2013

RESPONSES TO WDEQ-LQD COMMENTS

FOR THE

LOST CREEK ISR PROJECT

ANNUAL REPORT

PERMIT TO MINE #788

LOST CREEK ISR, LLC
SWEETWATER COUNTY, WY

PREPARED BY UR-ENERGY USA -

AGENT FOR LOST CREEK ISR, LLC

November 17, 2013

The following are responses provided by Lost Creek ISR, LLC (LCI) to comments made by Wyoming Department of Environmental Quality-Land Quality Division (WDEQ-LQD) dated October 31, 2013 regarding the 2013 Annual Report (AR). Thirty five (35) comments were provided by Melissa L. Bautz, P.G. – WDEQ/LQD District 2 Natural Resource Analyst. Comments restated below may have been abbreviated by LCI as necessary. Additional changes made by LCI have been incorporated for clarity as described in the Addendum at the end of the comments/responses.

1. **Comment G1 (LQD):**

   A tabulation of the Changes that have been approved for Permit 788 should be presented in the Annual Report.

   Response to G1 (LCI):

   A Section 2.4 has been added to the AR to include the summary Table 2.4-1: Summary of Permit Changes Approved to Date.

2. **Comment G2 (LQD):**

   Please provide an explanation of the Permit's reporting period in Section 2.3.

   Response to G2 (LCI):

   Explanation has been provided in Section 2.3.

3. **Comment N1 (LQD):**

   Section 3.2.1 – "Wellfield Water Balance": Please reconfigure Table 3.2-1 such that it appears on one page and that all data cells are filled in.

   Response to N1 (LCI):

   Table 3.2-1 has been modified so it does not break across pages.

4. **Comment N2 (LQD):**

   Section 3.6.1 – "Topsoil": Please add information regarding the site's short term topsoil stockpiles to Section 3.6.1.

   Response to N2 (LCI):

   Section 3.6.1 has been modified and titled "Soil Management". Separate sections for long-term topsoil, short-term topsoil, and subsoil have been added. Table 3.6-1 has been renamed Table 3.6-1A. Table 3.6-1B for short-term topsoil has been added. Table 3.6-1C for subsoil has been added.

5. **Comment N3 (LQD):**

   Please add to the topsoil discussion, an inventory and status of the site's subsoil stockpiles.

Response to N3 (LCI):
Subsoil discussion has been added to Section 3.6.1. A new table (Table 3.6-1C) has been added to summarize subsoil inventory. Subsoil piles have been identified and accounting has been revised since there is a subsoil stockpile associated with DW-3 that was previously unaccounted for.

6. **<u>Comment N4 (LQD):</u>**

Section 3.6.3 – "Ponds":

1) *<u>Please include pH and Conductivity in a revised version of Table 3.6-3.</u>*
2) *<u>Please add a statement to Section 3.6.3 that addresses the ponds' freeboard.</u>*
3) *<u>The WSEO approval for the ponds should be submitted for inclusion into the Permit (in the "Other Permits" section) as a non-significant revision (NSR).</u>*

Response to N4 (LCI):

1) pH and conductivity columns have been added to Table 3.6-3.
2) Pond freeboard is discussed in Section 3.6.3 including maximum values.
3) WSEO did not provide an approval letter.

7. **<u>Comment N5 (LQD):</u>**

Section 3.6.4 – "Infrastructure": <u>Secondary and two-track roads must be depicted on Figure 3.6-1; and their areas must be accounted for on Table 3.6-2.</u>

Response to N5 (LCI):
Roads have been added to Figure 3.6-1A and B. Table 3.6-2 has been edited to include accounting of any new secondary or two-track roads.

8. **<u>Comment N6 (LQD):</u>**

Section 3.7 – "New Wells/Well fields Installed During the Reporting Period": <u>Please add a summary statement at the beginning of Section 3.7 and please provide a reference to the Section or page number in the AR where Table 3.1-1 is located.</u>

Response to N6 (LCI):
Well types have been summarized in Section 3.7. The reference to Table 3.1-1 was an error. The correct references to Tables 3.1-2A and B have been included.

9. **<u>Comment N7 (LQD):</u>**

Section 3.9.1 – "Groundwater Monitoring": <u>Please add to Section 3.9.1 the following:</u>

1) *<u>a reference to Change No. 7,</u>*
2) *<u>an explanation of Table 3.9-3, and</u>*
3) *<u>add two columns ("well type" and "sampling frequencies") to the table entitled "Groundwater Quality Results" in Appendix A.</u>*

Response to N7 (LCI):

1) The reference to the NSR change number 7 has been added;
2) Explanation of the columns has been provided for Table 3.9-3;

3) The two columns have been added to the results tables.

10. **Comment N8 (LQD):**

Section 4.3 – "Surface Reclamation Activities": Please either add reclaimed area polygons to an existing map or provide a new map with this information (identifications for reclamation areas).

Response to N8 (LCI):
Figure 3.6-1 has been divided into Figure 3.6-1A and Figure 3.6-1B. Figure 3.6-1A includes polygons denoting disturbed versus reclaimed areas.

11. **Comment N9 (LQD):**

Section 5.3 – "Disturbance/Reclamation": Please clarify the accounting of the revegetation of this acreage (3.6 acres of mud pits).

Response to N9 (LCI):
Revegetation status has been clarified in the text and the acreage has been added to the revised Table 3.6-2. Additional acreage for historic drill hole re-abandonment has been added on Table 5.3-1 that was previously omitted. Table header for Table 5.3-1 was added.

12. **Comment T1 (LQD):**

Table 3.1-1 – "Operating Zones": Please add a row for totals to the bottom of this table.

Response to T1 (LCI):
A row with totals has been added to Table 3.1-1.

13. **Comment T2 (LQD):**

Appendix A – "Groundwater Quality Results" Table: Two columns should be added to the Appendix A table: one indicating "well type" and one indicating "sampling frequency".

Response to T2 (LCI):
The Appendix A tables have been modified to include ""Well Type" and "Sampling Frequency".

14. **Comment T3 (LQD):**

Table 3.6-2 – "Disturbance and Reclamation Summary": The following aspects of this table need clarification:

1. The column entitled "Estimated Reclamation Area" is misleading. Please clarify.

2. There is a need for a column in Table 3.6-2 indicating the current on-the-ground-disturbance at this moment in time. An explanation of this apparent topsoil "discrepancy" must be provided in the AR or the appropriate tables must be fixed or added (e.g. short term topsoil stockpiles).

