



# Department of Environmental Quality

To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.



Matt Mead, Governor

Todd Parfitt, Director

June 6, 2013

Mr. John Cash – VP Regulatory Affairs  
Exploration and Geology  
Lost Creek ISR, LLC  
5880 Enterprise Drive, Suite 200  
Casper, WY 82609

Re: **Lost Creek ISR LLC, Permit 788, Class 3 UIC Well Acceptance for Mine Unit 1 (MU1), Header House 1 (HH1)**

Dear Mr. Cash:

LQD is in receipt of Lost Creek ISR's Notice of Completion of Construction for Class 3 wells in MU1-HH1 at the Lost Creek ISR Project. The Notice was hand-delivered by you, during my onsite Inspection of the wells covered by that Notice, on June 6, 2013. The enclosed Inspection Memorandum summarizes the findings of that Inspection, which included a field checking of randomly selected wells and a records review.

Based upon the field inspection and records review of the 62 wells that were covered in the above-referenced Notice, all wells except one were found to be acceptable. Specifically, the well identified as MP-112 was found to have undergone Mechanical Integrity Testing (MIT) at a pressure lower than specified by the Permit.

In light of the unacceptable MIT pressure for MP-112, the certification of MP-112 is not accepted by the LQD. **All well certifications indicated in the above-referenced Notice (except for MP-112) are hereby accepted by the Land Quality Division (LQD) as being in compliance with the approved Operations Plan and LQD Noncoal Rules and Regulations Chapter 11, Section 11(b).**

Lost Creek ISR may commence initial circulation operations with the 61 specified wells within MU1-HH1, in accordance with the Operations Plan for Permit 788. Until the Nuclear Regulatory Commission (NRC) completes their late-June 2013 Inspection of the Lost Creek Project and authorizes (in writing) the injection of mining fluids (lixiviant) into MU1, only water may be circulated in MU1-HH1. Upon NRC approval, however, MU1-HH1 is authorized by LQD for commencement of ISR operations in accordance with LQD Permit 788. If there are any questions regarding this letter or its enclosures, please contact Melissa Bautz in the Lander Land Quality Division office at (307) 332-3047.

Sincerely,

Melissa L. Bautz, P.G.  
Natural Resources Analyst  
Land Quality Division - District 2 (Lander)

Enclosure 5-page Inspection Memorandum  
MLB:mlb

cc: Mark Newman – BLM – P. O. Box 2407, Rawlins, WY 82301  
John Saxton – US Nuclear Regulatory Commission – Federal and State Materials and Environmental Management Programs – Uranium Recovery Licensing Branch, Mail Stop T-8F5, Washington, D.C. 20555-0001  
Mark Moxley - WDEQ-LQD, District II → Permit 788 Inspection File  
LQD Cheyenne → Permit 788 Inspection File  
Chron

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WATER QUALITY  
(307) 332-3144  
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**Wyoming Department of Environmental Quality (WDEQ)- Land Quality Division (LQD)**  
**Inspection Memorandum**

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File: Lost Creek ISR, LLC – Permit 788

Date of Inspection: June 5, 2013

Date of Report: June 6, 2013 *MLB*

Participants: Steve Loose, Lost Creek ISR/Ur-Energy  
Mike Lueders, Mine Manager, Lost Creek ISR/Ur-Energy  
Melissa Bautz, WDEQ-Land Quality Division, Geologist

Report Prepared by: Melissa Bautz – WDEQ-Land Quality Division, Geologist

Subject: Inspection of UIC Class 3 Wells – Mine Unit 1, Header House 1

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***Introduction***

An Inspection of the 62 Class 3 (UIC) Wells in Mine Unit 1 (MU1) Header House 1 (HH1) was conducted on June 5, 2013 in response to Lost Creek ISR's submittal of a Notice of Completion for those wells (via hand-delivered letter dated June 5, 2013). The Inspection included a field check of randomly selected wells and a records review.

Lost Creek ISR's submittal of the Notice of Completion is in accordance with Noncoal Rules and Regulations Chapter 11, Section 11(b). During the Inspection, LQD followed the guidance provided in Guideline 4, Reference Document 8. Additionally, Permit-specific commitments were also considered during this Inspection (E.g. required MIT pressures, required Well Casing specifications, et cetera) The applicable portions of the Lost Creek Permit 788 for Well Construction specifications are Sections OP-3.3 and OP-3.4 of the Operations Plan, Volume 5.

