AD-9D68

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LOST CREEK ISR, LLC

January 26, 2016

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Re: Reply to NRC's December 8, 2015 Letter Regarding Removing License Conditions, Lost Creek ISR Project License SUA-1598 (TAC J00717)

Dear Mr. Saxton,

On December 8, 2015 the NRC provided a response to a submittal provided by Lost Creek ISR, LLC ("LCI") on July 28, 2015. The NRC's response seeks additional information pertaining to how LCI will comply with license condition 12.10 A and 12.11. Toward that end, please find below LCI's responses to the NRC's Requests.

Request 1: Please provide a completed NRC Form 313 associated with the July 12, 2013, request.

Response 2: A completed NRC Form 313 is attached to this submittal.

Request 2: With Regard to LC 12.10, LCI has not justified its determination that only natural uranium, radon, and radon progeny are principal radionuclides which will be accounted for by surveys and/or monitoring from all point and diffuse sources.

Response 2: Pursuant to NRC's suggestion, the samples collected in the plant will be analyzed annually for isotopic analysis of uranium, thorium-230, radium-226, and lead 210 in addition to radon and radon progeny.

Request 3a: In the revised description of LCI's methodology, please address the mixtures of radionuclides likely to be present at the LCI Project, including, at a minimum, the radionuclide mixtures anticipated for lixiviant and for yellowcake.

Response 3a: The mixtures of isotopes in the lixiviant are detailed below, based on samples of Production Circuit fluid. Some of the concentrations are assumed to be 0 pCi/L, such as lead-214, until samples are analyzed for these isotopes, when doing so would be conservative, because they are high energy beta emitters. The greater the ratio of high energy beta emitters to low energy beta emitters the greater the beta efficiency of the instrument. Some concentrations of isotopes are

NMSS01

assumed to be in equilibrium, until samples are analyzed for these isotopes, when doing so would be conservative, such as for low energy beta emitters.

In Table 3a-1 and 3a-2 below, the concentration of some of the isotopes in the lixiviant are presented. More sampling and analyses of the lixiviant and other production fluids will be necessary to determine which mixture to use to determine instrument efficiency.

The sum of the concentrations of the presented alpha emitting isotopes results in 59,168 pCi/L, which is close to the Gross Alpha measurement of 60,600 pCi/L. This supports the argument that the isotopes analyzed are representative of the significant contributors (i.e. >1% of Gross) to the mixture.

Table 3a-1 – Lixiviant Alpha Emitting Radioisotopes

Radionuclides of Interest	Concentration (pCi/L)	% of Gross
Gross Alpha	60600	
Uranium	56461.8	93%
Thorium-230	0.7	0%
Radium-226	2700	4%
Polonium 210	4.1	0%
Radium-228	1.8	0%

The sum of the concentrations of the presented beta emitting isotopes is not close to the Gross Beta measurement. This suggests that there are more measurements that need to be made. However, Gross Beta measurements do not directly relate to the actually activity of the beta emitting isotopes. The Gross Beta measurement is calibrated using a strontium-90 source. The mixture of the sample being measured must be known to associate Gross Beta measurements to the true activity of isotopes present.

Table 3a-1 – Lixiviant Beta Emitting Radioisotopes

Radionuclides of Interest	Concentration (pCi/L)	% of Gross
Gross Beta	9400	
Lead-210	13.4	0%
Thorium-234	2290	24%

The information presented in Table 3a-3 below will be useful in evaluating the instruments MDC in response to the questions below. The concentrations in Table 3a-3 are the relevant beta emitting radionuclides. Radionuclides that emit both alpha and beta radiation are omitted from Table 3a-3. Radionuclides in the uranium-238 and uranium-235 decay chain are omitted if they are on a branching fraction with less than 1% frequency.

Table 3a-3 – Relevant Lixiviant Beta Emitters

Decay series	Beta Emitting Isotopes of Interest	Half-Life	Max Beta Energy (MeV)	Concentration (pCi/L)	Notes
U-238	Thorium-234	24 days	0.193	2290	measured concentration
U-238	Protactinium-234m	1 minute	2.29	2290	equilibrium assumed with Th-234
U-238	Lead-214	27 minutes	0.98	0	assumed 0 pCi/L
U-238	Bismuth-214	20 minutes	1.5	0	assumed 0 pCi/L
U-238	Lead-210	21 years	0.061	13.4	measured concentration
U-238	Bismuth-210	5 days	1.2	13.4	equilibrium assumed with Pb-210
U-235	Thorium-231	26 hours	0.39	1242	assumed equilibrium with U-235
U-235	Lead-211	36 minutes	1.38	0	assumed 0 pCi/L
U-235	Thallium-207	5 minutes	1.4	0	assumed 0 pCi/L