3. "Secondary" and "Two-track" roads, with associated acreages should be tabulated somewhere, either on the map or in the text of the Report.

4. The "Activity" column on Table 3.6-2 includes a category for "Deep Wells". Please clarify this portion of Table 3.6-2.

5. The three acres indicated as being reclaimed at the Plant Site should be depicted on a map. The acreage should also be cross-referenced to Table 3.6-2.

Please address the above-listed five (5) comments on Table 3.6-2 as indicated.

Response to T3 (LCI):
In order to clarify the accounting of disturbance that currently exists through the end of the reporting period, Table 3.6-2 has been completely revised. However, the comments have been addressed as follows:

1. "Estimated Reclamation Area" column has been re-titled "Current Disturbance through AR 2013 Period".
2. Addressed by response #1. Topsoil accounting discrepancy should be resolved by the revised table.
3. Road disturbance acreages have been included on Table 3.6-2.
4. The disposal well identifications have been added on Table 3.6-2.
5. Plant area reclamation listed on Table 3.6-2 is shown on Figure 3.6-1A.

15. Comment T4 (LQD):
Table 3.9-4 – "Groundwater Level Measurements": Please add time vs. water level plots to the 2012/2013 AR and continue to provide those plots in future AR's.

Response to T4 (LCI):
The requested charts have been added to Table 3.9-4.

16. Comment F1 (LQD):
Figure 3.1- 1A – "Site Wells" Map:

1) *The Permit Boundary symbol should encompass the site's access road. The map's contour interval (of 10') should be stated on the map.*
2) *The meaning of the dates in parentheses in the map legend on should be explained.*

Please make the above changes to this Figure.

Response to F1 (LCI):
The above comments were addressed on the revised Figure 3.1-1A. The legend has been revised for clarity to show the distinction between features that were from the previous AR vs. the current AR.

17. Comment F2 (LQD):

Figure 3.2-1B – "Site Wells Mine Unit 1" Map:

1) *The Permit Boundary symbol should encompass the site's access road.*
2) *The dashed rectangular box on the map should be identified either with a label or in the map legend (i.e. as the inset box from Figure 3.1-1A).*
3) *The map's contour interval (of 10') should be stated on the map.*
4) *The meaning of the dates in parentheses in the map legend should be explained.*

Please make the above changes to this Figure.

Response to F2 (LCI):

The above comments were addressed on the revised Figure 3.1-1B. The legend has been revised for clarity to show the distinction between features that were from the previous AR vs. the current AR.

18. Comment F3 (LQD):

Figure 3.3-1 – "Spill Map":

1) *The Permit Boundary symbol should encompass the site's access road.*
2) *The contour interval (of 10') should be stated on the map.*
3) *Labels indicating the affected area of each spill should be added to this map.*

Please make the above changes to this Figure.

Response to F3 (LCI):

The above comments were addressed on the revised Figure 3.3-1.

19. Comment F4 (LQD):

Figure 3.6-1 – "Disturbance and Infrastructure" Map":

1) *The Permit Boundary symbol should encompass the site's access road.*
2) *There is an unlabeled topsoil stockpile symbol in "Inset 1" just north of culvert C-W3.*
3) *The map's contour interval (of 10') should be stated on the map.*
4) *Cattle guards should be indicated on this map.*
5) *This map should depict those (two-track) roads.*
6) *Subsoil stockpiles should be identified on this map.*

Please make the above changes to this Figure.

Response to F4 (LCI):

Figure 3.6-1 has been divided into two separate figures: Figure 3.6-1A: Disturbance and Figure 3.6-1B: Infrastructure. The above comments have been addressed on these new Figures.

20. Comment F5 (LQD):

Figure 5.1-1 – "Exploration Activity" Map":

1) *The Permit Boundary symbol should encompass the site's access road.*
2) *The map's contour interval (of 10') should be stated on the map.*
3) *The meaning of the dates in parentheses in the map legend should be explained.*

Please make the above changes to this Figure.

Response to F5 (LCI):
The above comments were addressed on the revised Figure 5.1-1. The legend has been revised for clarity to show the distinction between features that were from the previous AR vs. the current AR.

21. **Comment B1 (LQD):**
The introductory paragraph on Page 13 of the AR under the heading "Update in Bond Amount" has a typographical error: It indicates the year "2010" while it should read "2012". Please fix this error.

Response to B1 (LCI):
Error has been corrected in text.

22. **Comment B2 (LQD):**
Please expand the explanation columns on Worksheets 2 – 8 (e.g. via text wrapping) to render this column visible.

Response to B2 (LCI):
The columns have been adjusted so all text is visible.

23. **Comment B3 (LQD):**
Worksheet 1, Page 7: Please either indicate and clarify where in this worksheet pump efficiency is accounted for or please add a pump efficiency multiplier to the RO pumping worksheet/calculation.

Response to B3 (LCI):
The full horsepower rating of the pump motor is used to calculate energy cost but not pumping rate. The pumping rate was adjusted, by the designing engineer, to account for system inefficiency and resulting pumping rate. This not only applies to the RO pumps but to all pumps at the facility where the nameplate horsepower is used to determine energy costs but the water flow represents the expected rate based on pump curves.

24. **Comment B4 (LQD):**
Worksheet 1, Page 11: Please adjust the hourly rates on Worksheet 1 Page 11 as indicated.

Response to B4 (LCI):
The matter of hourly rates was raised by WDEQ-LQD while the original permit application, and associated surety estimate, were being reviewed. Considerable discussion regarding this matter was held and LCI provided evidence that the hourly rates provided were in-line with Wyoming wages. As a result of those discussions, WDEQ-LQD and LCI agreed to use the wage rates that are in-line with the current surety. LCI believes WDEQ-LQD should

honor the decision made during permitting and is supplying additional information below to support this position:

The following mean wage information, excluding benefits, is from a May 2012 salary survey performed by the U.S. Bureau of Labor Statistics of Wyoming workers. The complete survey can be found at http://www.bls.gov/oes/current/oes_wy.htm

Water & Wastewater Treatment Plant and System Operators	\$21.54/hr.
Construction Workers	\$14.52/hr.
Plumbers/Pipefitters	\$21.32/hr.
Construction and Extraction Occupation	\$22.21/hr.