***Field Inspection***

Six wells were randomly selected for field inspection. They were inspected for cover and casing integrity, presence of leak detection, and location concerns. The table below summarizes the inspection results.

**Table 1.** Summary table of Class 3 wells inspected on June 5, 2013

<b>Well ID</b>	<b>Well Cover</b>	<b>Well Casing</b>	<b>Leak Detection</b>	<b>Well Location</b>
1I-125	Good	Good	*Installed	OK
1P-62	Good	Good	*Installed	OK
1I-118	Good	Good	*Installed	OK
1I-106	Good	Good	*Installed	†Drainage, OK
1I-194	Good	Good	*Installed	OK
1I-135	Good	Good	*Installed	OK

†A leak detection float valve was present on all wells. However, the polyurethane foam (PUF) had not yet been applied to the base of the well cover. This was scheduled to occur within the week. The application of PUF to the gaps in the bottom of the well's cover, however, is not a Class 3 UIC concern. Rather, it is a permit commitment.

The location of Well 1I-106 is on an “island” of elevated ground between a bifurcation in the drainage west of Header House 1. There are currently no concerns with this location, as there is no evidence of surface water flow at the location of the well head. However, it will be monitored over time.

As indicated in Table 1 above, all six wells that were inspected were acceptable. The wells that were inspected are representative of the other wells in the Header House 1 area.

**Records Review**

Each well has the following three (3) records associated with it: Casing Record, Completion Record, and MIT Record. The spreadsheet submitted with the Notice summarizes pertinent information from each of those three Records for each well. During the onsite records review, six (6) wells were randomly chosen for a detailed records inspection. This involved detailed review of each of the above-referenced three records for each well. Results of the records review are tabulated below.

**Table 2.** Summary of Class 3 Wells whose records were thoroughly reviewed on June 5, 2013

Well ID	Casing Record	Completion Record	MIT Record
1I-112	OK	OK	OK (PSI=160), Pass
1I-125	OK	OK	OK (PSI=159), Pass
1P-062	OK	OK	OK (PSI=160), Pass
MP-112	***On file	OK	***Inadequate pressure (PSI=100), Pass
1I-114	OK	OK	OK (PSI=159), Pass
1P-053A	OK	OK	OK (PSI=160), Pass

\*\*\*The minimum required pressure for MIT’s for Injection (Class 3) Wells is 142 psi (Section OP 3.4 of Volume 5 of Permit 788, Operations Plan).

\*\*\*Well MP-112 was constructed in 2008 as a monitoring well. Its casing record is on file in Permit 788. This well’s MIT was conducted at 100 psi when it was still being considered to be a monitoring well. Since then, LCI would like MP-112 to be an Injection Well. Its mechanical integrity will need to be re-tested at 142 psi or higher before it can be reconsidered for Approval.

**Summary**

Based upon the field inspection and records review of the 62 wells that were covered in the above-referenced Notice, all wells except MP-112 were found to be acceptable.

W/Photo Addendum (Pages 3 – 5)

\*\*\*\*\*END OF MEMORANDUM\*\*\*\*\*

**Photo Addendum to accompany the June 5, 2013 MU1 – HH1 Class 3 UIC Well Inspection Permit 788**



**Photo Number 1: This depicts the outside of Header House 1.**



**Photo Number 2: This depicts one side of the Injection Well manifolds in Header House 1.**

**Photo Addendum to accompany the June 5, 2013 MU1 – HH1 Class 3 UIC Well Inspection Permit 788 cont'd**



**Photo Number 3: Well cover over a well in MU1 - Header House 1.**



**Photo Number 4: This depicts the inside of one of the Header House 1 well covers.**

**Photo Addendum to accompany the June 5, 2013 MU1 – HH1 Class 3 UIC Well Inspection Permit 788 cont'd**



**Photo Number 5: This is a panoramic view looking generally to the west at the bifurcated drainage in which Well 1I-106 is located.**



**Photo Number 6: This is a closer view of Well 1I-106 (depicted in the panoramic photo, above). The two blue lines indicate the two drainage channels that go around the well.**