

December 28, 2015

Attn: Document Control Desk  
U.S. Nuclear Regulatory Commission  
Mr. Drew Persinko, 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

**Subject: License SUA-1341, Docket No. 40-8502  
Willow Creek Project  
December 7, 2015  
Module 2-4 Production Fluid Release from Restored Mine Unit 2  
Christensen Ranch Mine Unit 2**

Dear Mr. Persinko:

In accordance with License Conditions 12.2 and 9.2 of the referenced license, this correspondence serves as the written notification for a release of ISR injection fluid at the Mine Unit 8 wellfield area well number U187-1 at the Willow Creek Project (Christensen Ranch) located in Johnson County. The spill occurred on December 7, 2015. The release was reported by phone to the NRC Project Manager, Region IV personnel and WDEQ on December 8, 2015.

The details of the release are included on the attached Spill Report Summary along with a map of the location. Note that there were no significant impacts to the public, environment, wildlife or livestock.

Please contact me should you have any questions regarding this report.

Sincerely,



Scott Schierman  
HSE Manager/RSO

cc: Rick Kukura

**Uranium One USA, Inc. - Willow Creek Project  
Spill Report Summary  
Module Building 2-4 Production Fluid Release**

**Date and Estimated Time (beginning & end)**

From: 5 December, 2015, 9 p.m.

To: 7 December, 2015, 8 a.m.

**Location**

Christensen Ranch Mine Unit 2

Module 2-4

Section 6, Township 44N, Range 76W

Johnson County, Wyoming

(See attached map for detailed location)

**Spill Type**

Low grade ISR production fluid from restored Mine Unit 2 wellfield.

**Estimated Volume Released**

Spilled: Approximately 2,100 gallons of ISR production fluid was released into Module Building 2-4 and it overflowed onto the surrounding soil.

**Estimated Volume Recovered**

No fluid was recovered as the release quickly soaked into the soil.

**Spill Analysis Results**

A small volume of the released fluid was obtained on 7 December, 2015 and submitted to the Willow Creek on site lab for analysis. The results were as follows:

Uranium	3.3 ppm
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**Impacts**

The release followed the existing grade and ended in a two track road, approximately 80 feet away (see attached photos and map). It is estimated that 765 square feet (0.0178 acres) of soil was impacted. No wildlife, livestock, or surface water was affected. No significant erosion resulted from the spill.

**Soil Surveys & Analysis Results**

Soil samples both inside the building and the estimated effected area were collected and are available for analysis. Gamma survey results taken at the spill area indicate that soil contamination is minimal and sampling and cleanup will not be required.

**Remediation Actions**

Due to the limited extent of the release, no remediation is anticipated at this time.

### **Explanation of the Root Cause**

On Thursday, December 3<sup>rd</sup>, all excursion control wells were shut down throughout MU-2 due to a deep-disposal well problem. Normally, when the well is turned off, the sample ports are opened to allow pressure equalization. The sample ports are then closed after the well is turned back on manually.

On Friday, December 4<sup>th</sup>, the day-shift operator checked the Module 2-4 building after a visual alarm was noticed during routine duties. One well was found to be on with the sample port open. The port was closed and all other buildings in the mine unit were checked and all wells were found to be off. No water had left the building.

On Monday, December 7<sup>th</sup>, after shift change, a day-shift operator found water leaking out of MU 2-4 building. He found that a production well that had turned on with the sample port still open. He closed the open sample port and made notifications. He investigated all the MU 2 wells and found 2 other wells running with open sample ports but no water had left those buildings.

It has been determined that when the Module 2-4 excursion control wells were turned off initially on December 3<sup>rd</sup>, the stop button had not been fully engaged. This allowed the start/stop switch to revert to the ON position causing the release through the open sample port.

### **Corrective Actions**

In order to ensure that this does not occur again, production wells that utilize the older style start/stop switches will have the sample port closed after the well is stopped and the excess pressure is bled off. With this change, even if the stop is not fully engaged and the well starts, it will pump back into the production trunk line and not into the module building. As a secondary precaution if modular buildings are being shut down and not in use the circuit breaker for the building will be thrown to eliminate power to the module unit. Site is actively visiting with each operator to make sure they understand the Standard Operating Procedures.