The hourly non-professional rates currently used in the surety, \$30/hr. to \$35/hr., are significantly greater than the rates published by the Bureau of Labor Statistics for Wyoming and slightly more than those currently paid by LCI. The current average hourly wage at Lost Creek is \$27.13/hr. which includes outstanding benefits. LCI has found that these rates have attracted qualified individuals with reasonable turnover rates. LCI believes the hourly rates for non-exempt employees in the current surety are more than sufficient; especially since they don't include profit for the contractor which is addressed in other places in the surety estimate.

Likewise, the professional wage rates presented in the current surety are consistent with what LCI pays our exceptionally qualified professional staff (PhD level with over 30 years relevant experience). LQD stated that the actual third party rate incurred by WDEQ in a recent reclamation project was \$80 per hour. This equates to an annual salary of \$166,400 which is unheard of at Wyoming and Nebraska in situ uranium projects. LCI would like to know if the \$80/hr. rate WDEQ paid was for part-time RSO labor, which would support an hourly rate of \$80/hr. If that is the case, LCI is willing to go to the \$80/hr. rate if we can also reduce the RSO's time commitment to the Project. The current surety assumes the RSO will be on-site 40 hours per week for the duration of the groundwater restoration and reclamation. However, for a restoration project the NRC would likely not require an RSO to be present 40 hours per week throughout the project due to the diminished radiologic risk.

The hourly rate for vehicles was updated to \$3.43.

25. <u>Comment B5 (LQD):</u>

Worksheet 3, Page 1: <u>The units cost for the "Demolition Cost per Cubic Foot" is now \$0.28 (from the 2012 version of Guideline 12) instead of \$0.2649. Please change this unit cost.</u>

Response to B5 (LCI):
The demolition cost per cubic foot was updated in Worksheet 3 page 1 to \$0.28 per cubic foot.

26. **Comment B6 (LQD):**

Worksheet 4, Page 1: The cost for "Sludge Handling Cost Per Load" is indicated as $235. Please clarify this line item of the bond in the "explanation" column.

Response to B6 (LCI):

WDEQ is correct that the cost represents two hours of loader time per load of sludge. However, the correct reference is Guideline 12 Table D-1 instead of Appendix J. The explanation has been clarified and the rate updated to $115.78/hr.

27. **Comment B7 (LQD):**

Worksheet 4, Page 3: The cost for "Backfill Cost per Cubic Yard" under the "POND BACKFILL" category on this page indicates a cost of $0.47. This cost comes from Appendix E of Guideline 12 (the 2012 version) and assumes a 1% grade and a 200' distance. Please indicate these assumption (1% grade, 200' distance) in the "explanation" column.

Response to B7 (LCI):

The soil could be more efficiently moved using a push-pull scraper so the backfill cost per cubic yard has been adjusted to use Appendix C Case 1, 0% grade numbers. However, Appendix C has a minimum carry distance of 500 feet but the average carry distance to backfill the ponds will be 300 feet. Therefore, the cost from App C was multiplied by 3/5 to represent the distance for this project. The result is a cost of $0.65 per cubic yard. The explanation and costs in Worksheet 4, Page 3 have been updated.

28. **Comment B8 (LQD):**

Worksheet 6, Page 2: The method of calculating costs for well pump removal should use Guideline 12, Appendix L values. Specifically, the pump removal cost of $0.40 / linear foot (LF) should be applied. If this is done, the pump removal costs change. The following table demonstrates the calculation. Please revise the above portion of Worksheet 6, Page 2 accordingly.

Response to B8 (LCI):

The $0.40/linear foot cost for removing pumps in Guideline 12 Appendix L includes the cost of manpower and equipment. However, the LCI surety is set up so that man power is captured in other spreadsheets. The cost of pump removal in Worksheet 6, Page 2 is just for equipment and expendable. LCI believes the rate of $24.40 per pump is a reasonable estimate of equipment and expendable cost. The explanation in the spreadsheet has been improved to describe what the cost is intended to cover. Since pumps are installed on flexible tubing it only takes about fifteen minutes to remove a pump.

29. **Comment B9 (LQD):**

Worksheet 7, Page 1: The cost for "Grading Cost per Acre" is $75.25 according to the 2012 version of Guideline 12. The worksheet indicates this cost to be $74.60. Please update this cost.

Response to B9 (LCI):

The spreadsheet has been updated to include the $75.25 rate.

30. **Comment B10 (LQD):**

Worksheet 7, Page 2: *For the line item entitled "Hauling/Placement Cost per Cubic Yard", the Appendix being used (B or C) should be stated in the explanation column. Additionally, the assumptions made (e.g. one-way distance and % grade) should also be stated in the explanation column. Lastly, for the line item entitled "Grading Cost per Acre", please use the current cost of $75.25 instead of the outdated cost of $74.60 here. Please revise the table in accordance with the above comments.*

Response to B10 (LCI):
The table has been revised to incorporate LQD's comments.

31. **Comment B11 (LQD):**

Worksheet 7, Page 5: *For the line item entitled "Hauling/Placement Cost per Cubic Yard", the Appendix being used (B or C) should be stated in the explanation column. Additionally, the assumptions made (e.g. one-way distance and % grade) should also be stated in the explanation column. Also, for the line item entitled "Grading Cost per Acre", please use thecurrent cost of $75.25 instead of the outdated cost of $74.60 here. Lastly, for the line item entitled "Scarify Compacted Area per Acre", the current cost is $69.02, not $50.59. Please revise the above items.*

Response to B11 (LCI):
The costs and description have been updated per LQD's comments.

32. **Comment B12 (LQD):**

Worksheet 7, Page 6: *For the line item entitled "Hauling/Placement Cost per Cubic Yard", the Appendix being used (B or C) should be stated in the explanation column. Additionally, the assumptions made (e.g. one-way distance and % grade) should also be stated in the explanation column. Please revise the above items.*

Response to B12 (LCI):
The costs and description have been updated per LQD's comments.

