COLORADO OFFICE
10758 W. CENTENNIAL RD., STE. 200
LITTLETON, CO 80127
TEL: (866) 981-4588
FAX: (720)-981-5643

WYOMING OFFICE
5880 ENTERPRISE DR., STE. 200
CASPER, WY 82609
TEL: (307) 265-2373
FAX: (307) 265-2801

LOST CREEK ISR, LLC

July 30, 2014

UIC Program Supervisor
WDEQ – Water Quality Division
Herschler Building – 4W
122 W. 25th Street
Cheyenne, WY 82002

RE: Quarterly Report for 2nd Quarter 2014
UIC Class I Permit 13-409
Lost Creek ISR Project, Sweetwater County, WY

Dear Program Supervisor,

This Quarterly Report for the Lost Creek ISR Project has been submitted in accordance with the requirements of Class I Underground Injection Control (UIC) Permit 13-409 Section K. The reporting period for this Quarterly Report is the 2nd calendar quarter of 2014 from April 1 to June 30, 2014.

Two disposal wells were operational during the reporting period: LC DW No. 1 ("DW-1") and LC DW No. 4 ("DW-4"). DW-1 and DW-4 were operated intermittently during the quarter. Operational data was monitored and recorded electronically.

As per permit requirements, the following elements from Section K(6) have been included in this report:

- ***a.*** *Minimum, volume-weighted average, and maximum instantaneous injection rates for each well for each month*
- ***b.*** *Minimum, average, and maximum daily injection pressures for each well for each month*
- ***c.*** *Total injection volume in barrels (bbl) for each well for each month, total for the quarter, and cumulative volume of waste injected to date.*
- ***d.*** *Maximum and minimum annulus pressures for each month with alarm/kill pressure value*

Table 1A, 1B and **1C** below provide a data summary for above items **a, c,** and **d**. Included as **Attachment 1** are tables and charts of the daily injection pressure values.

Table 1A: Operational Data Summary for DW-1

PARAMETER	UNITS	LC DW No. 1			
		April 2014	May 2014	June 2014	Quarter Total/Avg
Operation Time	min	22220	20322	15052	57594
% Run Time	%	51%	46%	35%	44%
Injection Rate Minimum Instantaneous	gpm	0	0	0	N/A
Injection Rate Average Instantaneous	gpm	6	6	6	N/A
Injection Rate Maximum Instantaneous	gpm	11	19	12	N/A
Injection Rate Maximum Permit Limit	gpm	**50**			N/A
Injection Pressure Daily Minimum	psig	*See **Attachment 1***			
Injection Pressure Daily Average	psig				
Injection Pressure Daily Maximum	psig				
Injection Pressure Permit Limit (LSIP)	psig	**609**			N/A
Injection Pressure Automatic Kill	psig	**605**			N/A
Injection Volume	gal	130962	116646	95490	343098
Injection Volume	bbl	3118	2777	2274	8169
Annulus Pressure Minimum	psig	281	277	283	N/A
Annulus Pressure Average	psig	302	291	300	N/A
Annulus Pressure Maximum	psig	323	315	320	N/A
Annulus Pressure Permit Limit	psig	**200-800**			N/A
Annulus Pressure Automatic Kill	psig	**200, 800**			N/A

Table 1B: Operational Data Summary for DW-4

PARAMETER	UNITS	LC DW No. 4			
		April 2014	May 2014	June 2014	Quarter Total/Avg
Operation Time	min	34239	32418	31111	97767
% Run Time	%	79%	73%	72%	75%
Injection Rate Minimum Instantaneous	gpm	0	0	0	N/A
Injection Rate Average Instantaneous	gpm	21	18	18	N/A
Injection Rate Maximum Instantaneous	gpm	35	41	200 (36*)	N/A
Injection Rate Maximum Permit Limit	gpm	**50**			N/A
Injection Pressure Daily Minimum	psig	*See **Attachment 1***			
Injection Pressure Daily Average	psig				
Injection Pressure Daily Maximum	psig				
Injection Pressure Permit Limit (LSIP)	psig	**838**			N/A
Injection Pressure Automatic Kill	psig	**810**			N/A
Injection Volume	gal	707,537	587,755	552,863	1,848,155
Injection Volume	bbl	16,846	13,994	13,163	44,004
Annulus Pressure Minimum	psig	212	286	283	N/A
Annulus Pressure Average	psig	298	294	299	N/A
Annulus Pressure Maximum	psig	329	322	322	N/A
Annulus Pressure Permit Limit	psig	**200-800**			N/A
Annulus Pressure Automatic Kill	psig	**200, 800**			N/A

**Max value excluding the anomalous spike as described in Section f below*

Table 1C: Cumulative Injection Volumes to Date

TIME PERIOD	UNITS	LC DW No. 1	LC DW No. 4
2013	bbl	14,625	6,471
2014 Q1	bbl	8,753	62,136
April 2014	bbl	3,118	16,846
May 2014	bbl	2,777	13,994
June 2014	bbl	2,274	13,163
CUMULATIVE TOTAL TO DATE	bbl	31,547	112,610

e. *Quarterly analytical results*

As per Permit **13-409**, a quarterly grab sample of the injectate was collected from the Plant outflow upstream of the branch points to each individual well. Samples were analyzed for all applicable parameters. Results of the analysis of the injectate are included as **Attachment 2** and summarized in **Table 3** below:

Table 3: Analytical Results Summary

Sample ID: DW-Injectate

Lab Analyte or Parameter	Analytical Method Used	Sample Date	Results	Units
pH	SM4500-H+B (field)	5/15/2014	7.79	s.u.
Specific Conductance at 25°C	120.1 (field)	5/15/2014	27,200	uS/cm
Temperature	SM2550B (field)	5/15/2014	17	°C
Specific Gravity	n/a	5/15/2014	1.01	- -
Total Dissolved Solids	SM2540C	5/15/2014	16,400	mg/L
Bicarbonate	SM2320B	5/15/2014	359	mg/L
Carbonate	SM2320B	5/15/2014	ND (5)	mg/L
Chloride, Total	300.0	5/15/2014	11,300	mg/L
Sulfate, Total	300.0	5/15/2014	496	mg/L
Hydrogen Sulfide	HACH 8131	5/15/2014	0.01	mg/L
Arsenic, Total	200.8	5/15/2014	0.028	mg/L
Selenium, Total	200.8	5/15/2014	0.287	mg/L
Vanadium, Total	200.8	5/15/2014	ND (0.02)	mg/L
Uranium, Total	200.8	5/15/2014	134	mg/L
Radium-226	SM 7500 Ra-B	5/15/2014	11.6	pCi/L

f. *Permit exceedances during the quarter*

DW-1:

There were 4 events that exceeded the maximum injection pressure for the month, all of them were instantaneous pressure spikes due to an unknown cause as shown in the following data windows:

1. 6/7/14 at 17:50
    - 17:50:29 – 599.4 PSI
    - 17:50:39 – 610.7 PSI
    - 17:50:49 – 598.5 PSI
2. 6/14/14 at 23:27
    - 23:27:40 – 600.81 PSI
    - 23:27:50 – 609.45 PSI
    - 23:28:00 – 602.57 PSI
3. 6/19/14 at 16:25
    - 16:24:50 – 599.3 PSI
    - 16:25:00 – 609.37 PSI

- 16:25:10 – 601.31 PSI

4. 6/26/14 at 12:08
    - 12:08:00 – 601.82 PSI
    - 12:08:10 – 611.3 PSI
    - 12:08:20 – 597.5 PSI

DW-4:

There were 2 events resulting in the exceedance of the maximum injection pressure:

1. April 7, 2014 at 13:09, a pressure spike reached 848 psi for injection pressure, which is 10 psi greater than the permitted max. This was an instantaneous spike that occurred within a 20 second span. The following data window shows that it was a very brief exceedance:
    - 13:09:35 - 790 psi.
    - 13:09:45 - 848 psi.
    - 13:09:55 - 803 psi.