The mixture of radionuclides in aged yellowcake can be determined theoretically assuming, conservatively, that the immediate short half-life daughters of uranium were in equilibrium with the different isotopes of natural uranium. The fractions of the activity of natural uranium isotopes are as follows: 0.485 uranium-238, 0.485 uranium-234, and 0.022 uranium-235. Thus the activity fractions of the beta emitting daughters in equilibrium would be: 0.489 thorium-234, 0.489 protactinium-234m, and 0.022 thorium-231. It is interesting to note that the beta emitting daughters in aged yellowcake would have no more than the same activity as the uranium alpha emitters.

Request 3b: In the revised description of LCI's methodology, please account for surface efficiencies in the determination of counting efficiencies of LCI's instruments. As noted in a previous licensing action (NRC 2015b, c), NRC staff has previously endorsed the ISO 7503-1 (ISO 1988) approach for assigning default surface efficiencies based on particle type (i.e. alpha or beta) and energy.

Response 3b: LCI will apply default surface efficiencies as recommended in ISO 7503-1 (ISO 1988), see Table 3b below.

Table 3b– Default Surface Efficiencies

Type of Particle and Energy Range	Surface Efficiency
Beta ($E_{\beta max} > 0.4$ MeV)	0.5
Beta (0.15 MeV < $E_{\beta max} < 0.4$ MeV)	0.25
Alpha	0.25

Request 3c: In the revised description of LCI's methodology, please describe how surface contamination survey instruments are calibrated for detection of low-energy beta particles associated with short-lived uranium progeny and other low-energy beta emitting contaminants.

Response 3c: The following equation details how to calculate a beta counting efficiency for instruments based on energy dependent instrument efficiency and ratio of characterized source activities. The intent of the following equation is to provide a weighted efficiency for specific beta emissions based on their energy, and the summation of the weighted efficiencies will be the counting efficiency used for surveys.

$$\varepsilon_c = \sum F_{Activity} F_{Branching} \varepsilon_i \varepsilon_s$$

$$\varepsilon_c = Counting\ efficiency$$
$$F_{Activity} = Fraction\ of\ isotope's\ activity\ to\ total\ activity\ of\ characterized\ source;$$
$$F_{Branching} = Frequency\ of\ emmission\ for\ specific\ E_{\beta max}\ for\ specific\ isotope$$
$$\varepsilon_i = Instrument\ efficiency\ for\ calibration\ source\ with\ closest\ E_{\beta max}\ within\ acceptable\ category$$
$$\varepsilon_s = Surface\ efficiency\ for\ acceptable\ category$$
$$Categories\colon\ Low\ E_{\beta max} < 0.4\ MeV < \ High\ E_{\beta max}$$

Currently we do not have a carbon-14 calibration source to determine the instrument efficiency for low energy beta emitters. If we assumed that the efficiency for low energy beta emitters was 0 for now then we could determine a conservative counting efficiency. For aged yellowcake our counting efficiency with the Ludlum Model 43-93 would be approximately 0.120 for beta and 0.070 for alpha on the low side (there is some variably between individual survey meters). For the lixiviant mixture detailed above in Response 3a, the efficiency would be approximately 0.093 for beta and 0.070 for alpha. The conservative counting efficiency would come from the lixiviant concentrations. The counting efficiency calculations for beta emitters from this mixture is presented in Table 3c below.

Table 3c – Lixiviant Counting Efficiency

Isotope	Energy (MeV)	Activity Fraction	Branching Ratio	Instrument Efficiency	Surface Efficiency	Weighted Efficiency
Th-234	0.103	0.392	0.21	0	0	0
Th-234	0.193	0.392	0.79	0	0.25	0
Pa-234m	2290	0.392	0.98	0.48	0.5	0.0921984
Pb-214	0.67	0	0.48	0.48	0.5	0
Pb-214	0.73	0	0.42	0.48	0.5	0
Pb-214	1.03	0	0.06	0.48	0.5	0
Bi-214	1.42	0	0.083	0.48	0.5	0
Bi-214	1.51	0	0.176	0.48	0.5	0
Bi-214	1.54	0	0.179	0.48	0.5	0
Bi-214	3.27	0	0.177	0.48	0.5	0
Pb-210	0.016	0.002	0.8	0	0	0
Pb-210	0.063	0.002	0.02	0	0	0
Bi-210	1.161	0.002	1	0.48	0.5	0.00048
Th-231	0.205	0.212	0.15	0	0.25	0
Th-231	0.287	0.212	0.49	0	0.25	0
Th-231	0.304	0.212	0.35	0	0.25	0
Pb-211	0.26	0	0.048	0	0.25	0
Pb-211	0.97	0	0.014	0.48	0.5	0
Pb-211	1.39	0	0.929	0.48	0.5	0
Th-207	1.42	0	0.998	0.48	0.5	0
					Counting Efficiency:	0.093