33. **Comment B13 (LQD):**

Worksheet 7, Page 7: *For the line item entitled "Hauling/Placement Cost per Cubic Yard", the Appendix being used (B or C) should be stated in the explanation column. Additionally, the assumptions made (e.g. one-way distance and % grade) should also be stated in the explanation column. Please revise the above items.*

Response to B13 (LCI):
The assumptions have been added to the explanation column.

34. **Comment B14 (LQD):**

Worksheet 8, Page 1: *Under category I entitled "Fence Removal & Disposal", the removal and disposal cost per foot is now $0.32/LF, not $0.28/LF. Please revise accordingly.*

Response to B14 (LCI):
The rate was updated to match LQD Guideline 12 Appendix H. However, the rate was then reduced by 10% to account for the fence only having 3 wires instead of 4 as listed in Guideline 12.

35. **Comment B15 (LQD):**

Worksheet 8, Page 1: Under category II entitled "Culvert Removal & Disposal", the removal and disposal cost per foot is now $6.89, not $3.33. Please revise accordingly.

Response to B15 (LCI):
The rate was updated to match LQD Guideline 12 Appendix J. However, Appendix J assumes a culvert diameter of 48" while the culverts at Lost Creek are typically 18 to 24". To attempt to correct for this difference the rate was multiplied by .75 to yield a 25% reduction.

Addendum

The following other changes have been made in addition to the changes made in response to comments:

- *Section 3.3*: Table 3.3-1 has been edited to include the spill affected area. The spill descriptions have been removed from the table and placed in the narrative of Section 3.3-1.
- *Table 3.9-3:* Analytical methods were revised for the field data table. RPD values and blank results have been added to the Quality Control Sample table.
- *Section 5.3*: Historic hole reabandonment disturbance was added to Table 5.3-1.

2013

ANNUAL REPORT FOR THE LOST CREEK IN SITU PROJECT

REVISION 1

PERMIT TO MINE #788

LOST CREEK ISR, LLC
SWEETWATER COUNTY, WY

PREPARED BY UR-ENERGY USA FOR

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY – LAND QUALITY DIVISION

OCTOBER 21, 2013
REVISED DECEMBER 17, 2013

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FIGURES

Figure 3.1-1A: Site Wells

Figure 3.1-1B: Site Wells Mine Unit 1

Figure 3.3-1: Spill Map

Figure 3.6-1A: Disturbance

Figure 3.6-1B: Infrastructure

Figure 5.1-1: Exploration Activity

TABLES

Table 3.1-1: Operating Wellfields

Table 3.1-2A: Completion Details for Monitoring, Water Supply, and Disposal Wells

Table 3.1-2B: Completion Details for Injection/Production Wells

Table 3.2-1: Plant Flow Totals

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Table 3.6-2: Disturbance and Reclamation Summary

Table 3.6-3: Storage Pond Quarterly Monitoring Results

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Table 3.9-2: Baseline Data for MU1 UCL Calculations

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Table 3.9-4: Groundwater Level Measurements

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Table 5.2-1: Drill Hole Summary

Table 5.2-2: Drill Holes Plugged and Abandoned

Table 5.3-1: Drilling Disturbance Summary

Table 6.0-1: Summary of Surety Changes

APPENDICES

Appendix A: Groundwater Quality Results

Appendix B: 2014 Surety Estimate Draft - Revision1

1.0 TITLE/CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for known violations.

Name: John W. Cash

Title: Vice President (Lost Creek ISR, LLC)

Signature: ______________ **Date:** 12/18/13

Report Prepared by:

Name: Michael Gaither

Title: Manager EHS and Regulatory Affairs

2.0 REPORT INFORMATION

This In-Situ Annual Report (ISAR) has been prepared in accordance LQD Rules and Regulations Chapter 11 Section 15(c), Wyoming Environmental Quality Act WS §35-11-411, and commitments in the Permit to Mine. The report format is consistent with WDEQ-LQD Guideline 4 Reference Document 1 Attachment IX: *In Situ Annual Report Format – July 2013.*

2.1 Permittee

Lost Creek ISR, LLC
A fully owned subsidiary of Ur-Energy USA, Inc.
5880 Enterprise Dr. Suite 200
Casper, WY 82609

Lost Creek Project
Permit to Mine #788 (Oct. 21, 2011)
3424 Wamsutter-Crooks Gap Road
Sweetwater County, WY

2.2 Regulatory Contacts

John Cash
Lost Creek ISR, LLC
Vice President
(307) 265-2373 x 303

Michael Gaither
Ur-Energy USA, Inc
Manager EHS and Regulatory Affairs
(307) 265-2373 x 321

2.3 Reporting Period

The "2013" reporting period covered by this ISAR is:

September 21, 2012 through **September 20, 2013**.

In accordance with W.S. 35-11-411 and LQD R&R Ch11 the AR is due on or within 30 days prior to the anniversary date of the permit, hence, the reporting period is cutoff at September 20. This is to allow time for report preparation since data may still be collected up to the anniversary date.

2.4 Summary of Permit Changes

Table 2.4-1 below lists the changes that have been made to the Permit to Mine since the Permit approval date of October 21, 2011.

TABLE 2.4-1: Summary of Permit Changes Approved to Date

LQD Change Number	LCI Change Number	Change Type	Description	LQD Approval Date	TFN
1	Nov 2011[1]	NSR	Update TOC and binder cover pages	05-Dec-2011	5 5/287
2	May 2012[1]	NSR	Add Section 2.13 to Operations Plan; Update Adjudication Files for Volume 1	25-May-2012	5 6/327
3	Sep 2012[1]	NSR	Add Class V UIC Permit to Volume 1	14-Sep-2012	5 4/353
4	Oct 2012[1]	NSR	Relocation of Deep Disposal Well #4	04-Oct-2012	5 2/357
5	Dec 2012[1]	NSR	Update surety estimate; Temp fuel storage discussion; Update topsoil stripping method	11-Dec-2012	5 6/374
6	Jan 2013[1]	NSR	Reinstallation of three MU1 monitoring ring wells	07-Mar-2013	5 3/389
7	Jul 2013[1]	NSR	Submit MU1 recompletes WQ and new UCL calculations to Volume 6A;	18-Oct-2013	6 1/025

3.0 MINE OPERATIONS

Significant activity since the previous Annual Report includes construction of the project infrastructure, Plant and associated structures, and wellfield portions as well as initial startup of operations.