2. June 28, 2014 at 20:50, a pressure spike occurred due to an unknown cause but could have been contributed by blockage in the line that may have pushed through as shown by an pressure increase and a flow decrease in the following data window:
    - 20:50:00 – Pressure 787.6 PSI; Flow 17.4 GPM
    - 20:50:10 – Pressure 897.4 PSI; Flow 6.7 GPM
    - 20:50:20 – Pressure 833.7 PSI; Flow 15.1 GPM
    - 20:50:30 – Pressure 805.3 PSI; Flow 16.2 GPM

There were 2 events that exceeded the maximum permitted flow rate of 50 GPM and both of them were instrument anomalies caused by shut down spikes:

1. 6/18/14 at 14:17
    - 14:17:40 – 17.3 GPM
    - 14:17:50 – 200.4 GPM
    - 14:18:00 – 1.2 GPM
    - 14:18:10 – 0 GPM
2. 6/20/14 at 6:19
    - 6:18:50 – 17.4 GPM
    - 6:19:00 – 200.4 GPM
    - 6:19:10 – 0 GPM

There was 1 event of the annulus pressure below the minimum value:

1. On April 4th, well DW-4 was shut down for acid stimulation maintenance. The instruments were taken offline and the pressures were recorded as zero or negative pressures on the data recorder. This made it appear that the annulus pressure was below the minimum pressure, but the well was not in operation at that time. When the well and instruments were brought back online the annulus pressures were determined to be within the normal range.

No other exceedances occurred during the reporting period.

g. *Any alarms or shutdowns and corrective actions*

Visual warnings are displayed on the computer screen within the control room and indicate when the injection pressure is near or at the limit. Shutdowns occurred associated with the pressure exceedances as described in Section **f** above. Other shutdowns occurred automatically when the pressure reached the set limits of 605 and 810 psig for DW-1 and DW-4, respectively.

Four maintenance shutdowns occurred for DW-4 during the quarter for acid treatment and other routine maintenance.

Corrective actions to help prevent pressure overages include reducing the automatic shutdown pressure to 600 psi for DW-1. Additionally, non-electronic high pressure switches will be installed and linked to a shunt trip that shuts down the injection pump when the pressure reaches the maximum operating pressure. The pressure switch system will operate independent of the programmed system and regardless of whether the pump is operated Hand or Auto mode.

h. *Summary of well tests or workovers*

Maintenance was performed on DW-4 on April 4, 2014 as described in the report included as **Attachment 3**. An acid treatment was completed down well to try to increase the injection flow rate.

If you have any questions regarding this submittal, please contact me at the Casper Office.

Regards,

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

Attachments: **Attachment 1: Daily Injection Pressures**
Attachment 2: Sample Analysis Report
Attachment 3: Acid Stimulation Memo

Cc: Theresa Horne, Ur-Energy, Littleton Office (via e-mail)
Brian Wood, WDEQ-LQD, Lander (via e-mail)
John Saxton, NRC Project Manager (via e-mail)

Attachment 1: Daily Injection Rates
DW-1
Lost Creek ISR Project 13-409

Date	Daily Minimum Injection Pressure (psig)	Daily Average Injection Pressure (psig)	Daily Maximum Injection Pressure (psig)	Shutdown Pressure (psig)	Maximum Injection Pressure Limit
4/1/2014	504	574	595	605	609
4/2/2014	498	566	590	605	609
4/3/2014	494	565	595	605	609
4/4/2014	489	585	596	605	609
4/5/2014	460	547	578	605	609
4/6/2014	504	588	600	605	609
4/7/2014	468	525	547	605	609
4/8/2014	438	537	571	605	609
4/9/2014	564	580	604	605	609
4/10/2014	518	576	602	605	609
4/11/2014	535	585	604	605	609
4/12/2014	538	585	603	605	609
4/13/2014	550	587	601	605	609
4/14/2014	550	579	602	605	609
4/15/2014	550	586	603	605	609
4/16/2014	548	586	602	605	609
4/17/2014	545	585	606	605	609
4/18/2014	535	587	599	605	609
4/19/2014	522	559	591	605	609
4/20/2014	522	554	591	605	609
4/21/2014	520	584	600	605	609
4/22/2014	501	561	605	605	609
4/23/2014	494	575	605	605	609
4/24/2014	524	587	601	605	609
4/25/2014	486	526	569	605	609
4/26/2014	512	575	600	605	609
4/27/2014	524	577	603	605	609
4/28/2014	528	588	600	605	609
4/29/2014	475	562	589	605	609
4/30/2014	559	592	604	605	609
5/1/2014	504	543	566	605	609
5/2/2014	453	519	548	605	609
5/3/2014	394	411	430	605	609
5/4/2014	366	374	383	605	609
5/5/2014	346	352	358	605	609
5/6/2014	308	361	382	605	609
5/7/2014	361	479	580	605	609
5/8/2014	465	545	563	605	609
5/9/2014	527	557	599	605	609
5/10/2014	482	558	587	605	609
5/11/2014	544	585	600	605	609

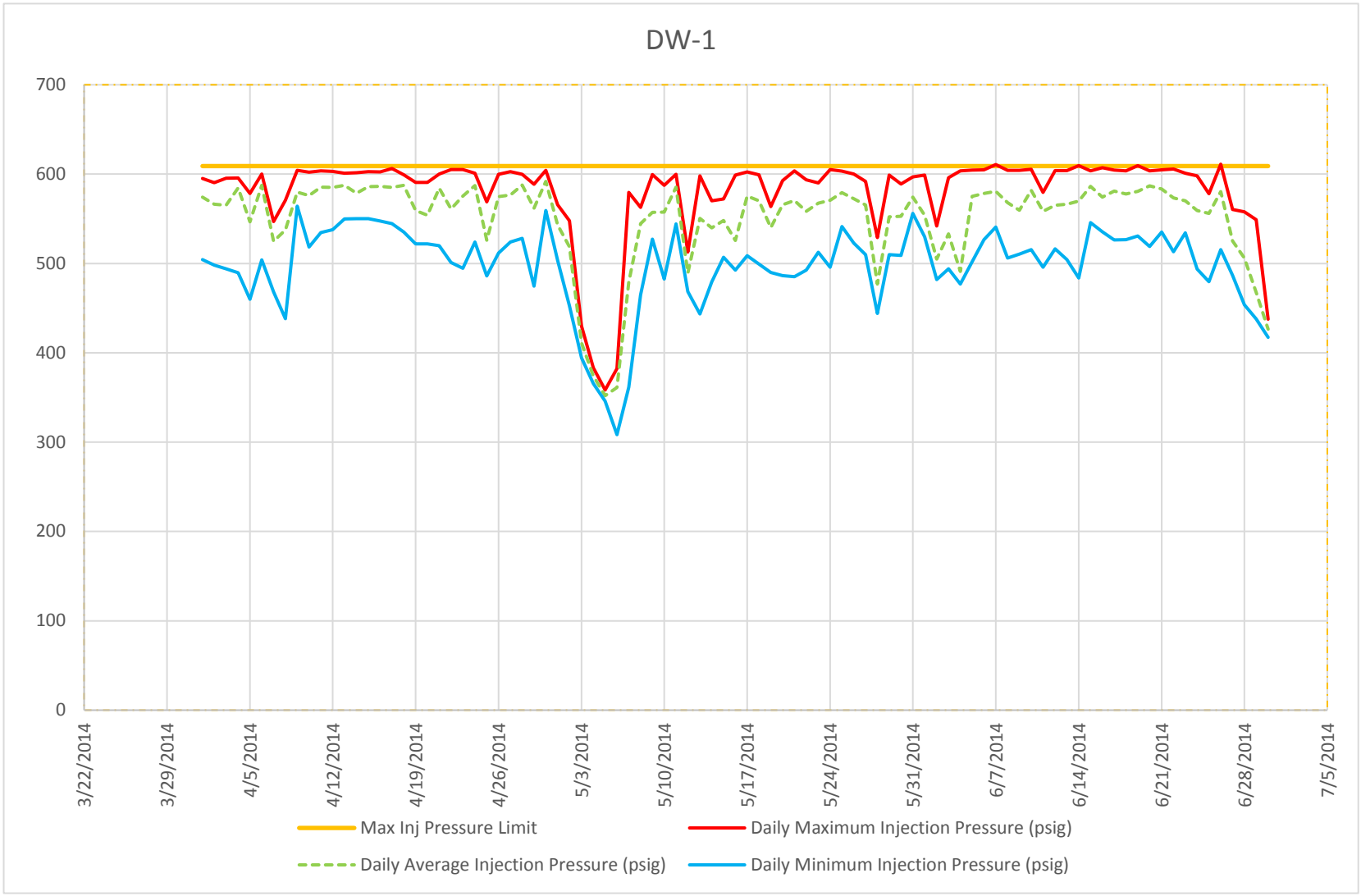
Attachment 1: Daily Injection Rates
DW-1
Lost Creek ISR Project 13-409

