

April 9, 2012

Sent via Certified Mail

Attn: Document Control Desk
U.S. Nuclear Regulatory Commission
Mr. Keith I. McConnell, Deputy Director
Decommissioning & Uranium Recovery Licensing Directorate
Division of Waste Management & Environmental Protection
Office of Federal and State Materials &
Environmental Management Programs
11545 Rockville Pike
Rockville, MD 20852-2738

**RE: License SUA-1341, Docket No. 40-8502
Willow Creek ISR Project
Notification of Excursion - Monitor Wells 5AH57-1 and 5AV46-1**

Dear Mr. McConnell:

In accordance with License Conditions 12.2 and 9.2 of the referenced license, this letter serves as the written notification of the confirmed Excursion status for Monitor Wells 5AH57-1 and 5AV46-1 which was reported to you by email on April 3, 2012. Both of these wells are located in the south western portion of restored Mine Unit (MU) 5 wellfield area where uranium production activities recently resumed in the MU 5-2 wellfield (Section 20 of Township 44 N, Range 76 W in Campbell County, Wyoming). Both wells are actually historic injection wells that were put into service as monitor wells for the MU 5-2 activities. Well 5AH57-1 is located in the MU 5-1 area. Well 5AV46-1 is located in the MU 5-3 area. Both wells are used to monitor the Production Zone for uranium recovery operations in the MU 5-2 area.

Monitor Well 5AH57-1

The routine biweekly sample of Well 5AH57-1 exceeded all three Upper Control Limits (UCLs) on March 29, 2012. A second confirmation sample was taken on April 2, 2012. It should be noted that the time between the initial sample and the confirmation sample was due to the work schedule at Willow Creek, which is Monday through Thursday. The confirmation sample exceeded two of the UCLs, which confirmed the Excursion status. The results for uranium concentration for the samples were 10.9 and 8.6 mg/L respectively. In accordance with license requirements, the sampling frequency has been

increased to weekly, and will continue until 3 consecutive weekly samples indicate that not more than one UCL is exceeded.

The Corrective Action implemented to address this condition is an increase in the net bleed from the area and to change the location of the production and injection wells. This was implemented soon after the Excursion conditions were determined. It is expected that the response in the area will be fairly rapid, although the fact that the area has been mined and restored could have created some unanticipated conditions, such as the occurrence of a higher permeability zone. Additionally, when the 5-2 area was first started, considerably more bleed (more production than injection) than normal was taken to assist in cleaning up the quality of water produced to aid the IX process. This may have caused the restored groundwater near this well to change composition. The effects of the Corrective Actions will be monitored and modified as required to correct the Excursion as quickly as possible

Monitor Well 5AV46-1

The routine biweekly sample of Well 5AV46-1 exceeded two of the Upper Control Limits (UCLs) on March 29, 2012. A second confirmation sample was taken on April 2, 2012. It should be noted that the time between the initial sample and the confirmation sample was due to the work schedule at Willow Creek, which is Monday through Thursday. This sample only exceeded one of the UCLs. An additional confirmation sample was taken on April 3, 2012. This sample exceeded two UCLs, which confirmed the Excursion status. The results for uranium concentration for the samples were 13.7, 12.2 and 12.4 mg/L respectively. In accordance with license requirements, the sampling frequency has been increased to weekly, and will continue until 3 consecutive weekly samples indicate that no more than one UCL is exceeded.

As with Well 5AH57-1, the Corrective Action implemented to address this condition is an increase in the net bleed from the area and to change the location of the production and injection wells. This was implemented soon after the Excursion conditions were determined. It is expected that the response in the area will be fairly rapid, although the fact that the area has been mined and restored could have created some unanticipated conditions, such as the occurrence of a higher permeability zone. Additionally, when the 5-2 area was first started, considerably more bleed (more production than injection) than normal was taken to assist in cleaning up the quality of water produced to aid the IX process. This may have caused the restored groundwater near this well to change composition. The effects of the Corrective Actions will be monitored and modified as required to correct the Excursion as quickly as possible

The attached tables provide the analytical data for the samples which confirmed the Excursion status of Monitor Wells 5AH57-1 and 5AV46-1.

Please contact me if you have any questions regarding this notification.

Sincerely,



Tim McCullough
Manager Site SHE

cc: Bill Kearney
Larry Arbogast
Rick Kukura
Barry Koch
Blair Spitzberg, NRC
Ron Linton, NRC
Linda Gersey, NRC

**URANIUM ONE
CHRISTENSEN RANCH
MINE UNIT 5
MONITOR WELL 5AV46-1**

SAMPLE DATE	CHLORIDE (UCL 33.3mg/l)	CONDUCTIVITY (UCL 1263 µmhos/cm)	ALKALINITY (UCL 424.4 mg/l)	pH	WATER LEVEL	U₃O₈ ppm
11/28/2011	16.8	976	322.7	7.3		5.4
12/6/2011	16.2	1018	313.4	7.3		5.0
12/14/2011	18.0	969	339.0	7.2		4.9
12/19/2011	19.2	1070	343.4	7.2		7.1
12/27/2011	22	1101	368	7.2		8.1
1/5/2012	18.0	1015	330	6.9		7.4
1/18/2012	18	1000	323.5	7.1		6.4
2/1/2012	22.3	1012	410.7	7.3		6.9
2/16/2012	17.3	961	308	7.6	4453.6	6.1
2/29/2012	18.5	893	284.4	7.4	4449.3	
3/13/2012	19.7	1005	315	7.4	4456.4	
3/29/2012	33.3	1450	459.8	7.6	4425.5	13.7
4/2/2012	26	1320	386.3	7.3	4435.5	12.2
4/3/2012	31.6	1373	459.9	7.4	4419.1	12.4