Request 3d: In the revised description of LCI's methodology, please describe appropriate alpha and beta scan MDC equations in addition to alpha and beta static survey equations.

Response 3d: The following equation can be used for calculating the alpha scan MDC:

$$Alpha\ Scan\ MDC = \frac{60[-\ln(1 - P(n \geq 1))]}{\varepsilon_i \varepsilon_s t}$$

$$P(n \geq 1) = probability\ of\ detecting\ a\ single\ count\ based\ on\ equation\ 6-12\ of\ MARSSIM$$
$$\varepsilon_i = Instrument\ efficiency\ for\ calibration\ source\ with\ closest\ E_{\beta max}\ within\ acceptable\ category$$
$$\varepsilon_s = Surface\ efficiency\ for\ acceptable\ category$$
$$t = residence\ time$$

The following equation can be used for calculating the beta scan MDC (based on MARSSIM equation 6-10):

$$Beta - Gamma\ Scan\ MDC = \frac{MDCR}{\sqrt{p}\varepsilon_i\varepsilon_s \frac{probe\ area, cm^2}{100\ cm^2}}$$

$$MDCR = \text{minimum detectable count rate, determined using 6-8 and 6-9 of MARSSIM}$$
$$p = surveyor\ efficiency$$
$$\varepsilon_i = Instrument\ efficiency\ for\ calibration\ source\ with\ closest\ E_{\beta max}\ within\ acceptable\ category$$
$$\varepsilon_s = Surface\ efficiency\ for\ acceptable\ category$$

The following equation can be used for calculating the static measurement MDC, as presented in Table 3.1 of NUREG-1507 (NRC 1998) with consideration for probe or swipe area:

$$MDC = \frac{3 + 3.29\sqrt{R_b t_g (1 + t_g/t_b)}}{(counting\ efficiency)(t_g)\frac{probe\ or\ swipe\ area\ cm^2}{100\ cm^2}}$$

$$R_b = Background\ count\ rate$$
$$t_b = background\ counting\ time$$
$$t_g = gross\ counting\ time$$

Request 4: Using a revised methodology for calculating MDCs of survey instruments, please provide revised estimates of MDCs and demonstrate that appropriate LCI target levels and regulatory limits are met, in accordance with LC 12.11.

Response 4: The following calculations are based on survey instrument Ludlum Model 43-93 probe and Model 2360 meter. This instrument has lower efficiencies for alpha and beta radiation than either of the swipe counters used at Lost Creek. Also, it is easy to use longer count times and perform measurements in lower background areas when using a swipe counter. The instruments used at Lost Creek can satisfy the MDC's necessary. The MDC's are expected to improve as more sampling occurs to determine appropriate mixtures of radionuclides to use to calculate counting efficiencies.

The alpha scan MDC for the M43-93 is 282 dpm/100cm^2, and is calculated as follows:

$$Alpha\ Scan\ MDC = \frac{60[-\ln(1 - P(n \geq 1))]}{\varepsilon_i\varepsilon_s t}$$

$$P(n \geq 1) = 0.9$$
$$\varepsilon_i \times \varepsilon_s = 0.07\ (see\ Response\ 3c\ above)$$
$$t = 7\ seconds\ (7cm\ width\ at\ a\ scan\ rate\ of\ 1\frac{cm}{s})$$

To calculate the MDCR a scan speed of 1 cm/s was used with the width of the probe being 7 cm. This results in a scan interval of 7 seconds. Using a false positive rate of 0.60 (60%) and a true positive proportion of 0.95 (95%), and a background count rate of 158 the MDCR was calculated to be 51 cpm. The beta scan MDC for the M43-93 is 881 dpm/100cm^2. The highest background count rate acceptable for the rest of the conditions remaining the same would be 205 cpm and would result in an MDC of 1000 dpm/100cm^2. The MDCR calculation would be as follows:

$$Beta - Gamma\ Scan\ MDC = \frac{MDCR}{\sqrt{p}\varepsilon_i\varepsilon_s \frac{probe\ area, cm^2}{100\ cm^2}}$$

$$MDCR = 51\text{ cpm (determined using 6-8 and 6-9 of NUREG 1575)}$$
$$p = 0.5\ (conservative\ estimate)$$
$$\varepsilon_i \times \varepsilon_s = 0.093\ (see\ Response\ 3c\ above)$$
$$probe\ area = 88\ cm^2$$