Date	Daily Minimum Injection Pressure (psig)	Daily Average Injection Pressure (psig)	Daily Maximum Injection Pressure (psig)	Shutdown Pressure (psig)	Maximum Injection Pressure Limit
5/12/2014	468	489	513	605	609
5/13/2014	443	551	598	605	609
5/14/2014	479	540	570	605	609
5/15/2014	507	548	572	605	609
5/16/2014	493	526	599	605	609
5/17/2014	509	576	602	605	609
5/18/2014	499	570	599	605	609
5/19/2014	490	540	564	605	609
5/20/2014	486	566	593	605	609
5/21/2014	485	571	604	605	609
5/22/2014	493	558	594	605	609
5/23/2014	512	567	590	605	609
5/24/2014	496	571	605	605	609
5/25/2014	541	579	603	605	609
5/26/2014	523	572	600	605	609
5/27/2014	510	565	592	605	609
5/28/2014	444	477	529	605	609
5/29/2014	510	552	599	605	609
5/30/2014	509	553	589	605	609
5/31/2014	556	574	597	605	609
6/1/2014	530	554	599	605	609
6/2/2014	482	505	542	605	609
6/3/2014	494	533	596	605	609
6/4/2014	477	491	604	605	609
6/5/2014	502	575	604	605	609
6/6/2014	527	578	605	605	609
6/7/2014	541	581	611	605	609
6/8/2014	506	568	604	605	609
6/9/2014	510	560	604	605	609
6/10/2014	515	582	606	605	609
6/11/2014	496	558	580	605	609
6/12/2014	516	565	604	605	609
6/13/2014	504	566	604	605	609
6/14/2014	484	570	609	605	609
6/15/2014	546	586	604	605	609
6/16/2014	536	574	607	605	609
6/17/2014	526	581	604	605	609
6/18/2014	527	578	604	605	609
6/19/2014	531	581	609	605	609
6/20/2014	519	587	604	605	609
6/21/2014	535	583	605	605	609

Attachment 1: Daily Injection Rates
DW-1
Lost Creek ISR Project 13-409

Date	Daily Minimum Injection Pressure (psig)	Daily Average Injection Pressure (psig)	Daily Maximum Injection Pressure (psig)	Shutdown Pressure (psig)	Maximum Injection Pressure Limit
6/22/2014	513	573	606	605	609
6/23/2014	534	570	601	605	609
6/24/2014	494	559	598	605	609
6/25/2014	480	556	578	605	609
6/26/2014	515	580	611	605	609
6/27/2014	487	525	560	605	609
6/28/2014	454	506	558	605	609
6/29/2014	438	467	549	605	609
6/30/2014	417	426	438	605	609

ATTACHMENT 1: CHART OF DAILY INJECTION RATES
DW-1
LOST CREEK ISR PROJECT 13-409



Attachment I: Daily Injection Rates
DW-4
Lost Creek ISR Project 13-409

Date	Daily Minimum Injection Pressure (psig)	Daily Average Injection Pressure (psig)	Daily Maximum Injection Pressure (psig)	Shutdown Pressure (psig)	Maximum Injection Pressure Limit
4/1/2014	692	792	810	810	838
4/2/2014	667	763	794	810	838
4/3/2014	697	778	799	810	838
4/4/2014	0	789	808	810	838
4/5/2014	730	792	809	810	838
4/6/2014	719	793	807	810	838
4/7/2014	711	789	848	810	838
4/8/2014	702	789	810	810	838
4/9/2014	710	791	809	810	838
4/10/2014	692	779	802	810	838
4/11/2014	660	753	803	810	838
4/12/2014	676	762	809	810	838
4/13/2014	676	793	810	810	838
4/14/2014	707	793	816	810	838
4/15/2014	718	789	810	810	838
4/16/2014	704	788	829	810	838
4/17/2014	728	794	810	810	838
4/18/2014	720	791	808	810	838
4/19/2014	703	764	800	810	838
4/20/2014	698	769	800	810	838
4/21/2014	648	735	798	810	838
4/22/2014	643	710	786	810	838
4/23/2014	580	717	753	810	838
4/24/2014	693	761	818	810	838
4/25/2014	690	770	807	810	838
4/26/2014	690	754	780	810	838
4/27/2014	706	766	781	810	838
4/28/2014	674	764	784	810	838
4/29/2014	621	731	778	810	838
4/30/2014	565	695	774	810	838
5/1/2014	0	740	775	810	838
5/2/2014	616	729	788	810	838
5/3/2014	583	667	768	810	838
5/4/2014	588	760	806	810	838
5/5/2014	609	738	809	810	838
5/6/2014	643	734	767	810	838
5/7/2014	677	743	794	810	838
5/8/2014	740	772	792	810	838
5/9/2014	728	776	801	810	838
5/10/2014	696	792	833	810	838
5/11/2014	672	726	746	810	838