3.1 Operating Wellfields

Lost Creek initial operations began on August 2, 2013 with the startup of several zones associated with Mine Unit 1 (MU1) which initially was limited to circulation of raw groundwater from the wellfield to the ion-exchange circuit and back. Lixiviant injection had commenced a short time thereafter on approximately August 6.

A complete map of all wells including monitoring, injection, production, water supply, and deep disposal wells is provided as Figure 3.1-1A and Figure 3.1-1B. The status of wellfield zones in operation through the end of the reporting period is displayed on Figure 3.1-1B and summarized on Table 3.1-1 below. Completion details for all wells are summarized on Table 3.1-2A and Table 3.1-2B for monitor wells and injection/production wells, respectively.

TABLE 3.1-1: Operating Zones

Mine Unit	Header House	Number of Wells Installed	Number of Wells Producing (as of Sep. 20, 2013)
1	1-1	61	20
	1-2	60	19
	1-3	72	24
	1-4	76	0
	TOTAL:	**269**	**63**

3.2 Water Balance/Hydrology

3.2.1 Wellfield Water Balance

The total quantity of recovery fluid injected and recovered from the wellfield is summarized in Table 3.2-1:

TABLE 3.2-1: Plant Flow Totals

Flow	Ave Flow Rate (gpm)	Flow Total (gal)	Mine Unit	Date Range	Method of Determining Flow Total
Production Circuit	857	60,065,847	1	Aug 2 – Sep 20	Sum of daily totalizer readings
Injection Circuit	847	59,369,127			
Wellfield Bleed	8	541,222			

Total flow rates are determined by measurements from flow totalizers installed in the lines at the IC/PC pump station within the Plant.

3.2.2 Hydrology

The following pump tests were completed during the reporting period:

- Mine Unit 1 LC25M retest
  - Following the MU1 retest described in the 2012 ISAR, LC25M and HJT-103 responses were anomalous.
  - LC25M was abandoned and reinstalled as LC25MA and HJT-103 was cleaned of silt.
  - A pump test was conducted to determine the hydrologic response of LC25MA following reinstallation and HJT-103 following silt removal.
  - Results were as expected which showed there was drawdown in both wells as a result of pumping water from their associated horizon.

- Mine Unit 2 Mini Pump Test
  - The purpose of the M-HJ203 Pump Test was to assess the level of hydraulic communication between the HJ Horizon (Production Zone), and the overlying FG Horizon and the underlying KM Horizon with the focus on the role that historic exploration drill holes might play in cross-aquifer communication.
  - The results have yet to be fully evaluated.

- Water Supply Single Well Stress Test
  - Supply well LC1148W was tested to demonstrate that it can supply the Plant with sufficient water volume to satisfy the Potable Water permit.
  - The pump test was conducted July 17, 2013 to July 18, 2013. The total length of pumping was 1,445 minutes (1 day), and the average pumping rate was 25.1 gpm.
  - At the current pump setting (600 feet), there is 350 feet of available drawdown indicating that the well is capable of a sustained yield many times the plant requirement of 18,700 gallons per day or 13 gpm.

3.2.3 Wastewater Stream

Waste water generated from Plant operations including primarily wellfield bleed and washdown water from within the Plant was discharged to the Storage Ponds. Injection to the Disposal Well (DW-1) had not commenced during the reporting period. Water quality monitoring of the injectate will be conducted according to the WQD Class I well permit when injection begins.

3.3 Spills

Two reportable spills greater than 420 gallons each occurred on August 3 and 4, 2013 as described in the Spill Report submitted to LQD on August 9, 2013. The spills were composed of only fresh groundwater since injection of lixiviant had not occurred yet. The spills are summarized on Table 3.3-1 below and displayed on Figure 3.3-1.

TABLE 3.3-1: Spill Summary

Spill ID	Date	Affected Area (acres)	Estimated Quantity (gal)	Recovered Quantity (gal)	Location
1I314	8/2/2013	0.08	2,200	N/A	MU1 Near injection well 1I314 near HH1-3
1I309A	8/4/2013	0.01	24,458	13,440	MU1 Trunk line near HH1-2

Spill 1I314: A release of fresh groundwater from a buried HDPE pipe feeding injection well 1I314 from Header House (HH) 1-1. The HDPE lateral line may have been nicked by a backhoe after the line had passed its initial pressure test and then burst upon the addition of water pressure.

Spill 1I309A: A release of fresh groundwater from a 10" diameter injection trunk line leading to Header House 1-2. The cause of the spill was likely a failed gasket that may have been crimped during installation.

3.4 Excursions

No excursions occurred during the reporting period.

3.5 Mechanical Integrity Testing Results for Existing Wells

The following summary (Table 3.5-1) of the MIT data reported on a quarterly basis provides MIT statistics including number of wells tested, passed, failed, and abandoned, or replaced:

TABLE 3.5-1: MIT Summary

Service Performed	4th Qtr 2012 (from Sep 21)	1st Qtr 2013*	2nd Qtr 2013*	3rd Qtr 2013 (through Sep 20)	*Row Totals*
Number of Tests	2	82	142	293	*519*
Tests Passed	2	77	140	264	*483*
Tests Failed	0	5	2	29	*36*
Number of Wells Tested	2	73	141	276	*492*
Wells Abandoned	0	0	0(2)**	5(8)**	*5(10)***
Wells Replaced	0	0	2	8	*10*

**Corrections made from what was reported in the quarterly report*
***(#) Wells abandoned in the following quarter*

The MIT results for each individual well have been provided in the Quarterly Reports.

3.6 New Affected Lands During the Reporting Period

3.6.1 Soil Management

Soil management includes long-term topsoil, short term topsoil, and subsoil as described in the Permit Operations Plan (OP) Section 2.5. During construction of the various structures and features described in Section 3.6.2, topsoil was stripped and stockpiled at various locations as shown on Figure 3.6-1A. Projected topsoil stripping depths shown on Plate OP-3 range from 14 to 24 inches. Actual topsoil depths were not measured during excavation.

Long-Term Topsoil
Long-term topsoil piles were graded to a slope greater than 1-to-3 with a toe ditch cut at the base. Signs labeled with the pile number were installed at each long-term stockpile. Piles were seeded with a tractor and seed-drill with the LQD-approved seed mix in the spring of 2013. Approved seed mix is provided on Table 4.3-1 in Section 4.3. Topsoil pile volumes were estimated by the use of survey-grade GPS data.

