <p>No U1 Comment</p>
<p>10.3 The licensee shall establish pre-operational baseline water quality data for all production units. Baseline water quality sampling shall provide representative pre-mining ground water quality data and restoration criteria as described in the approved license application. The data shall be from wells established in the mining zone, the mining zone perimeter, the upper aquifer and the lower aquifer where present, with spacing and locations as specified in the approved license application. The data shall, at a minimum, consist of the sample analyses shown in Table 5.24 of Section 5.8.2.2 of the approved license application, unless superseded by this license condition.</p> <p>The wells used for obtaining baseline ground water quality in current and future production areas shall be established at the following minimal density:</p>	<p>6. RE: Proposed Condition 10.3 - Baseline Water Quality Data</p> <p>Uranium One Comment 5 A:</p> <p>The existing sentence in the current license condition "Baseline ground water quality in previously approved production areas shall be the mean data values (well field average) from the following submittals:" should not be removed from the proposed License Condition as it still applies to existing wellfields.</p> <p>NRC response: Agreed.</p>

<u>Monitored Unit</u>	<u>Density</u>	Uranium One Comment 5 B:
<p>Ore Zone Monitors Ore Zone Baseline (restoration)</p> <p>Shallow Zone Monitors</p> <p>Deep Zone Monitors (where zone present)</p>	<p>All 1 well per 3 acres of pattern area</p> <p>1 well per 4 acres of pattern area</p> <p>1 well per 4 acres of pattern area</p>	<p>The proposed language in the paragraph starting with "Four samples shall be collected..." is not consistent with the license application. This paragraph should be rewritten as follows:</p> <p><i>"Four samples shall be collected and analyzed from each monitor well to establish baseline water quality parameters including the ore zone perimeter, overlying and underlying monitor wells, and mine unit baseline wells. Consecutive sampling events shall be at least 14 days apart. The first round of samples for all wells will be analyzed for Assay Suite A as per Table 5.24 of the License Application. Rounds 2, 3 and 4 for the Ore Zone Perimeter, Upper Aquifer and Lower Aquifer Wells will be analyzed for Assay Suite B as per Table 5.24. Round 2 for the mine unit baseline wells will be analyzed for Assay Suite A and rounds 3 and 4 for the mine unit baseline wells will be analyzed for Assay Suite B as per Table 5.24 of the license application."</i></p>
<p>Baseline ground water quality in previously approved production areas shall be the mean data values (well field average) from the following submittals:</p> <p><u>Christensen Ranch</u></p> <p>Unit 3 and Module 2 expansion Unit 3 expansion and Module 4A expansion Unit 2 south portion Unit 2 north portion Unit 4 Unit 5</p> <p>December 1, 1988 (Table 2) August 8, 1991 (Table 6) November 27, 1992 (Table 2) April 16, 1992 (Table 2) April 1, 1994 (Table 6) February 28, 1995 (Table 7)</p> <p>Four samples shall be collected and analyzed for Assay Suite A from each monitor well to establish baseline water quality parameters including the ore zone perimeter, overlying and underlying monitor wells, and mine unit baseline wells. Consecutive sampling events shall be at least 14 calendar days apart. The third and fourth sample events may be analyzed for a reduced list of parameters. The parameters that may be deleted from the third and fourth sampling events are those that are below the minimum analytical detection limits during the first and second sampling events.</p>		<p>NRC response:</p> <p>NRC staff is requiring statistically valid samples when determining baseline water quality parameters. Staff has determined that four samples are required to show a statistically valid sample and is consistent with requirements of sampling required for new licenses and renewals. NUREG-1569, Section 5.7.8.3 (1) (page 5-39) states that "at least four independent sets of samples should be collected"... and "An acceptable set of samples should include all well field perimeter monitor wells, all upper and lower aquifer monitor wells, and at least one production/injection well per acre in each well field." Also, NUREG-1569 states, "as a general guideline, at least six samples are required to achieve a 90% confidence that any random sample will lie within 2 std dev of the mean." (page 5-39). No change at this time.</p>
<p>10.4 Prior to mining in each production unit, the licensee shall collect ground water samples and establish Upper Control Limits (UCLs) in accordance with Section 5.8 of the approved license application. UCLs shall be applied to all monitor wells (with the exception of the mine unit baseline wells) in</p>		<p>7. RE: Proposed Condition 10.4 - Upper Control Limits</p> <p>Uranium One Comment: In respect to the first paragraph, Upper Control Limits (UCLs) are not applied to all monitoring wells. This paragraph should be rewritten as</p>