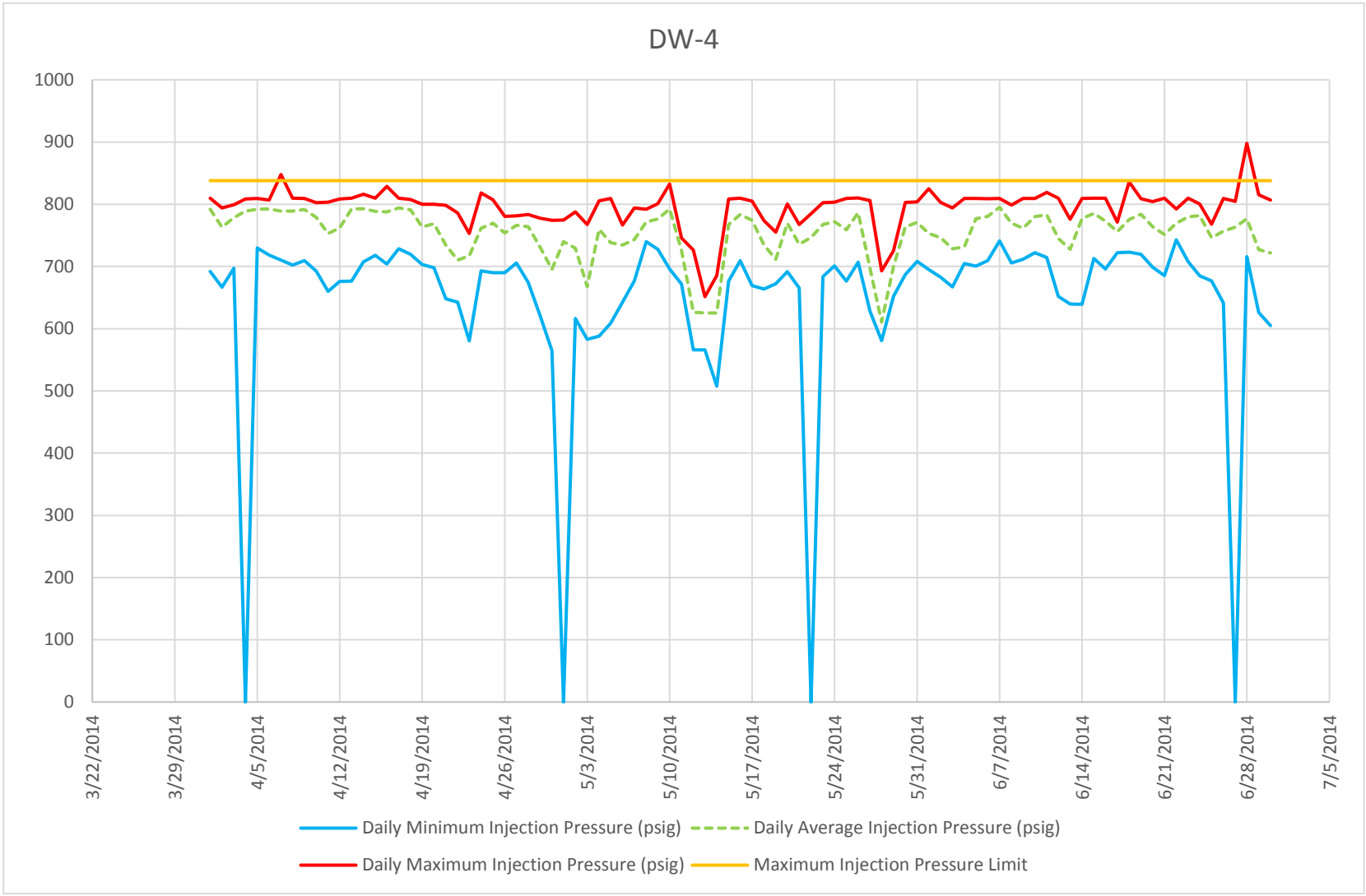
Attachment 1: Daily Injection Rates
DW-4
Lost Creek ISR Project 13-409

Date	Daily Minimum Injection Pressure (psig)	Daily Average Injection Pressure (psig)	Daily Maximum Injection Pressure (psig)	Shutdown Pressure (psig)	Maximum Injection Pressure Limit
5/12/2014	566	626	726	810	838
5/13/2014	566	625	651	810	838
5/14/2014	508	625	685	810	838
5/15/2014	676	768	809	810	838
5/16/2014	710	783	810	810	838
5/17/2014	669	774	805	810	838
5/18/2014	664	735	774	810	838
5/19/2014	672	712	755	810	838
5/20/2014	692	769	800	810	838
5/21/2014	666	736	767	810	838
5/22/2014	0	747	785	810	838
5/23/2014	683	767	802	810	838
5/24/2014	701	772	803	810	838
5/25/2014	676	759	809	810	838
5/26/2014	707	787	810	810	838
5/27/2014	628	697	806	810	838
5/28/2014	581	611	693	810	838
5/29/2014	652	700	725	810	838
5/30/2014	687	764	803	810	838
5/31/2014	708	771	804	810	838
6/1/2014	695	753	825	810	838
6/2/2014	683	746	803	810	838
6/3/2014	667	728	794	810	838
6/4/2014	705	731	809	810	838
6/5/2014	701	777	809	810	838
6/6/2014	710	781	809	810	838
6/7/2014	741	795	809	810	838
6/8/2014	706	770	799	810	838
6/9/2014	712	761	809	810	838
6/10/2014	722	780	810	810	838
6/11/2014	714	783	819	810	838
6/12/2014	652	745	810	810	838
6/13/2014	640	728	776	810	838
6/14/2014	639	777	809	810	838
6/15/2014	713	785	810	810	838
6/16/2014	696	773	810	810	838
6/17/2014	722	756	771	810	838
6/18/2014	723	776	836	810	838
6/19/2014	720	784	809	810	838
6/20/2014	699	764	804	810	838
6/21/2014	685	751	810	810	838

Attachment 1: Daily Injection Rates
DW-4
Lost Creek ISR Project 13-409

Date	Daily Minimum Injection Pressure (psig)	Daily Average Injection Pressure (psig)	Daily Maximum Injection Pressure (psig)	Shutdown Pressure (psig)	Maximum Injection Pressure Limit
6/22/2014	743	770	792	810	838
6/23/2014	708	780	810	810	838
6/24/2014	685	782	800	810	838
6/25/2014	677	746	768	810	838
6/26/2014	641	757	810	810	838
6/27/2014	0	763	805	810	838
6/28/2014	716	777	898	810	838
6/29/2014	626	727	815	810	838
6/30/2014	605	722	807	810	838

ATTACHMENT 1: CHART OF DAILY INJECTION RATES
DW-4
LOST CREEK ISR PROJECT 13-409



ATTACHMENT 2

Inter-Mountain Labs
1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Your Environmental Monitoring Partner

Date: 6/6/2014

CLIENT: UR-Energy
Project: Lost Creek
Lab Order: S1405266

CASE NARRATIVE

Report ID: S1405266001

Sample DW Injectate was received on May 16, 2014.

All samples were received and analyzed within the EPA recommended holding times, except those noted below in this case narrative. Samples were analyzed using the methods outlined in the following references:

"Standard Methods For The Examination of Water and Wastewater", approved method versions
Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Edition
40 CFR Parts 136 and 141
40 CFR Part 50, Appendices B, J, L, and O
Methods indicated in the Methods Update Rule published in the Federal Register Friday, May 18, 2012
ASTM approved and recognized standards

All Quality Control parameters met the acceptance criteria defined by EPA and Inter-Mountain Laboratories except as indicated in this case narrative.

Qualifiers by sample

Total Metals/Uranium - Spike Recovery outside accepted recovery limits

Reviewed by:
Wade Nieuwsma, Assistant Laboratory Manager

Inter-Mountain Labs
1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Your Environmental Monitoring Partner

Sample Analysis Report

Company: UR-Energy
5880 Enterprise Dr. Suite 200
Casper, WY 82609

Date Reported 6/6/2014
Report ID S1405266001

ProjectName: Lost Creek
Lab ID: S1405266-001
ClientSample ID: DW Injectate
COC: 150146

WorkOrder: S1405266
CollectionDate: 5/15/2014 7:40:00 AM
DateReceived: 5/16/2014 11:20:00 AM
FieldSampler: MG/ES
Matrix: Water

Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
Anions/Cations							
Alkalinity, Total (As CaCO3)	294	mg/L		5	SM 2320B	05/19/2014 2121	KV
Alkalinity, Bicarbonate as HCO3	359	mg/L		5	SM 2320B	05/19/2014 2121	KV
Alkalinity, Carbonate as CO3	ND	mg/L		5	SM 2320B	05/19/2014 2121	KV
Chloride	11300	mg/L		1	EPA 300.0	05/20/2014 2122	AMB
Sulfate	496	mg/L		1	EPA 300.0	05/20/2014 2122	AMB
General Parameters							
Total Dissolved Solids (180)	16400	mg/L		10	SM 2540	05/19/2014 1532	BT
Specific Gravity	1.01			0.01	SM 2710F	05/16/2014 1600	KB
Sulfide	0.01	mg/L		0.01	HACH 8131	05/20/2014 740	KB
Sulfide as H2S	0.01	mg/L		0.01	HACH 8131	05/20/2014 740	KB
Metals - Total							
Arsenic	0.028	mg/L		0.005	EPA 200.8	05/20/2014 2029	MS
Selenium	0.287	mg/L		0.005	EPA 200.8	05/20/2014 2029	MS
Uranium	134	mg/L		0.0003	EPA 200.8	05/20/2014 2029	MS
Vanadium	ND	mg/L		0.02	EPA 200.8	05/20/2014 2029	MS
Radionuclides - Dissolved							
Radium 226	11.6	pCi/L		0.2	SM 7500 Ra-B	06/03/2014 1126	MB
Radium 226 Precision (±)	0.8	pCi/L			SM 7500 Ra-B	06/03/2014 1126	MB

These results apply only to the samples tested.

RL - Reporting Limit

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
M	Value exceeds Monthly Ave or MCL or is less than LCL
O	Outside the Range of Dilutions
X	Matrix Effect
C	Calculated Value
H	Holding times for preparation or analysis exceeded
L	Analyzed by a contract laboratory
ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits

Reviewed by:
Wade Nieuwsma, Assistant Laboratory Manager

Inter-Mountain Labs
1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Your Environmental Monitoring Partner

ANALYTICAL QC SUMMARY REPORT

CLIENT: UR-Energy
Work Order: S1405266
Project: Lost Creek

Date: 6/6/2014
Report ID: S1405266001

Alkalinity Sample Type **MBLK** Units: mg/L

BLANK (05/19/14 14:43) RunNo: 107784

Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Alkalinity, Total (As CaCO3)	ND	5					

Alkalinity Sample Type **LCS** Units: mg/L

ATQC (05/19/14 14:36) RunNo: 107784

Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Alkalinity, Total (As CaCO3)	596	5	595		100	90 - 110	

Alkalinity Sample Type **DUP** Units: mg/L

S1405251-007AD (05/19/14 16:24) RunNo: 107784

Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
Alkalinity, Bicarbonate as HCO3	176	5	176	0.0320		20	
Alkalinity, Total (As CaCO3)	144	5	144	0.0320		20	

Anions by ION Chromatography Sample Type **MBLK** Units: mg/L

BLK (05/19/14 11:09) RunNo: 107782

Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Chloride	ND	1					
Sulfate	ND	1					

Anions by ION Chromatography Sample Type **LCS** Units: mg/L

DIONEX (05/19/14 11:24) RunNo: 107782

Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Chloride	31	1	30		103	90 - 110	
Sulfate	143	1	150		95.4	90 - 110	

Anions by ION Chromatography Sample Type **MS** Units: mg/L

S1405237-003ASPK (05/19/14 18:55) RunNo: 107782

Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Chloride	11	1	9.09	2	97.3	80 - 120	
Sulfate	72	1	68.2	5	97.1	80 - 120	

Anions by ION Chromatography Sample Type **MSD** Units: mg/L

S1405237-003ASPK (05/19/14 19:09) RunNo: 107782

Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
Chloride	13	1	11	12.9	113	20	
Sulfate	82	1	72	14.8	113	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
L	Analyzed by a contract laboratory	ND	Not Detected at the Reporting Limit
O	Outside the Range of Dilutions	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits	X	Matrix Effect

ANALYTICAL QC SUMMARY REPORT

CLIENT: UR-Energy
Work Order: S1405266
Project: Lost Creek

Date: 6/6/2014
Report ID: S1405266001

Radium 226 in Water - Dissolved Sample Type **MBLK** Units: pCi/L

MB14-139 (06/03/14 08:55) RunNo: 108511 PrepDate: 05/20/14 0:00 BatchID R108511

Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Radium 226 (Dissolved)	ND	0.2					

Radium 226 in Water - Dissolved Sample Type **LCS** Units: pCi/L

LCS14-139 (06/03/14 08:55) RunNo: 108511 PrepDate: 05/20/14 0:00 BatchID R108511

Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Radium 226 (Dissolved)	4.8	0.2	5		96.2	76.4 - 122	

Radium 226 in Water - Dissolved Sample Type **MS** Units: pCi/L

TAPMS (06/03/14 08:55) RunNo: 108511 PrepDate: 05/20/14 0:00 BatchID R108511

Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Radium 226 (Dissolved)	4.8	0.2	5	0.5	85.7	74.5 - 133	

Radium 226 in Water - Dissolved Sample Type **MSD** Units: pCi/L

TAPMSD (06/03/14 08:55) RunNo: 108511 PrepDate: 05/20/14 0:00 BatchID R108511

Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
Radium 226 (Dissolved)	4.7	0.2	4.8	1.42	84.3	20	

Solids By SM 2540 Sample Type **MBLK** Units: mg/L

DI (05/19/14 15:22) RunNo: 107955

Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Total Dissolved Solids (180)	ND	10					

Solids By SM 2540 Sample Type **LCS** Units: mg/L

CONTROL (05/19/14 15:23) RunNo: 107957

Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Total Dissolved Solids (180)	210	10	226		92.0	90 - 110	

Solids By SM 2540 Sample Type **DUP** Units: mg/L

S1405267-001A (05/19/14 15:34) RunNo: 107957

Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
Total Dissolved Solids (180)	17400	10	17700	1.41		20	

Sulfide by HACH 8131 Sample Type **LCS** Units: mg/L

QC (05/20/14 07:38) RunNo: 107861

Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Sulfide	4.02	0.01	7.19		55.9	50 - 150	

Sulfide by HACH 8131 Sample Type **DUP** Units: mg/L

S1405266-001E (05/20/14 07:42) RunNo: 107861

Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
Sulfide	ND	0.01	0.01			20	
Sulfide as H2S	ND	0.01	0.01			20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
L	Analyzed by a contract laboratory	ND	Not Detected at the Reporting Limit
O	Outside the Range of Dilutions	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits	X	Matrix Effect

ANALYTICAL QC SUMMARY REPORT

CLIENT: UR-Energy
Work Order: S1405266
Project: Lost Creek

Date: 6/6/2014
Report ID: S1405266001

Total (200.2) Metals by EPA 200.8 - Water Sample Type **MBLK** Units: mg/L

MB-8257 (05/20/14 20:13) RunNo: 107867 PrepDate: 05/20/14 14:47 BatchID 8257

Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Arsenic	ND	0.005					
Selenium	ND	0.005					
Uranium	ND	0.0003					
Vanadium	ND	0.02					

Total (200.2) Metals by EPA 200.8 - Water Sample Type **LCS** Units: mg/L

LCS-8257 (05/20/14 20:19) RunNo: 107867 PrepDate: 05/20/14 14:47 BatchID 8257

Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Arsenic	0.098	0.005	0.1		97.6	85 - 115	
Selenium	0.197	0.005	0.2		98.6	85 - 115	
Uranium	0.0968	0.0003	0.1		96.8	85 - 115	
Vanadium	0.10	0.02	0.1		95.9	85 - 115	

Total (200.2) Metals by EPA 200.8 - Water Sample Type **MS** Units: mg/L

S1405267-001BS (05/20/14 20:45) RunNo: 107867 PrepDate: 05/20/14 8:30 BatchID 8257

Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
Arsenic	0.216	0.005	0.2	0.012	102	70 - 130	
Selenium	1.11	0.005	0.4	0.683	107	70 - 130	
Uranium	43.7	0.0003	0.2	43.2	264	70 - 130	S

Total (200.2) Metals by EPA 200.8 - Water Sample Type **MSD** Units: mg/L

S1405267-001BMSD (05/20/14 20:51) RunNo: 107867

Analyte	Result	RL	Conc	%RPD	%REC	% RPD Limits	Qual
Arsenic	0.225	0.005	0.216	4.11	106	20	
Selenium	1.12	0.005	1.11	0.579	108	20	
Uranium	43.6	0.0003	43.7	0.288	201	20	S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
L	Analyzed by a contract laboratory	ND	Not Detected at the Reporting Limit
O	Outside the Range of Dilutions	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits	X	Matrix Effect

Inter-Mountain Labs
Sheridan, WY and Gillette, WY

- CHAIN OF CUSTODY RECORD -

Page 1 of 1

All shaded fields must be completed.
This is a legal document: any misrepresentation may be construed as fraud.