A summary of the long-term topsoil piles is provided on Table 3.6-1A below:

TABLE 3.6-1A: Long-Term Topsoil Pile Summary

Topsoil Pile ID	Estimated Volume (cubic yards)	Stockpile Location	Future Reclamation Use
Topsoil 1	4,014	West Road	West Road
Topsoil 2	4,115	West Road	West Road
Topsoil 3	4,451	West Road	West Road
Topsoil 4	4,751	West Road	West Road
Topsoil 5	4,716	West Road	West Road
Topsoil 6	3,133	Plant access	Plant access road
Topsoil 7	1,963	NE of Staging Area	Staging Area and Drill Shop
Topsoil 8	4,755	East Road	East Road
Topsoil 9	5,110	East Road	East Road
Topsoil 10	7,777	East Road	East Road
Topsoil 11	5,449	East Road	East Road
Topsoil 12	2,408	East of DW-4 Pad	DW-4 well pad
Topsoil 13	1,748	East of DW-3 Pad	DW-3 well pad
Topsoil 14*	3,985	Plant Area Topsoil	Plant area (portion of soil has been replaced)
TOTAL IN STOCKPILES:	**58,375**		

**Topsoil volume was originally estimated by calculating the quantity of soil that would have been removed based on the proposed area of disturbance and depth of topsoil removal within the plant perimeter fence. The actual topsoil volume remaining in stockpile was determined by GPS after some topsoil was used for reclamation of areas surrounding the Plant.*

Short-Term Topsoil

Some topsoil had been stockpiled with the long-term stockpiles on a short-term basis. Short-term topsoil stockpiles are typically stored near the point of origin. Most of the short-term topsoil that had been generated was from trunk line installation as described in the Permit Operations Plan Section 2.5.1, from drilling activity, or from temporary office trailer placement. Topsoil had been windrowed next to the trunk line excavation corridors and replaced and reseeded as sections of the trunk line construction were completed (see location of trunk line on Figure 3.6-1B). Topsoil had been removed from the temporary office trailer footprint and stockpiled with Topsoil 6 for short-term storage. Other short-term topsoil was removed in association with MU1 infrastructure and stockpiled at various locations as shown on Figure 3.6-1A. Short-term topsoil stockpiles associated with drilling is described in Section 5.3.

A summary of short-term topsoil is provided on Table 3.6-1B:

TABLE 3.6-1B: Short-Term Topsoil Pile Summary

Topsoil Pile Description	Estimated Volume (cubic yards)	Stockpile Location	Reclamation Status
N-S Trunk Line from Plant to MU1	N/A	Windrowed along excavation corridor	Soil was replaced and reseeded
MU1 Trunk Line	5,722	Windrowed along excavation corridor	Soil still in windrows
MU1 Fuel Depot	83	East of fuel depot	On standby
MU1 HH1-1	107	East of HH1-1	On standby
MU1 HH1-2	444	East of HH1-2	On standby
MU1 HH1-3	83	North of HH1-3	On standby
MU1 HH1-4A	356	East of HH1-4	On standby
MU1 HH1-4B	71	Southwest of HH1-4	On standby
MU1 Road	56	Northwest of HH1-2	On standby
Temp office trailers near Plant main gate	403	With Topsoil 6	Soil was replaced
East main access road borrow ditches	N/A	With Topsoil 8, 9, 10, and 11	Soil was replaced and reseeded
West main access road borrow ditches	N/A	With Topsoil 1, 2, 3, 4, and 5	Soil was replaced and reseeded
TOTAL IN STOCKPILE:	**6,125**		

Subsoil

Subsoil excavated during construction of the holding ponds and the disposal well drill ponds has been stockpiled until pond reclamation is completed. Subsoil was also excavated in conjunction with installation of trunk lines and piled on the area stripped of topsoil next to the main excavation. Subsoil had been replaced as sections of the trunk line construction were completed.

TABLE 3.6-1C: Subsoil Pile Summary

Subsoil Pile Description	Estimated Volume (cubic yards)	Stockpile Location	Reclamation Status
Subsoil 1	6,662	Just west of DW-4 drill pad	In stockpile to be used to replace drill pond excavation
Subsoil 2	6,311	Just east of DW-3 drill pad	In stockpile to be used to replace drill pond excavation
N-S Trunk Line from Plant to MU1	0	N/A	Replaced
MU1 Trunk Line	4,667	Windrowed along excavation	In windrow to be used to backfill trench
MU1 Trunk Line	0	N/A	About half the length of the excavation replaced
TOTAL IN STOCKPILE:	**17,640**		

3.6.2 New Structures/ Construction

Initial construction of the project commenced in October 2012. The structures and features constructed are shown on Figure 3.6-1B and include:

- Access road improvements
- Mine Unit 1 and 2 fencing
- Plant Area structures including:
  - Processing Plant
  - Maintenance Building
  - Holding Ponds
  - Fire Water System and Tank
  - Hydrochloric acid tanks (T-HCL-1 and T-HCL-2)
  - Permanent fuel supply tanks (gasoline, diesel, and propane)
  - Security fencing
- Trunk lines from Plant to MU1 and within MU1
- Header houses HH-1, HH-2, HH-3, and HH-4 (incomplete)
- MU1 lateral pipelines
- MU1 oxygen tank
- MU2 monitor wells including monitor ring
- MU1 Drill shop and associated staging area
- MU1 temporary fuel station (gasoline and diesel) by staging area
- Deep Well DW-1 well head, pump house, and pipeline
- Deep Well DW-3 drilling pad and pond
- Deep Well DW-4 drilling pad, pond, and well head

A summary of the associated disturbance acreages is provided on Table 3.6-2.

3.6.3 Ponds

Two holding ponds used for intermediate holding of liquid waste stream prior to injection in the deep disposal well were constructed. Construction details are included in Attachment OP-7 of the Permit to Mine Operations Plan and inspection and monitoring requirements are discussed in Section OP 2.9.4 of the Permit. The ponds are permitted by NRC, EPA, BLM, and WSEO. The pond locations are shown on Figure 3.6-1. Each pond is approximately 155 feet wide by 260 feet long with a capacity of 2.3 acre feet (approximately 0.75 million gallons). Pond inspections are performed daily and include a check of freeboard height to make sure there is at least 3 feet of vertical freeboard from the top of the pond rim to the water surface. At the end of the reporting period the ponds were full to near the limit and the freeboard depth was 4.1 feet and 3.1 feet for N Pond and S Pond, respectively. Freeboard depth must be 3 feet or greater.