<p>conformance with the approved license application and appropriate SOPs. The UCL parameters shall be chloride, conductivity, and total alkalinity.</p> <p>UCLs for monitor wells established prior to the issuance of the Performance Based License Condition (PBLIC) in December 1996, are provided in Table 5.26 for the Irigaray site and Table 5.27 for the Christensen Ranch site in Section 5.8 of the 1998 approved license application.</p>	<p>follows:</p> <p><i>"Prior to mining in each production unit, the licensee shall collect ground water samples and establish Upper Control Limits (UCLs) in accordance with Section 5.8 of the approved license application. UCLs shall be applied to all monitor wells (with the exception of the mine unit baseline wells) in conformance with the approved license application and appropriate SOPs. The UCL parameters shall be chloride, conductivity, and total alkalinity."</i></p> <p>NRC response: This addition is acceptable. Staff notes that the original language was not changed from the previous license.</p>
<p>10.5 The licensee is authorized to conduct operations at a maximum flow rate of 9000 gallons per minute, exclusive of restoration flow. Annual dried yellowcake production shall not exceed 2.5 million pounds.</p>	<p>No U1 Comment</p> <p>NRC response: Change to 9000 gpm based on proposed flow rate increase</p>
<p>10.6 Solution evaporation ponds A, B, C, D and E, shall have at least 2 feet of freeboard. Ponds RA and RB shall have at least 8 feet of freeboard. The 8-foot freeboard may be temporarily changed to a 2-foot freeboard in either RA or RB as long as sufficient reserve capacity is available in the overall pond system to accept the contents of one of the ponds in case of leakage. The Christensen Ranch permeate storage pond, brine ponds and filter backwash pond (if constructed) shall have at least 2 feet of freeboard.</p> <p>Additionally, the licensee shall, at all times, maintain sufficient reserve capacity in the evaporation pond system to enable the transfer of the contents of a pond to other ponds. In the event of a leak and subsequent transfer of liquid, the freeboard requirements shall be suspended during the repair period.</p>	<p>No U1 Comment</p>
<p>10.7 All liquid effluents from process buildings and other process waste streams, with the exception of sanitary wastes, shall be returned to the process circuit, discharged to the solution evaporation ponds, or disposed of as allowed by NRC</p>	<p>No U1 Comment</p>