150146

Client Name	**Project Identification**	**Sampler (Signature/Attestation of Authenticity)** / **Telephone #**
UR-ENERGY	LOST CREEK	M. GAITHER / E. STONAKER
Report Address	**Contact Name**	
5880 ENTERPRISE DR SUITE 200 CASPER WY 82609	MIKE GAITHER	
Invoice Address	**Email** MIKE.GAITHER@UR-ENERGY.COM	
	Phone (307) 265-2373 X321	
	Purchase Order #	**Quote #**

ANALYSES / PARAMETERS

ITEM	LAB ID (Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SAMPLE IDENTIFICATION	Matrix	# of Containers	SEE LIST	SEE LIST	RADIOCHEMISTRY SEE LIST	GUIDELINE B					REMARKS
1		5/15/2014	0950	N POND	WT	1	✓								
2			0950	S POND		1	✓								Please return Ice Packs
3	S1405266-001		0740	DW INJECTATE		1		✓							
4				BLM ~~(EEN)~~ (4775) mw.		1			✓						
5				BLM (4777)		1			✓						
6		↓	0750	PLANT PC	↓	2				✓					
7															
8															
9															
10															
11															
12															
13															
14															

LAB COMMENTS	Relinquished By (Signature/Printed)	DATE	TIME	Received By (Signature/Printed)	DATE	TIME
3.2°C 3.2°C	Eric Stonaker / Eric Stonaker	5/15/14	18:15	[signature]	5-16-14	11:20

SHIPPING INFO	MATRIX CODES		TURNAROUND TIMES	COMPLIANCE INFORMATION	ADDITIONAL REMARKS
☐ UPS	Water	WT	**Check desired service**	Compliance Monitoring? Y / N	
☐ Fed Express	Soil	SL	☒ Standard turnaround	Program (SDWA, NPDES,...)	
☐ US Mail	Solid	SD	☐ **RUSH - 5 Working Days**	PWSID / Permit #	
☐ Hand Carried	Filter	FT	☐ **URGENT** - < 2 Working Days	Chlorinated? Y / N	
☒ Other ACTION CARGO	Other	OT	***Rush & Urgent Surcharges will be applied***	Sample Disposal: Lab / Client	

LOST CREEK PROJECT
MISC. ANALYTE LIST w/ COC 150146

N Pond, S Pond:

Sample ID	Sampling Frequency	Analytical Requirements
N Pond S Pond	Quarterly (four times per calendar year) [or whenever a process change could significantly alter the water quality]	pH Alkalinity Spec. Conductivity Total Dissolved Solids (TDS) Chloride Sodium Sulfate Radium-226 Selenium* Arsenic Uranium, natural

DW Injectate:

Lab Analyte or Parameter	Units	Analytical Method	Preservation	Holding Time
Specific Gravity	- -	n/a	Cool, ≤ 6°C	n/a
Total Dissolved Solids	mg/L	160.1 or SM2540C	Cool, ≤ 6°C	7 days
Bicarbonate	mg/L	SM2320B	Cool, ≤ 6°C	6 months
Carbonate	mg/L	SM2320B	Cool, ≤ 6°C	6 months
Chloride, Total	mg/L	300.0 or 300.1	Cool, ≤ 6°C	28 days
Sulfate, Total	mg/L	300.0, 300.1, or 375.2	Cool, ≤ 6°C	28 days
Hydrogen Sulfide	mg/L	SM4500-S2-D or SM4500-S2-G	Zn acetate, zero headspace, NaOH to pH > 9, Cool, ≤ 6°C	7 days
Arsenic, Total	mg/L	206.5, 200.7, or 200.8	HNO_3 to pH <2	6 months
Selenium, Total	mg/L	200.7 or 200.8	HNO_3 to pH <2	6 months
Vanadium, Total	mg/L	200.7 or 200.8	HNO_3 to pH <2	6 months
Uranium, Total	mg/L	908.1 or 200.8	HNO_3 to pH <2	6 months
Radium-226	pCi/L	903.1	HNO_3 to pH <2	6 months

BLM(EEN), BLM(4777):
U-nat, Ra-226, Th-230, Pb-210, Po-210

Plant PC:
Guideline 8

ATTACHMENT 3

Petrotek Engineering Corporation 5935 South Zang Street, Suite 200 Littleton, Colorado 80127 (303) 290-9414 FAX (303) 290-9580

April 25, 2014

UR Energy
Lost Creek ISR, LLC
5880 Enterprise Drive, #200
Casper, WY 82609

Attention: Steve Hatten

Subject: Acid Treatment Summary– Class I Disposal Well: UR Energy Lost Creek
WDEQ UIC Permit 13-409

Dear Steve:

On April 4, 2014, Tim Gimbel, a representative of Petrotek Engineering Corporation supervised the acid treatment of the UR Energy (URE) Lost Creek Project Class I well (LCDW No. 4) in Sweetwater County, Wyoming. The Wyoming Department of Environmental Quality (WDEQ) was notified prior to the work and provided approved of the treatment plan in the letter received April 3, 2014. The field activities are outlined below.

- The well was isolated from plant flow and monitoring, the well house was removed, and Halliburton was rigged up on the well in preparation for acid treatment.
- The well was treated with approximately 14,400 gallons of 15% hydrochloric acid (HCl) that contained 29 gallons of HAI-404M acid inhibitor and 15 gallons of Losurf-300D surfactant using five stages of salt as a diverter.
- The acid and additives were pumped into the well at an average rate of approximately 1.3 bbl/min (approximately 55 gpm).
- The acid treatment was followed by approximately 100 barrels of flush water fortified with 2% by weight potassium chloride (KCl).
- Halliburton was rigged down and the well was returned to URE control. To allow the acid to spend, the well remained shut-in for several hours.
- After the wellhouse and attached monitoring equipment were replaced, the well was put back into service on the evening on April 4, 2014.

The Halliburton treatment report is included as an attachment to this summary. Please contact me if you have any questions or comments regarding the outlined treatment.