### **Agency Reporting**

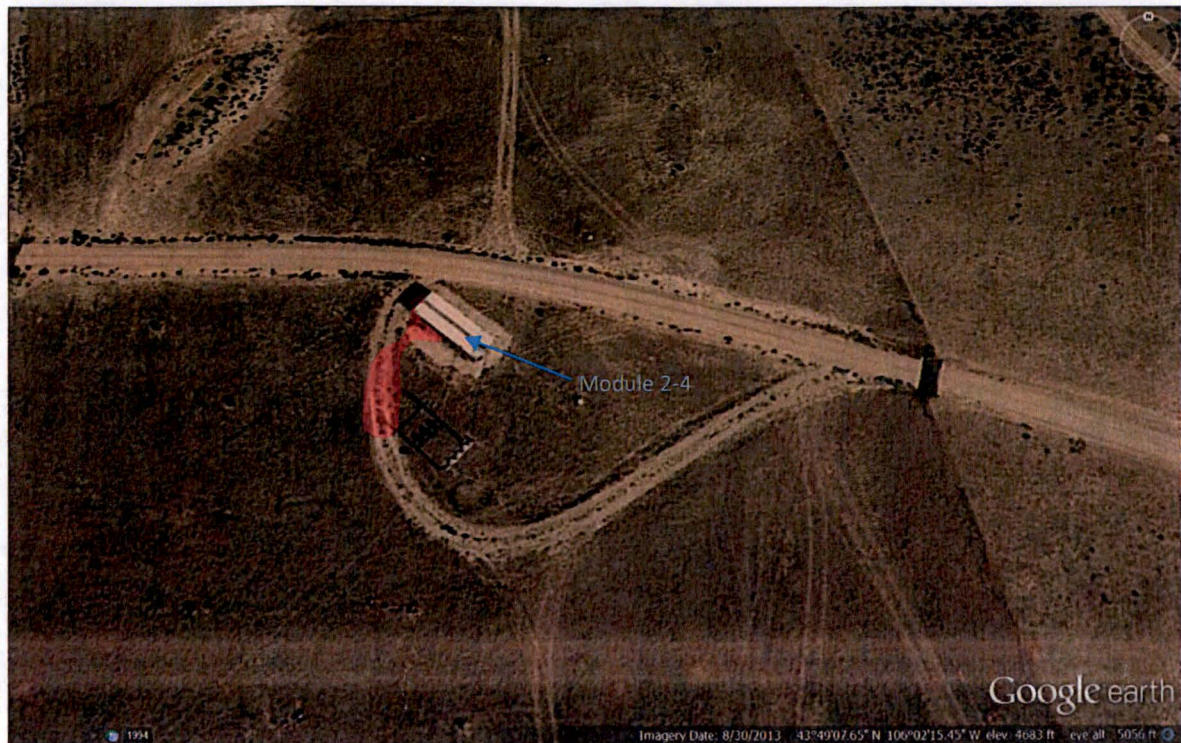
WDEQ: Luke McMahan - Permit Coordinator; December 8, 2015 (phone call)  
Joe Hunter – Spill Coordinator; December 8, 2015, 2014 (phone message)

NRC: Ray Kellar- Region IV Branch Chief; December 8, 2015 (phone message)  
Ron Linton - Project Manager; December 8, 2015 (phone message)  
Linda Gersey – Health Physicist, Region IV; December 8, 2015 (phone call)

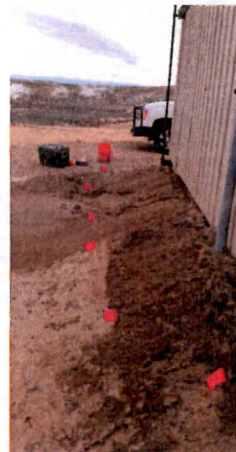
### **Map of Spill Location and Impacted Area**

Attached

The location and estimated extent of the spill outside the building is shown as light red.



Looking northwest along road. Flags show uR meter locations.



Looking north along west side of building.  
Flags show uR meter locations.