<p>regulations.</p> <p>Additionally, the licensee is authorized to dispose of process solutions, injection bleed, and restoration brine in the following wells:</p> <p style="text-align: center;">Christensen Ranch DW No.1 Christensen Ranch 18-3 Christensen Ranch DW No. 2 Christensen Ranch DW No. 3</p> <p>The licensee shall maintain a record of the volumes of solution disposed in these wells and submit this information in the annual monitoring report.</p>	<p>NRC comment: Changed disposal well names consistent with WDEQ permit.</p>
<p>10.8 The licensee shall maintain effluent control systems, as specified in Section 4.0 of the approved license application, with the following additions:</p> <p>A. Operations shall be suspended within 1 hour in the dry/pack area of the plant if any of the emission control equipment for the yellowcake drying or packaging areas is not operating within the ranges permitted by WDEQ Air Quality Permit No. OP-254.</p> <p>B. Parameters that determine efficiency of yellowcake stack emission control must be identified and these parameters must be checked and logged hourly. If automated systems are used to satisfy the checking and logging requirements, the licensee must demonstrate in its SOPs how the automated system will meet the hourly requirement. In addition, the licensee must identify the type and locations of human interfaces (alarms, lights, and monitoring stations), how and what frequency the operability of emission control systems are tested and recorded, and, in the case of inoperability, how shutdown is initiated (manually or automatically).</p> <p>C. The furnace draft pressure shall be read and documented once per 12-hour shift, and maintained within the design specification of -0.1 to -0.5 inches of</p>	<p>8. RE: Proposed Condition 10.8 B- Yellowcake Dryer Emission Parameters</p> <p>Uranium One Comment 7 A: The two paragraphs contain contradictory requirements in regards to manual readings of monitoring equipment (every 12 hours vs. every hour). The two paragraphs are also redundant in that the first paragraph lists the emission control monitoring parameters (the scrubber flow rate and differential pressure) while the second paragraph states these emission control parameters must be identified.</p> <p>NRC response: paragraph one removed due to redundancy.</p> <p>Uranium One Comment 7 B: The second paragraph also requires that certain scrubber operational procedures be included in a SOP. This information is included in an existing SOP titled "Drypack - Scrubber System". This SOP was reviewed by NRC prior to restart of drying activities and the procedure is currently being used during drying activities. It is unclear why this information is being requested in a SOP when it is already in place.</p> <p>NRC response: If the SOP is in place, the licensee is already in compliance with the LC. No change.</p>

water.	
<p>10.9 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 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, as revised.</p>	<p>No U1 Comment</p> <p>Minor changes</p>
<p>10.10 The licensee shall sample particulates and radon progeny on a monthly frequency at the Irigaray and Christensen Ranch Satellite locations shown on Figures 5.2 and 5.3 of the approved license application. Additional sampling locations can be added by the licensee through the SERP.</p>	<p>No U1 Comment</p>
<p>10.11 If employees do not shower prior to leaving the restricted area, they shall monitor themselves with an alpha survey instrument prior to exiting in conformance with Regulatory Guide 8.30, as revised.</p>	<p>No U1 Comment</p> <p>Minor changes</p>
<p>10.12 The licensee shall implement the bioassay program discussed in Regulatory Guide 8.22, Bioassay at Uranium Mills," as revised. Exceedance of the administrative or actions levels and corrective actions performed will be documented in the ALARA Audit Report.</p>	<p>No U1 Comment</p> <p>Minor changes</p>
<p>10.13 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 with a radiation source each day when in use.</p>	<p>No U1 Comment</p>

<p>10.14 reserved</p>	<p>9. RE: Proposed Condition 10.14- Heldt Draw Baseline Monitoring</p> <p>Uranium One Comment:</p> <p>The proposed license condition is out dated as Mine Unit 8 located within the Heldt Draw area is substantially constructed at this time (April 2012). Therefore, it is not possible to obtain four baseline surface water samples from Heldt Draw prior to wellfield construction. It should be noted that Heldt Draw is a relatively small ephemeral drainage with a grass lined swale that only flows surface water in direct response to large rainfall and/or snowmelt events. It may not flow water though its entire reach for long periods of time (many months to years).</p> <p>Given the ephemeral nature of the Heldt Draw, and the fact that there is a surface water monitoring plan for Willow Creek at three locations downstream of the confluence of Heldt Draw and Willow Creek (Site GS-1, IR-14 and IR-1) Uranium One does not see the reason to include an additional surface water monitoring site in the surface water monitoring plan to be used during operations (Table 5.24). Uranium One recommends that this license condition be deleted.</p> <p>NRC response: NRC inspection revealed no accessible locations to monitor Willow Creek at the boundary. The NRC will use downstream monitoring locations at the Irigaray site as evidence that operations are not causing contaminant problems on Willow Creek. The LC will be removed.</p>
<p>10.15 The licensee shall conduct ground water restoration and post-restoration monitoring as described in Section 6.1 of the approved license application. The primary goal of restoration shall be to return the ground water quality, on a production-unit average, to baseline concentrations on a parameter-by-parameter basis. If the primary goal cannot be achieved, the ground water will, at a minimum, be returned to an alternate standard approved by the NRC. In submitting any license amendment application requesting review of proposed alternate concentration limits pursuant to 10 CFR 40, Appendix A, Criterion 5(B)(6), the licensee must also show</p>	<p>10. RE: Proposed Condition 10.15 - Post-Restoration Groundwater Monitoring</p> <p>Uranium One Comment 9 A:</p> <p>The existing language "The licensee shall conduct ground water restoration and post-restoration monitoring as described in Section 6.1 of the approved license application" conflicts with the new language "The licensee shall conduct sampling of all constituents of concern on a quarter year basis (emphasis added) during stabilization monitoring", to the current post-restoration stability monitoring plan in Section</p>