Sincerely,

VIA E-MAIL

Petrotek Engineering Corporation
Wes Janes

CC: Ken Cooper - PEC
Hal Demuth - PEC
John Cash - URE

Attachment(s): 1

Petrotek Energy Corporation
5935 South Zang st, Ste 200
Littleton, CO 80127-4646

LCDW 4 N/A

Interval 1
N/A, Wyoming

Sales Order: 901243896

Post Job Report

For: Tim Gimbel
Date: Friday, April 04, 2014

HALLIBURTON

Table of Contents

1.0 PUMPING SCHEDULE

1.1 Designed Pumping Schedule

Stage Number	Description	Flow Path	Fluid System	Clean Volume gal	Slurry Volume gal	Stage Time min
1	Breakdown	In	FIELD SALT WATER	500	500	500.00
2	Acid	In	HCL ACID 15% - SBM (27012)	2400	2400	2400.00
3	Diverter: Particulates	In	HYBOR G 25# - SBM (21113)	500	500	500.00
4	Acid	In	HCL ACID 15% - SBM (27012)	2400	2400	2400.00
5	Diverter: Particulates	In	HYBOR G 25# - SBM (21113)	500	500	500.00
6	Acid	In	HCL ACID 15% - SBM (27012)	2400	2400	2400.00
7	Diverter: Particulates	In	HYBOR G 25# - SBM (21113)	500	500	500.00
8	Acid	In	HCL ACID 15% - SBM (27012)	2400	2400	2400.00
9	Diverter: Particulates	In	HYBOR G 25# - SBM (21113)	500	500	500.00
10	Acid	In	HCL ACID 15% - SBM (27012)	2400	2400	2400.00

Stage Number	Description	Flow Path	Fluid System	Clean Volume gal	Slurry Volume gal	Stage Time min
11	Diverter: Particulates	In	HYBOR G 25# - SBM (21113)	500	500	500.00
12	Acid	In	HCL ACID 15% - SBM (27012)	2400	2400	2400.00
13	Flush	In	FIELD SALT WATER	4200	4200	4200.00
Total				21600	21600	21600.00

2.0 ACTUAL STAGE SUMMARY

2.1 Stage Summary

Stage Number	Stage Time	Start Time	End Time	Time min	Pump Time min	Max Treat Pr psi	Max Slurry Rate bpm
2	04-Apr-14 12:02:55	11:37:01	04-Apr-14 12:02:55	25.93	25.87	934	2.2
3	04-Apr-14 12:08:28	12:02:56	04-Apr-14 12:08:28	5.55	5.55	793	2.1
4	04-Apr-14 12:56:00	12:08:29	04-Apr-14 12:56:00	28.72	9.37	1007	2.3
5	04-Apr-14 13:02:38	12:56:01	04-Apr-14 13:02:38	6.63	6.48	772	3.3
6	04-Apr-14 13:28:09	13:02:39	04-Apr-14 13:28:09	25.52	25.52	1276	2.6
7	04-Apr-14 13:34:03	13:28:10	04-Apr-14 13:34:03	5.90	5.90	1153	2.3
8	04-Apr-14 14:02:11	13:34:04	04-Apr-14 14:02:11	28.12	28.12	1081	2.5
9	04-Apr-14 14:08:13	14:02:12	04-Apr-14 14:08:13	6.04	6.03	1026	2.1
10	04-Apr-14 14:37:22	14:08:14	04-Apr-14 14:37:22	29.16	29.15	1017	2.3
11	04-Apr-14 14:44:55	14:37:23	04-Apr-14 14:44:55	7.55	7.55	951	2.2
12	04-Apr-14 15:28:14	14:44:56	04-Apr-14 15:28:14	43.30	29.33	1031	4.0
13	04-Apr-14 16:55:42	15:28:15	04-Apr-14 16:55:42	87.48	51.53	1825	12.4

Stage Number	Stage Time	Max Wellhead Rate bpm	Avg Treating Pressure psi	Avg Clean Rate bpm	Avg Slurry Rate bpm	Avg Wellhead Rate bpm	Avg Hydraulic Horsepower hp
2	04-Apr-14 12:02:55	2.2	811	2.1	2.1	2.1	42
3	04-Apr-14 12:08:28	2.1	789	2.1	2.1	2.1	40
4	04-Apr-14 12:56:00	2.3	654	1.6	1.6	1.6	25
5	04-Apr-14 13:02:38	3.3	652	2.1	2.1	2.1	34
6	04-Apr-14 13:28:09	2.6	804	2.2	2.2	2.2	44
7	04-Apr-14 13:34:03	2.3	1014	2.2	2.2	2.2	55
8	04-Apr-14 14:02:11	2.5	851	2.0	2.0	2.0	43
9	04-Apr-14 14:08:13	2.1	930	2.0	2.0	2.0	45
10	04-Apr-14 14:37:22	2.3	848	2.0	2.0	2.0	42
11	04-Apr-14 14:44:55	2.2	828	2.0	2.0	2.0	40
12	04-Apr-14 15:28:14	4.0	783	2.0	2.0	2.0	39
13	04-Apr-14 16:55:42	12.4	1052	1.9	1.9	1.9	48

Stage Number	Stage Time	Clean Volume gal	Slurry Volume gal	Wellhead Volume gal
2	04-Apr-14 12:02:55	2277	2277	2271
3	04-Apr-14 12:08:28	482	482	482
4	04-Apr-14 12:56:00	625	625	625
5	04-Apr-14 13:02:38	572	572	572

Stage Number	Stage Time	Clean Volume gal	Slurry Volume gal	Wellhead Volume gal
6	04-Apr-14 13:28:09	2396	2396	2396
7	04-Apr-14 13:34:03	550	550	550
8	04-Apr-14 14:02:11	2410	2410	2410
9	04-Apr-14 14:08:13	504	504	504
10	04-Apr-14 14:37:22	2492	2492	2492
11	04-Apr-14 14:44:55	632	632	632
12	04-Apr-14 15:28:14	2478	2478	2478
13	04-Apr-14 16:55:42	4085	4085	4085
Total		19503	19503	19497

3.0 Performance Highlights

3.1 Job Summary

Start Time	04-Apr-14 11:29:41	
End Time	04-Apr-14 16:55:42	
Pump Time	230.40	min
Start Averaging Time	04-Apr-14 11:37:01	
End Averaging Time	04-Apr-14 16:55:42	
Max Treating Pressure	1825	psi
Max Slurry Rate	12.4	bpm
Max Wellhead Rate	12.4	bpm
Max Gel Rate	12.4	bpm
Max Acid Rate	4.0	bpm
Avg Treating Pressure	868	psi
Avg Clean Rate	2.0	bpm
Avg Slurry Rate	2.0	bpm
Avg Wellhead Rate	2.0	bpm
Avg Gel Rate	0.7	bpm
Avg Acid Rate	1.3	bpm
Avg Hydraulic Horsepower	43	hp
Clean Volume	19503	gal
Slurry Volume	19503	gal
Wellhead Volume	19497	gal
Gel Volume	6824	gal
Acid Volume	12678	gal
BH Max Treating Pressure	4528	psi
BH Avg Treating Pressure	3528	psi
BH Max Rate	12.4	bpm
BH Avg Rate	1.8	bpm
Load to Recover	19503	gal
Volumes Pumped	**Total**	**Units**
FIELD SALT WATER	4085	gal
HCL ACID 15% - SBM (27012)	12678	gal
HYBOR G 25# - SBM (21113)	2740	gal

Disclaimer: The average and maximum values (except volumes and bottom hole values) are based on the start and end averaging times.