Quarterly water quality sampling was conducted on September 12, 2013. The results are provided on Table 3.6-3 below:

TABLE 3.6-3: Storage Pond Quarterly Monitoring Results

Sample Location	Sample Date	Alkalinity, Total as CaCO3 *A2320B*	Chloride *E300.0*	pH *SM4500-H+B*	Sodium *E200.7*	Sp. Cond. @ 25°C *120.1*	Sulfate *E300.0*	TDS @ 180°C *A2450*	Arsenic *E200.8*	Selenium *E200.8*	Uranium *E200.8*	Radium 226 *E903.0*
		mg/L	*mg/L*	*s.u.*	*mg/L*	*uS/cm*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*pCi/L*
N Pond	9/12/2013	99	138	--	103	--	149	574	0.004	0.024	0.441	115
N Pond	9/13/2013	--	--	8.07	--	906	--	--	--	--	--	--
S Pond	9/12/2013	116	121	--	91	--	156	574	0.005	0.027	0.164	142
S Pond	9/13/2013	--	--	8.04	--	896	--	--	--	--	--	--

3.6.4 Infrastructure

Roads and power lines were constructed as shown on Figure 3.6-1B. The injection, production, and Mine Unit trunk lines are also shown. Many of the secondary and two-track roads shown on the map had existed prior to construction. Disturbance associated with constructed roads is also shown on the map.

3.7 New Wells/Wellfields Installed During the Reporting Period

Phased construction of MU1, including header houses, injection and production wells, and infrastructure commenced in October of 2012. The wells and wellfield structures (i.e. header houses) are shown on Figure 3.1-1B. A total of 69 monitoring wells, including 28 monitoring ring, 39 interior (3 sets of 13), and 2 observation wells, had already been installed in MU1. The monitoring wells of MU2, including 31 ring wells and 45 (15 sets of 3) interior monitor wells were installed in addition to other wells installed during the reporting period that are listed on Table 3.1-2A.

A total of 450 injection and 230 production wells were installed in MU1 during the reporting period and are included on Table 3.1-2B. An "I" in the well name indicates that it is an injection well and a "P" designation indicates a production well.

Disposal well DW-4 was installed in addition to the previously installed DW-1. The pad for DW-3 was constructed but the well had not been drilled.

3.8 Class III Well Stimulation Activity

No stimulation activities for Class III wells occurred during the reporting period.

3.9 Environmental Monitoring

3.9.1 Groundwater

Groundwater quality monitoring data is included as Appendix A. Routine groundwater monitoring for MU1 was initiated in August 2013. The MU1 monitoring ring wells that were recompleted or reinstalled were sampled for Mine Unit baseline water quality to establish new Upper Control Limits (UCL). The UCLs for Lost Creek include alkalinity, chloride and specific conductance. Additional recent data collected in July 2013 was used for recalculation of UCLs with approval of LQD to account for the time gap spanning 2009 to 2013. The additional data and calculations were approved and incorporated in to the Permit Volume 6A through the non-significant revision (Change No. 7) listed on Table 2.4-1. The recalculated UCL values are included in Table 3.9-1 below.

TABLE 3.9-1: Recalculated UCL Values

Well Group[1]	Alkalinity as CaCO3 (mg/L)			Chloride (mg/L)			Specific Conductance (µmhos/cm)		
	Mean	Standard Deviation	UCL	Mean	Standard Deviation	UCL[2]	Mean	Standard Deviation	UCL
All M wells	114.7	14.3	186.2	5.5	0.7	20.5	529.4	96.6	1012.4
All MO wells[3]	101.2	16.2	182.1	6.4	1.5	21.4	486.1	87.1	921.7
All MU wells[4]	81.9	24.8	206.0	6.3	2.5	21.3	432.1	45.4	658.9

[1] *See Table 3.9-2 for the sampling results of each well and Permit Attachment MU1 4-1 for outlier analysis*
[2] *Per WDEQ-LQD Guideline 4 (2000), the UCL was calculated by adding 15 mg/L to each mean chloride concentration.*
[3] *The first two alkalinity values of well MO-112 were outside the tolerance intervals, but were not considered outliers; therefore, they are included in these calculations.*
[4] *The first chloride value for well MU-113 was outside the tolerance interval and considered to be an outlier; therefore, it is not included in these calculations.*

UCL baseline data is included on Table 3.9-2. Monitoring of UCL parameters is performed in accordance with Permit OP-3.6.4. Operational monitoring results for UCL values are shown on Table 3.9-3. Table 3.9-3 includes columns for "Assay" which is the analytical result, "UCL" which is the calculated UCL value, and "% Diff" which is the percent difference between the assay value and the UCL. A negative % Diff indicates no excursion. Two conditions indicate a potential excursion: if a % Diff is greater than 20 for any one assay result or; if two of three assay values exceed the UCL value.

All other groundwater monitoring results are included in Appendix A including field collected data and Quality Control sample IDs.

Groundwater levels were measured in conjunction with UCL sample collection to monitor for significant changes in levels. Resulting data provided as depth to water are listed on Table 3.9-4. Typically, if there is a sudden change of several feet the measurement will be investigated and corrective action applied such as re-measuring the water level or adjusting wellfield balance as necessary. No significant actions, other than measurements being verified, have been necessary as a result of water level changes. Changes in water levels will continue to be tracked over time as more data is available.

3.9.2 Surface Water

Due to the ephemeral nature of surface water at the Lost Creek project site surface water quality is not typically feasible. No surface water quality was determined for the reporting period since no surface runoff was collected.

3.9.3 Wildlife

The results of wildlife monitoring for the 2012 calendar year are included in the Annual Wildlife Monitoring Report submitted to WDEQ-LQD on April 22, 2013. Wildlife monitoring for the 2013 calendar year will be provided in the 2013 Annual Wildlife Monitoring Report due in the spring of 2014.