that it has first made practicable efforts to restore the specified hazardous constituents to the background or maximum contaminant levels (whichever is greater).

The licensee shall conduct four rounds of sampling of all WDEQ-LQD Guideline 8, Assay Suite A constituents during stabilization monitoring, with each well sample being at least three months apart. The applicant shall continue the stability monitoring until the data show the most recent four consecutive samples indicate no statistically significant increasing trend for individual constituents which would lead to an exceedance above the approved target restoration values.

Changes to ground water restoration or post-restoration monitoring plans shall be submitted to the NRC for review and approval at least 2 months prior to ground water restoration in a mining unit.

The licensee shall conduct ground water restoration activities in accordance with the approved LRA. Permanent cessation of lixiviant injection in a production area would signify the licensee's intent to shift from the principal activity of uranium production to the initiation of ground water restoration and decommissioning for any particular production area. If the licensee determines that these activities are expected to exceed 24 months for any particular production area, then the licensee shall submit an alternate schedule request that meets the requirements of 10 CFR 40.42.

6.1.2.4- Stabilization Monitoring and Table 6.1- Restoration Groundwater Monitoring Schedule and Analyses of the license application. In Section 6.1.2.4, Uranium One commits, in accordance with WDEQ regulations and approved permits, to conduct post-restoration stabilization monitoring for a period of 12 months and sample designated restoration wells at the beginning, middle and end of this 12 month period. Further, these samples will be analyzed for a full suite (WDEQ-LQD Guideline 8, Assay Suite A) of chemical and radiological parameters.

NRC response: NRC staff will require four samples be taken to show stability during the stabilization monitoring phase as is consistent with other NRC licensees. Samples must be at least 3 months apart.

Uranium One Comment 9 B:

Uranium One requests a definition of "constituents of concern" as it is not clear what they are in reference to. Possibly Criterion 5(B)(6) parameters?

NRC response: Constituents of concern will be specified as WDEQ-LQD Guideline 8, Assay Suite A constituents.

Uranium One Comment 9 C:

The language "The applicant shall continue the stability monitoring until the data show the most recent four consecutive quarters indicate no statistically significant increasing trend for all constituents of concern which would lead to an exceedance above the approved target restoration values." also conflicts with the license application and WDEQ regulations. Prolonged post-stabilization monitoring (greater than one year) is not proposed in Section 6.1 of the license application, it is also contrary to the currently approved post-restoration stability monitoring practices. Postrestoration stabilization monitoring, currently approved of by both the NRC and WDEQLQD, consists of samples being taken from designated restoration wells for a 9 month to one year period. This duration of stability monitoring has used by both NRC and the WDEQ for approval of existing restored wellfields as well as