The alpha static measurement MDC for the M43-93 is 314 dpm/100cm^2, and is calculated as follows:

$$MDC = \frac{3 + 3.29\sqrt{R_b t_g(1 + t_g/t_b)}}{(counting\ efficiency)(t_g)\frac{probe\ or\ swipe\ area\ cm^2}{100\ cm^2}}$$

$$R_b = 9\ cpm$$
$$t_b = 0.8\ min$$
$$t_g = 0.8\ min$$
$$\varepsilon_{counting} = \varepsilon_i \times \varepsilon_s = 0.07\ (see\ Response\ 3c\ above)$$
$$probe\ area = 88\ cm^2$$

The beta static measurement MDC for the M43-93 is 884 dpm/100cm^2, and is calculated as follows:

$$MDC = \frac{3 + 3.29\sqrt{R_b t_g(1 + t_g/t_b)}}{(counting\ efficiency)(t_g)\frac{probe\ or\ swipe\ area\ cm^2}{100\ cm^2}}$$

$$R_b = 198\ cpm$$
$$t_b = 0.8\ min$$
$$t_g = 0.8\ min$$
$$\varepsilon_{counting} = 0.093\ (see\ Response\ 3c\ above)$$
$$probe\ area = 88\ cm^2$$

Request 5: Please identify the important parameters in calculating MDCs which should be controlled by procedure (e.g., residence time), and commit to including these parameters in appropriate procedures and training programs.

Response 5: Important parameters for use of instruments that need to be controlled are residence time, background count rate, and source to detector window distance. These parameters are incorporated in the MDC calculations and must be the same during use of the instrument or more conservative. More conservative would be longer residence time, lower background count rate, and less distance between the source and detector window. LCI commits to including these parameters in appropriate procedures and training programs.

Sincerely,

Chris Pedersen
Corporate Radiation Safety Officer

Cc: Deputy Director, Division of Decommissioning
Uranium Recovery and Waste Programs
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Mail Stop T-8F5
11545 Rockville Pike, Two White Flint North
Rockville, MD 20852-2738
Theresa Horne, Ur-Energy, Littleton
Mr. John Saxton, NRC (via email)

NRC FORM 313 (01-2016) 10 CFR 30, 32, 33, 34 35, 36, 37, 39, and 40

U.S. NUCLEAR REGULATORY COMMISSION

APPLICATION FOR MATERIALS LICENSE

APPROVED BY OMB: NO. 3150-0120 **EXPIRES: 01/31/2016**

Estimated burden per response to comply with this mandatory collection request: 4.3 hours. Submittal of the application is necessary to determine that the applicant is qualified and that adequate procedures exist to protect the public health and safety. Send comments regarding burden estimate to the FOIA, Privacy, and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0120), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW. *AMENDMENTS/RENEWALS THAT INCREASE THE SCOPE OF THE EXISTING LICENSE TO A NEW OR HIGHER FEE CATEGORY WILL REQUIRE A FEE.

APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:

MATERIALS SAFETY LICENSING BRANCH
DIVISION OF MATERIAL SAFETY, STATE, TRIBAL AND RULEMAKING PROGRAMS
OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS
U.S. NUCLEAR REGULATORY COMMISSION
WASHINGTON, DC 20555-0001

ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:

IF YOU ARE LOCATED IN:

ALABAMA, CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, FLORIDA, GEORGIA, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, NORTH CAROLINA, PENNSYLVANIA, PUERTO RICO, RHODE ISLAND, SOUTH CAROLINA, TENNESSEE, VERMONT, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA,

SEND APPLICATIONS TO:

LICENSING ASSISTANCE TEAM
DIVISION OF NUCLEAR MATERIALS SAFETY
U.S. NUCLEAR REGULATORY COMMISSION, REGION I
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PA 19406-2713

IF YOU ARE LOCATED IN:

ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND APPLICATIONS TO:

MATERIALS LICENSING BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, IL 60532-4352

ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MISSISSIPPI, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH, WASHINGTON, OR WYOMING,

SEND APPLICATIONS TO:

NUCLEAR MATERIALS LICENSING BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
1600 E. LAMAR BOULEVARD
ARLINGTON, TX 76011-4511

PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S.NUCLEAR REGULATORY COMMISSION JURISDICTIONS.

