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LOST CREEK ISR, LLC

40-9068

December 7, 2017

ATTN: Document Control Desk
Nuclear Regulatory Commission
Washington, D.C. 20555-001

RE: 60-day Excursion Report for KPW2
Lost Creek ISR Project PT788

To Whom It May Concern,

In accordance with License Condition 11.5, this letter serves as the 60-day report for the excursion at the Lost Creek ISR Project for monitor well KPW2. This report declares the excursion corrected and provides the following information:

Description of the Excursion Event
A vertical excursion occurred at KPW2 associated with the HH1-6 area shown on attached figure "Header House 1-6 Patterns and Wells". The well, located just to the east of HH1-6, allows monitoring of the KM horizon which underlies the HJ mining horizon. The analysis of a sample collected from KPW2 on September 28, 2017 revealed elevated alkalinity and conductivity that exceeded the UCL (NRC criteria) values indicating a potential excursion. A confirmation sample was collected on October 8, 2017 resulting in a declaration of excursion via notification letter dated October 13, 2017. The excursion declaration was the result of two parameters exceeding the associated UCL albeit not by more than the 20% threshold.

The cause or source of the excursion is not known but several courses of action were taken to recover the water quality in the area of KPW2.

Corrective Actions Taken
As described in the initial notification, injection was halted in accordance with License Condition 10.10 by shutting off the following injection wells within a 150 foot radius of KPW2: 1I150, 1I153, 1I161, 1I162, 1I171, 1I301A, 1I303, 1I304, 1I305A, 1I306, 1I307, 1I525, 1I527, 1P153I. A single production well 1P152 initially remained in operation in the vicinity to provide drawdown.

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Additionally, during the corrective action period, the following actions occurred:

- Sampling of KPW2 was increased to weekly during the excursion.
- Additional injection up to a 200 foot radius was halted that included wells 1I146, 1I164, 1I285, 1I286, and 1I526.
- Pumping was switched to other production wells on an individual basis to determine if drawdown was occurring at KPW2 in an attempt to locate and isolate the source of excursion. The following production wells were operated periodically on an individual basis (i.e. the production well was shut off and another was started): 1P152, 1P154B, 1P078A, 1P151, 1P150. No effect on KPW2 water levels were observed during the pumping.
- Additional injection wells within the 200 foot radius, associated with the adjacent HH1-7 area, were halted including wells 1I281, 1I288, 1I302, and 1I328A (see attached figure "HH1-7 Patterns and Wells"). Following this action, water levels in KPW2 slightly decreased and the water quality immediately was affected. The water quality was then restored to non-excursion status relatively quickly.

Corrective Action Results

The excursion was corrected as shown by the water quality (**Table 1**).

TABLE 1: KPW2 UCL Data

Sample ID	Collection Date	Span	Alkalinity (mg/L)			Chloride (mg/L)			Sp. Cond. (µS/cm)		
			Assay	NRC UCL	% Diff	Assay	NRC UCL	% Diff	Assay	NRC UCL	% Diff
KPW2	9/18/2017	24	130	136	-5	14.7	21	-30	597	615	-3
KPW2	9/28/2017	10	144	136	*6*	19.2	21	-9	662	615	*8*
KPW2	10/8/2017	10	143	136	*5*	20.0	21	-5	648	615	*5*
KPW2	10/12/2017	4	137	136	*1*	21.1	21	0	654	615	*6*
KPW2	10/17/2017	5	139	136	*2*	17.7	21	-16	652	615	*6*
KPW2	10/26/2017	9	141	136	*3*	16.3	21	-22	642	615	*4*
KPW2	11/2/2017	7	140	136	*3*	20.6	21	-2	652	615	*6*
KPW2	11/10/2017	8	154	136	*13*	21.6	21	*3*	686	615	*12*
KPW2	11/14/2017	4	151	136	*11*	18.9	21	-10	689	615	*12*
KPW2	11/20/2017	6	153	136	*13*	22.0	21	*5*	676	615	*10*
KPW2	11/22/2017	2	124	136	-9	9.0	21	-57	541	615	-12
KPW2	11/27/2017	5	115	136	-15	7.9	21	-62	522	615	-15
KPW2	12/6/2017	9	122	136	-10	8.2	21	-61	539	615	-12

Italics (yellow highlight): Percent difference is between 0% and 20%
Bold Italics *(red highlight): Percent difference is greater than 20%*

The sampling of KPW2 will revert to the routine schedule now that the excursion has been corrected. Water quality through December will be provided in the quarterly excursion report.

Please contact me at the Casper office if you have any questions regarding this submittal.

Regards,

Michael D. Gaither
Manager EHS and Regulatory Affairs
Ur-Energy USA, Inc.

Attachments: 2 figures as stated

Cc: Deputy Director, Division of Decommissioning, Uranium Recovery and Waste Programs
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U.S. Nuclear Regulatory Commission
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John Saxton, NRC Project Manager (via email)
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Header House 1-6 Patterns and Wells

HH1-7

HH1-6

HH1-6

KPW2

MO-107
MU-107

MP-106
MO-106

MO-108
MP-108
MU-108

MU-109
MP-109
MO-109

- Header House Boundary
- Header House Location
- Pattern Boundary
- Injection Well
- Production Well
- Interior Monitor Well
- I to P Communication

Header House 1-7 Patterns and Wells

- Header House Boundary
- Header House Location
- Pattern Boundary
- Injection Well
- Production Well
- Interior Monitor Well
- Injector to Producer Communication

0 75.00 feet

Scale: 1:893.8

N

HH1-7

HH1-8

HH1-6

KPW2

1I331 1I594 1I595 1I264 1I265 1I266 1I267 1P171 1P291 1P284 1P133 1P134A 1I399 1I334 1P135 1I268 1I269 1I178 1I179 1I180 1I270 1P210 1I272 1I398 MP-107 MO-107 MU-107 1P292I 1P094A 1P093A 1P138 1P137 1P136 1I397 1I278 1I273A 1I274 1I277 1I276 1I599 1P140 1I279 1I290 1I294 1I598 1I281 1P293 1P314 1I280A 1P200 1I289 1I287 1I293 1P142 1P143 1I288 1I297 1P148 1P147 1P144 1I296 1P286I 1I396 1P146 1I298 1I295 1I299 1P145 1I304 1I328A 1I302

HJMP-105

M-M8 M-L5 MP-106 MU-106 MO-106

MO-108 MP-108