	<p>wellfields currently under review for concurrence of the completion of ground water restoration.</p> <p>NRC response: NRC will require 4 samples at a minimum. Well field stability cannot be shown simply with 4 rounds of sampling. If a constituent is showing increasing trends, it cannot be considered stable. Staff will change all constituents to individual constituents in paragraph 2.</p>
<p>10.16 The licensee shall include the following as part of the ground water monitoring program: Annual sampling and analysis for chloride and conductivity from 517 and USMT Wells M-1, NM-3, M-4, SM-1, M-219, M-220, and M-221.</p>	<p>No U1 Comment</p>
<p>10.17 The licensee shall implement the respiratory protection program, as described in the approved LRA.</p>	<p>No U1 Comment</p>
<p>10.18 The licensee is hereby authorized to receive contaminated process equipment for reuse from licensed uranium recovery operators. Records of all receipts shall be maintained.</p>	<p>No U1 Comment</p>
<p>10.19 The licensee is hereby authorized to transfer source material to any facility licensed by NRC or an NRC Agreement State to receive source material for purposes of drying and storage. The licensee shall follow Standard Operation Procedure No. E-11 in the event of a transportation or storage accident.</p>	<p>No U1 Comment</p>
<p>10.20 Prior to initiating vanadium separation processing, the licensee's SERP, in accordance with License Condition 9.4 shall assess the potential safety and environmental impacts of that process. If those impacts are outside the scope of the impacts considered by NRC in the EA as part of the license renewal review, the licensee shall submit a license amendment request to NRC for review and approval.</p>	<p>No U1 Comment</p>

<p>10.21 The licensee shall use its SOP PBLC-02, approved by NRC in December 1996, including the guidance for evaluating hydrologic connectivity between aquifers, in assessing the potential start up of new mine units.</p>	<p>No U1 Comment</p>
<p>SECTION 11: Monitoring, Recording, and Bookkeeping Requirements</p>	
<p>11.1 Injection manifold pressures and flow rates shall be measured and recorded daily. During well-field operations, injection pressures shall not exceed 120 psi at the Irigaray site, and 140 psi at the Christensen Ranch site. Also, during maintenance tasks, injection pressures shall not exceed the integrity test pressures.</p>	<p>No U1 Comment</p>
<p>11.2 All designated monitor wells shall be sampled and tested for the UCLs established in accordance with Condition 10.4. Sampling shall be performed on the routine sampling schedule in the approved license application.</p> <p>If the routine sampling results indicate an exceedance of at least two UCLs, a second sample shall be collected from that well within 48 hours and analyzed for chloride, conductivity, and total alkalinity. The well shall be placed on excursion status if the results from the second sample also exceed at least two of the established UCLs.</p> <p>If the results from the second sample do not confirm the initial exceedance, a third sample shall be collected within 48 hours of receiving the results from the second sampling, and analyzed. The routine sampling shall be considered in error if the second and third samples do not confirm the initial exceedance. The well shall be placed on excursion status if the results from the second or third samples exceed at least two of the established UCLs.</p> <p>Upon confirming an excursion, the licensee shall implement</p>	<p>No U1 Comment</p>