3.2 Job Stage Log

Time	Description	Comment
04-Apr-14 11:37:00	Stage 2	Acid
12:02:56	Stage 3	Diverter: Particulates
12:08:29	Stage 4	Acid
12:56:01	Stage 5	Diverter: Particulates
13:02:39	Stage 6	Acid
13:28:10	Stage 7	Diverter: Particulates
13:34:04	Stage 8	Acid
14:02:12	Stage 9	Diverter: Particulates
14:08:14	Stage 10	Acid
14:37:23	Stage 11	Diverter: Particulates
14:44:56	Stage 12	Acid
15:28:15	Stage 13	Flush

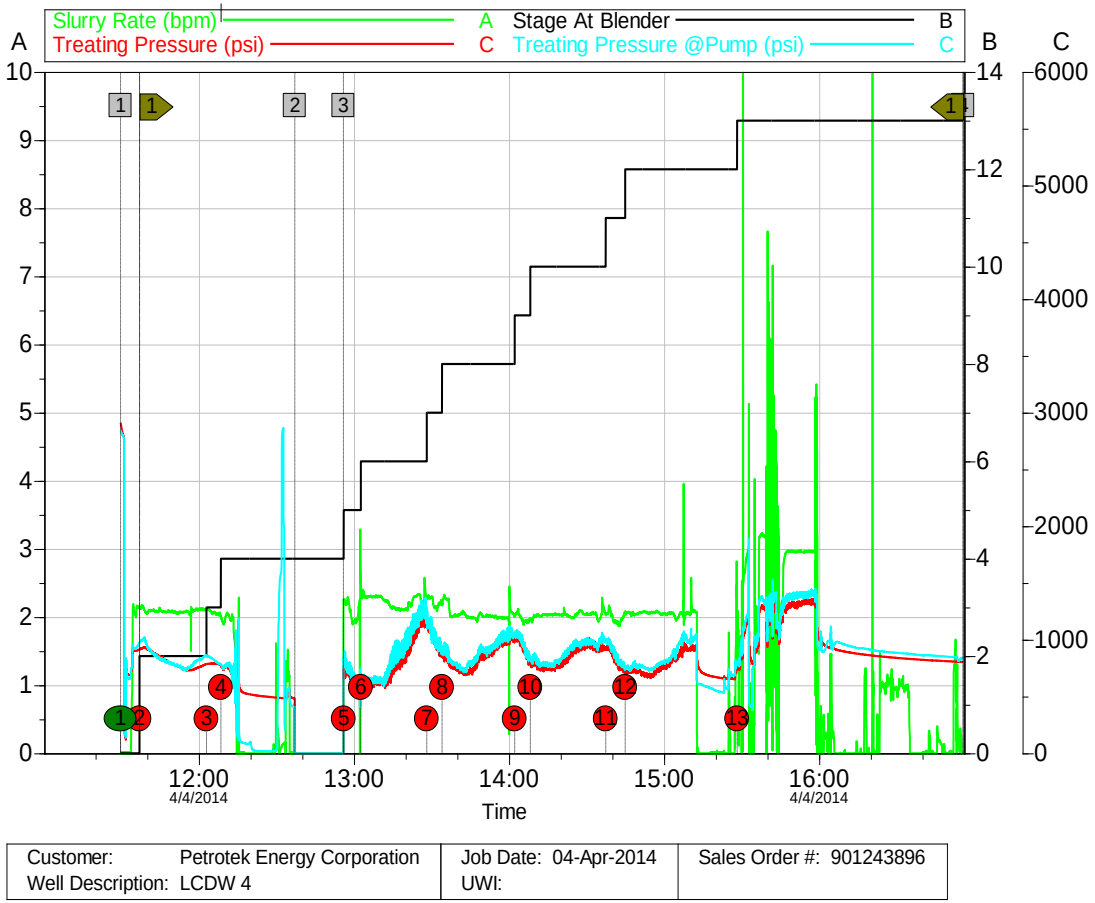
3.3 Job Event Log

Stage Number	Event Number	Time	Description	Comment
	1	04-Apr-14 11:29:41	Start Job	Starting Job
2		11:37:00	Stage 2	Acid
		11:37:01	Start Averaging	Start Avg Trt 1
3		12:02:56	Stage 3	Diverter: Particulates
4		12:08:29	Stage 4	Acid
	2	12:37:05	Pause	Suspending Job
	3	12:55:54	Resume	Resuming Job
5		12:56:01	Stage 5	Diverter: Particulates

Stage Number	Event Number	Time	Description	Comment
6		13:02:39	Stage 6	Acid
7		13:28:10	Stage 7	Diverter: Particulates
8		13:34:04	Stage 8	Acid
9		14:02:12	Stage 9	Diverter: Particulates
10		14:08:14	Stage 10	Acid
11		14:37:23	Stage 11	Diverter: Particulates
12		14:44:56	Stage 12	Acid
13		15:28:15	Stage 13	Flush
		16:55:42	End Averaging	End Avg Trt 1
	4	16:55:44	End Job	Ending Job

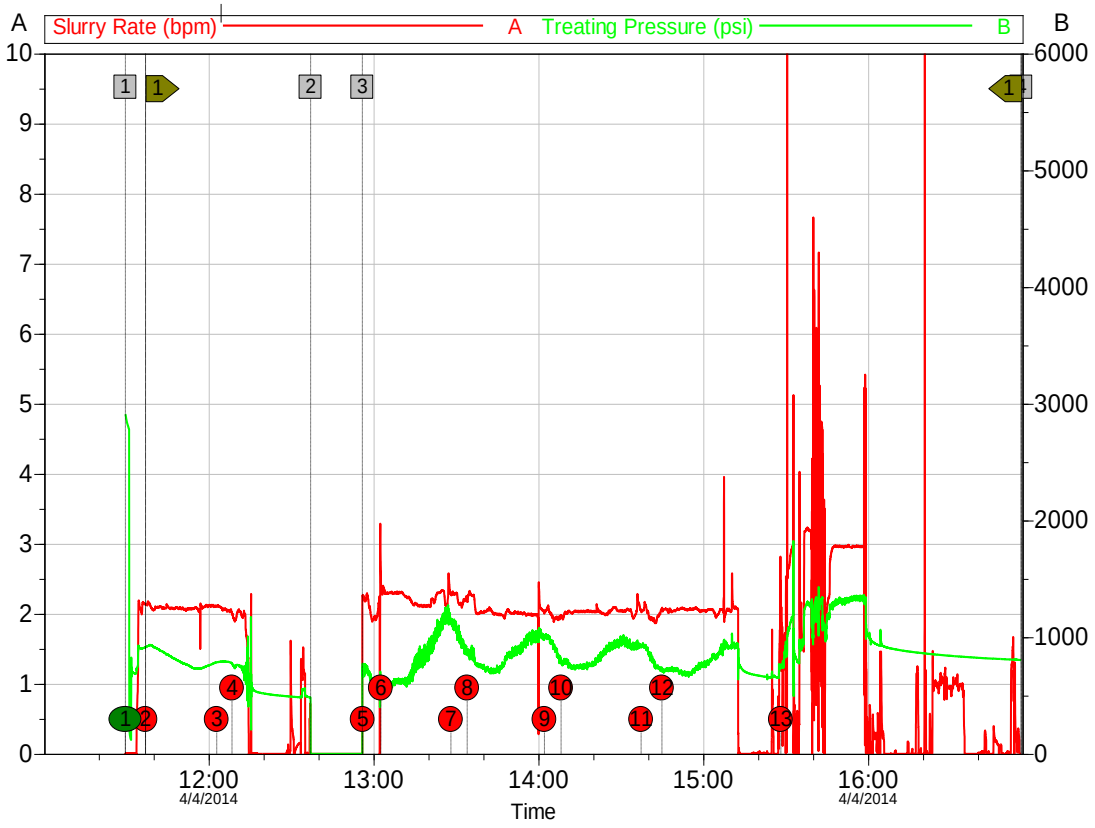
4.0 ATTACHMENTS

4.1 graph 1



Customer:	Petrotek Energy Corporation	Job Date: 04-Apr-2014		Sales Order #: 901243896	
Well Description:	LCDW 4	UWI:			

4.2 graph 2



Customer:	Petrotek Energy Corporation	Job Date: 04-Apr-2014		Sales Order #: 901243896	
Well Description:	LCDW 4	UWI:			