1. THIS IS AN APPLICATION FOR *(Check appropriate item)*
   - [ ] A. NEW LICENSE
   - [x] B. AMENDMENT TO LICENSE NUMBER SUA-1598
   - [ ] C. RENEWAL OF LICENSE NUMBER

2. NAME AND MAILING ADDRESS OF APPLICANT *(Include ZIP code)*

Lost Creek ISR, LLC
5880 Enterprise Drive, Suite 200
Casper, WY 82609

3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

3424 Wamsutter-Crooks Gap Road, Approximately 15 miles southwest of Bairoil, WY

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

John W. Cash

BUSINESS TELEPHONE NUMBER	BUSINESS CELLULAR TELEPHONE NUMBER
(307) 265-2373	(307) 267-7003

BUSINESS EMAIL ADDRESS

john.cash@ur-energy.com

SUBMIT ITEMS 5 THROUGH 11 ON 8-1/2 X 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

5. RADIOACTIVE MATERIAL
   a. Element and mass number; b. chemical and/or physical form; and c. maximum amount which will be possessed at any one time.
6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.
7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE.
8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS.
9. FACILITIES AND EQUIPMENT.
10. RADIATION SAFETY PROGRAM.
11. WASTE MANAGEMENT.
12. LICENSE FEES (Fees required only for new applications, with few exceptions*) *(*See 10 CFR 170 and Section 170.31)*

FEE CATEGORY 2A(2) AMOUNT ENCLOSED $ N/A

13. CERTIFICATION. *(Must be completed by applicant) THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.*

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, 36, 37, 39, AND 40, AND THAT ALL INFORMATION CONTANED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.

WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 62 STAT. 749 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

CERTIFYING OFFICER – TYPED/PRINTED NAME AND TITLE	SIGNATURE	DATE
John W. Cash, Vice President	John W Cash	1/26/2016

FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS
			$		
APPROVED BY				DATE	

ATTACHMENT TO NRC FORM 313, "APPLICATION FOR MATERIAL LICENSE"

LOST CREEK ISR, LLC APPLICATION

Request to Remove Pre-Operational License Conditions 12.10, 11 and 12

3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

The Project location includes portions or the entirety of Sections 13 and 23 to 26 of Township 25 North, Range 93 West, and Sections 1 to 3, 10 to12, 14 to 23 and 27 to 31 of Township 25 North, Range 92 West. The physical address used by emergency responders is 3424 Wamsutter Crooks Gap Rd. Approximately 15 miles southwest of Bairoil, Wyoming in Sweetwater County.

5. RADIOACTIVE MATERIAL

a. Natural Uranium (U-238, 235 and 234) in any chemical or physical form and in unlimited quantities.
b. Byproduct material as defined in 10 CFR 40.4 in unspecified form and in quantities generated under operations by the license.

6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED

See Sections 1.0 and 1.1 of the original Technical Report submitted in October 2007.

7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE

See Sections 5.1.5, 5.1.5.1, 5.4.3 and 5.4.3.1 of the original Technical Report submitted in October 2007.

8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS

See Section 5.5 of the original Technical Report submitted in October 2007.

9. FACILITIES AND EQUIPMENT

See the original Technical Report submitted in October 2007 as well as submittals dated July 12, 2013 (ADAMS Accession Number ML13282A381), November 15, 2013 (ADAMS Accession Number ML13324A962), January 16, 2015 (ADAMS Accession Number ML15029A423), and July 28, 2015 (ADAMS Accession Number ML15218A055).

10. RADIATION SAFETY PROGRAM

See Section 5 in its entirety in the original Technical Report submitted in October 2007. Also see submittals dated July 12, 2013 (ADAMS Accession Number ML13282A381), November 15, 2013 (ADAMS Accession Number ML13324A962), January 16, 2015 (ADAMS Accession Number ML15029A423), and July 28, 2015 (ADAMS Accession Number ML15218A055).

11. WASTE MANAGEMENT

See Sections 4.2 thru 4.3.2 in the original Technical Report submitted in October 2007.

12. LICENSE FEES

The Fee Category is 2A(2) in accordance with 10 CFR 170.31. Since 2A(2) is a Full Cost Category, the NRC will invoice Lost Creek ISR, LLC to recover the cost of reviewing the amendment application.