<p>corrective actions, and increase the sampling frequency for the excursion indicators to weekly. Written progress reports of the excursion status shall be submitted to the NRC, in accordance with Condition 9.2, on a quarterly basis, until the excursion has been mitigated. An excursion is considered mitigated when the concentrations of at least two excursion indicators remain below the established UCLs for three consecutive samples.</p>	
<p>11.3 The licensee shall conduct effluent, personnel, and environmental monitoring programs in accordance with Sections 5.7 and 5.8 of the approved license application.</p> <p>The licensee shall conduct airborne samples for natural uranium, Ra-226, Po-210, Th- 230 and Pb-210 at each in-plant air particulate sampling location at a frequency of once every 6 months for 2 years, and annually thereafter, to ensure compliance with 10 CFR 20.1204. The licensee shall also evaluate changes to plant operations to determine if more frequent radionuclide analyses are required to demonstrate compliance with 10 CFR 20.1204. The licensee may provide alternative procedures specific to in-plant air particulate sampling to show compliance with 10 CFR 20.1204 to the NRC for review and verification within 6 months of license renewal.</p> <p>The licensee shall conduct airborne samples for natural uranium, Ra-226, Po-210, and Pb-210 at each Christensen Ranch environmental monitoring location at a frequency of once every 6 months for 2 years, and annually thereafter, to ensure compliance with 10 CFR 20.1301. The licensee shall also evaluate changes to plant operations to determine if more frequent radionuclide analyses are required to demonstrate compliance with 10 CFR Part 20.1301. The licensee may provide alternative procedures specific to environmental monitoring for natural uranium, Ra-226, Po-210, and Pb-210 to show compliance with 10 CFR 20.1301 to the NRC for review and verification within 6 months of license renewal.</p>	<p>11. RE: Proposed Condition 11.3 - Effluent, Personnel and Environmental Monitoring Programs</p> <p>Uranium One Comment 10 A:</p> <p>General comment. Uranium One does not understand the need for much of this detailed radionuclide monitoring data when the facility was in operation for approximately 30 years and a considerable database exists for radionuclide monitoring at both in-plant and environmental monitoring sites. Moreover, this extensive database shows that occupational exposures have always been than 10% of applicable NRC limits and the monitoring at the restricted area boundary continuously show compliance with NRC limits. Similarly, review of the historic environmental monitoring at Irigaray environmental air monitoring locations indicate that the Ra-226 and Th-230 ratios under 10 CFR 20.1204(g) would allow them to be disregarded and uranium would become the most restrictive radionuclide DAC. Uranium One would not anticipate that the ratios of the radionuclide's would be any different for in-plant monitoring locations at Irigaray or the Christensen Satellite Plant whose primary airborne consistent is radon. Additionally, if the contents of this proposed license condition are retained it should be modified such that occupational, effluent and environmental requirements are separated.</p> <p>NRC response License condition 11.3 tried to address several unresolved issues in the LRA.</p> <p>(1) the LRA assumption that all in-plant airborne radioactivity (see</p>

<p>The licensee shall describe how the environmental monitoring program demonstrates that 10 CFR Part 20 public dose limits in controlled and unrestricted areas are met. The documentation of the areas designated as restricted, controlled and unrestricted areas and the environmental monitoring station locations shall be updated periodically, as needed.</p> <p>The licensee shall provide the following information for the airborne effluent and environmental monitoring program in which it shall develop written procedures, that shall be submitted to NRC for verification prior to implementation, to:</p> <ul style="list-style-type: none"> a. Discuss, in accordance with 10 CFR 40.65, how 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, consistent with 10 CFR 20.1301 and 10 CFR 20.1302, the highest exposures likely for member(s) of the public from licensee operations. c. Discuss how radon progeny (radon-222) will be factored into the determination of potential public dose from the licensee's operations consistent with 10 CFR Part 20, Appendix B, Table 2. d. Discuss, in accordance with 10 CFR Part 20.1501, how the occupational dose (gaseous and particulate) received throughout the entire license area from licensee operations will be accounted for, and verified by surveys and/or monitoring. 	<p>Section 5.7.3) is natural uranium and requires radiological characterization of in-plant airborne radioactivity;</p> <ul style="list-style-type: none"> (2) requires environmental air particulate monitoring at CR; and (3) addresses the 10 CFR 40.65 required reporting, public dose assessment from monitoring data & radon-222 dose assessment. <p>Uranium One Comment 10 B:</p> <p>The third paragraph makes reference to obtaining air samples for radionuclide analysis at the Christensen Ranch environmental monitoring sites to ensure compliance with 10 CFR 20.1204(g). It is unclear why data collected at the environmental sites needs to be obtained and compared to occupational dose requirements.</p> <p>NRC staff has added the ability to demonstrate compliance.</p> <p>Uranium One Comment 10 C:</p> <p>In respect to the section that requests the licensee to develop written procedures for NRC verification for radiological surveys, how exposures to the public will be determined, how radon progeny will be factored into public dose estimates, Uranium One recommends that these requirements be deleted as the information has been forwarded to the NRC and/or reviewed by NRC on an annual basis.</p> <p>This issue was discussed with NRC staff in PM/PM phone call. No change.</p>
<p>11.4 The licensee shall perform and document weekly visual inspections of the Irigaray and Christensen Ranch Satellite evaporation pond embankments, fences and liners, as well as measurements of pond freeboard and checks of the leak</p>	<p>No U1 Comment</p>

<p>detection system. Any time 6 vertical inches or more of fluid is detected in the leak detection system standpipes, it shall be analyzed for chloride, conductivity, pH and uranium. If analyses indicate that the pond is leaking, the licensee shall lower the pond fluid level by transferring its contents to an alternate cell, and undertake repairs, as needed. If standpipe water exists, quality samples shall be analyzed for the above parameters weekly during the leak period and for at least 2 weeks following repairs.</p>	
<p>11.5 The licensee shall conduct the weekly in-plant inspection and audit programs described in Section 5.3 of the approved license application. In addition, the RSO or designee shall document a daily walk-through of the Irigaray and Christensen Ranch Satellite facilities to determine that radiation control practices are being implemented appropriately.</p>	<p>No U1 Comment</p>
<p>11.6 The results of the following activities, operations, or actions shall be documented: sampling, analyses, surveys and monitoring, survey/monitoring equipment calibration, results of reports on audits and inspections, all meetings and training courses required by this license; and any subsequent reviews, investigations and corrective actions. Unless otherwise specified in the NRC regulations, all such documentation shall be maintained for a period of at least five (5) years.</p>	<p>No U1 Comment</p>
<p>11.7 The licensee shall monitor for external exposure in accordance with 10 CFR 20.1502(a)(1), and Section 5.7.2 of the approved license application. The licensee shall monitor for internal exposure in accordance with 10 CFR 20.1502(b)(1) and Section 5.7.3 of the approved license application.</p> <p>The licensee shall conduct surveys in accordance with 10 CFR 20.1501 in header houses to evaluate the magnitude and</p>	<p>No U1 Comment</p>

<p>extent of radiation levels and to determine potential radiological hazards present.</p>	
<p>11.8 The licensee shall identify the location of any new ground water wells or new use of existing wells, where the information is publicly available and/or known to the licensee, that are located within the license area and within 2 kilometers of any production area monitoring ring wells. The licensee shall also report publicly available information such as well depth, screen depth and estimated pumping rate. The licensee shall evaluate the impact of ISR operations on ground water wells and recommend any additional monitoring or other measures to protect ground water users. The evaluation shall be submitted as part of the annual reporting to the NRC.</p>	<p>12. RE: Proposed Condition 11.8 - Evaluation of New Ground Water Wells</p> <p>Uranium One Comment 11 A: The proposed language "the evaluation shall be submitted as part of the annual reporting to the NRC for review" is confusing as Uranium One is required, in accordance 10 CFR 40.65, to submit semi-annual reports, not annual reports. Additionally, this license condition belongs in Section 12- "Reporting Requirements" since it contains an "annual reporting" requirement for submittal to NRC.</p> <p>NRC response: An annual SERP report and ALARA report is required. Check to see if all SERP's are submitted to NRC, not just for changes, tests, etc. as outlined in, (e) in SERP LC.</p> <p>Uranium One Comment 11 B: Uranium One requests a better understanding of the intent of the condition and our ability to "identify the location, screen depth, and estimated pumping rate of any new ground water wells or use within two kilometers of a production area", if such wells are outside the permit area. Wyoming State Engineer records can be reviewed each year to assess if any new wells were potentially installed, but the availability of the specific information requested (pumping rate, "new use") may not be. Moreover, the Willow Creek Project has operated in various capacities for over 30 years with no adverse impact to adjacent ground water users. In the case that ground water quality of adjacent wells was adversely impacted by ISR (or any other operation for that matter), such a condition falls under State of Wyoming laws and the jurisdiction of the WDEQ. Similarly, in the case that the ground water availability or pumping capacity of adjacent wells was adversely impacted by ISR operations, such a condition falls under State of Wyoming laws and the jurisdiction of the Wyoming State Engineer.</p> <p>NRC response: The licensee should be determining if other wells are</p>

	installed near the project and evaluating ISR impact on them. Change to require licensee to obtain only publically available information.
<p>11.9 The licensee shall provide for NRC review the surface contamination detection capability (minimum detectable concentration (MDC)) for radiation survey instruments, including scan MDC for portable instruments, used for contamination surveys to release equipment and materials for unrestricted use and for personnel contamination surveys. The detection capability in the scanning mode for the alpha and beta radiation expected shall be provided in terms of disintegrations per minute per 100 cm².</p> <p>The licensee shall revise the applicable radiation safety training program to specify when alpha and beta contamination surveys are required to be conducted for personnel, equipment, and materials leaving a restricted area.</p>	No U1 Comment
<p>SECTION 12. Reporting Requirements</p>	
<p>12.1 Effluent and environmental monitoring program results provided in the semi-annual report and in accordance with 10 CFR 40.65, "Effluent monitoring reporting requirements," shall be reported in the format shown in Table 3 of Regulatory Guide 4.14, (Rev. 1) entitled, "Sample Format for Reporting Monitoring Data." The report shall also include injection rates, recovery rates and injection manifold pressure, status of well fields in operation (including last date of lixiviant injection), status of well fields in restoration and restoration progress, status of any long term excursions, and a summary of mechanical integrity tests during the reporting period.</p>	<p>13. RE: Proposed Condition 12.1 - Semi - Annual Report Requirements</p> <p>Uranium One Comment:</p> <p>NRC has added several new requirements to the semiannual (40.65) reports that are not required by 10 CFR 40.65 (limited to "effluent monitoring reporting"). This includes the "status of wellfields in operation or restoration", and "a summary of integrity tests during the reporting period". These items are not related to effluent monitoring. Additionally, Uranium One surmises that the "integrity tests" requested are Mechanical Integrity Test (MIT) results for injection wells. It is not clear what NRC expects to be submitted to meet this new requirement. Additionally, in accordance with EPA and WDEQ regulations, the results of Mechanical Integrity Test (MITs) and associated information, is submitted to the WDEQ in required WDEQ Quarterly Reports. Uranium One requests that NRC provide the regulatory basis requiring the submittal of this information to NRC, and for what purpose NRC will</p>

	<p>use the information.</p> <p>NRC response: The condition can be removed from the reporting requirements in 10 CFR 40.65 and included in a separate condition, if requested. The licensee uses the term integrity testing in the LRA, therefore the NRC staff did as well, see LRA 3.3.2.2. See CBR 11.1 (B) for details. Changed to mechanical integrity tests.</p> <p>Regulatory Basis: To determine compliance with 10 CFR 40.42, (d) timeliness in decommissioning and (e) surety calculation. All, 40.41(e) (4) allows the Commission to require additional reporting and deemed necessary.</p>
<p>12.2 Spill, Leak, Excursion, and Incident/Event Reporting</p> <p>Until license termination, the licensee shall maintain documentation of unplanned releases of source or AEA 11e.(2) byproduct materials (including extraction solutions) 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/event location and the impacted area.</p> <p>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, the licensee must report this information to the NRC Operations Center as required.</p> <p>If the licensee is required to report any spills, leaks, or excursions of source, AEA 11e.(2) byproduct material, or process chemicals because of impact on the environment, or to report any other incidents/events to State or Federal agencies, a report shall be made to the Region IV Branch Chief for Uranium Recovery Inspection and the NRC Project Manager, by telephone or electronic mail, within 48 hours.</p>	<p>No U1 Comment</p>

<p>This notification shall be followed, within 30 days of the notification, by submittal of a written report, according to Condition 9.2, detailing the conditions leading to the release or incident/event, corrective actions taken, and results achieved.</p>	
<p>12.3 An annual report will be submitted to the NRC in accordance with License Condition 9.2, that includes the ALARA audit report, land use survey, monitoring data, and the SERP information required under License Condition 9.4(d). The report shall include a summary of the daily walk-through inspections.</p>	<p>No U1 Comment</p>