3.10 Deviations or Unanticipated Events or Conditions

The following conditions occurred during the reporting period:

- UCL values were recalculated to include recent data collected just prior to operation to account for the time gap from the original baseline sampling events in 2009.
- A small concrete washout area was established during construction of the Plant foundations and other related structures. It has since been reclaimed.
- The Storage Pond liner specifications were changed due to the unavailability of liner matching the original specifications. The original specification stated a thickness gauge of 48 mil. Liner was available in a gauge of 45 mil and was approved and used for the pond construction.
- Visibility markers were added to the Mine Unit fencing for sage grouse protection according to BLM specifications.
- A drilling pit was inadvertently excavated within drainage in the southeastern portion of MU1. The area was immediately reclaimed and then seeded in February 2013.
- For well completion, a PVC coupler as opposed to a "j-collar" has been used for the screen assembly.
- As a result of findings from the weekly inspection on 1/9/2013, better monitoring of cement weights was initiated to ensure the proper weight of cement used in well construction. New cement balances were purchased and another one was refurbished. Weekly calibration of balances was also initiated.
- Areas around several culverts (CE-3, CE-1, CP-1, and CW-2) were susceptible to erosion due to rare heavy rains and will be reclaimed and modified for silt and erosion control.
- Some extraneous vehicle tracks in native areas were noted at various locations. Signage, t-posts, and administrative controls will be implemented to minimize vehicle

travel in areas to be preserved form disturbance. Approved vehicle routes will be delineated as necessary.

3.11 Projected Operations

Projected operations are included in the schedule for the bond calculation discussed in Section 6.0. To summarize the anticipated operations for the next reporting year:

- Mine Unit 1
    - Continued installation and operation of injection and production wells, MU1 header houses 4 through 11, and associated infrastructure.
    - Intermediate restoration of disturbed areas such as drill sites, temporary staging areas, roads, within the fenced boundary.
- Mine Unit 2
    - Hydrologic pump tests will be completed
    - Installation of injection and production wells
    - Delineation of travel routes will occur as much as feasible to preserve native ground and topsoil

4.0 RECLAMATION/RESTORATION ACTIVITIES

4.1 Groundwater Restoration Activities

Groundwater restoration operations have not commenced.

4.2 Well Plugging and Abandonment Reports

A total of 33 cased or completed wells were abandoned during the reporting period. Injection and production well holes that were piloted and abandoned are included in the exploration drill hole abandonment list discussed in Section 5.2. A summary table of well abandonment is provided as Table 4.2-1 and locations are shown on Figure 3.1-1A and Figure 3.1-1B.

4.3 Surface Reclamation Activities

Several areas were reclaimed following construction due to the construction-related disturbance shown on Figure 3.6-1B. Areas around the Plant site were recontoured with topsoil borrowed from Topsoil 14 and reseeded. The borrow ditches next to the refurbished roads was covered with topsoil borrowed from the long-term piles along the road and reseeded. The area underlying the temporary office was recontoured with topsoil stockpiled with Topsoil 6 and will be reseeded. The main trunkline corridor from the Plant to MU1 was regraded with topsoil and reseeded. Drill sites for the injection, production, and monitor wells were recontoured but not reseeded as described in Section 5.3. A summary of reclamation is included on the disturbance summary Table 3.6-2.

Long-term topsoil piles Topsoil 1-11 were seeded with approved seed mix in April 2013. Other topsoil piles will be seeded in the Fall 2013.

Reclaimed areas were recontoured with topsoil and reseeded with the approved seed mixture listed on Table 4.3-1 below:

TABLE 4.3-1: LQD-Approved Seed Mix

SEED	lbs-PLS/acre
Thickspike Wheatgrass	4
Western Wheatgrass	2
Indian Ricegrass	2
Great Basin Wildrye	2
Big Sagebrush	1
Winterfat (Ceratoides lanata)	1.5
Slender Wheatgrass	2.5
Sandberg Bluegrass	1.5
Total	16.5

4.4 Deviations or Unanticipated Events or Conditions

No deviations to the approved Reclamation Plan occurred.

5.0 DRILL HOLE REPORTING

5.1 Area of Activity

A map depicting the area of exploration or delineation drilling, drill hole reclamation, and historic hole re-abandonment activity for the reporting period is provided as Figure 5.1-1.

5.2 Drill Hole Summary

Drill holes that were installed for delineation purposes are included on Table 5.2-1. A total of 143 delineation holes in MU2 were drilled and subsequently plugged during the reporting period. Plugged and abandoned delineation drill holes are listed on Table 5.2-2.

175 historic exploration holes located within MU2 were washed out and reabandoned. Historic holes are shown on Figure 5.1-1 and summarized on Table 5.2-2.

5.3 Disturbance/Reclamation

Disturbance at each drilling location was estimated to be approximately 0.025 acres due to drilling and mud pit excavation. Topsoil was preserved at each location during excavation according to mud pit excavation procedures in the Permit to Mine OP-2.5.1. Reclamation of areas disturbed due to drilling and historic drill hole re-abandonment covering approximately 8.0 collective acres included hole plugging, mud pit backfilling, topsoil replacement, and contouring. However, reseeding has not occurred.

Table 5.3-1: Drilling Disturbance Summary

Drilling Type	Location	Number of Drill Locations	Acreage Per Location	Total Acres of Drill Hole Disturbance
Delineation	MU2	143	0.025	3.6
Historic Hole Re-abandonment	MU2	175	0.025	4.4
			TOTAL:	**8.0**

5.4 Reclamation Seeding Details

No seeding of delineation drill hole locations occurred during the reporting period.

6.0 RECLAMATION PERFORMANCE BOND ESTIMATE

The draft recalculated bond (surety) estimate and projected reclamation schedule (Table RP-4 and RP-5) for the next reporting period of September 2013 to September 2014 is included as Appendix B pursuant to WS 35-11-417(c)(ii) and WS 35-11-411(a)(iii). Upon LQD approval, the surety estimate will be installed in the Permit through a Non-Significant Revision.

Update in Bond Amount
The currently revised bond is in the amount of **$14,483,000** which is an increase from the 2012 bond in the amount of $8,599,391. The change in bond amount is mostly reflective of the construction and commencement of the project. Increases have been in the estimation of operable Mine Unit 1 area and amount of structures and wells that will be constructed. The bond currently in the Permit included the 2012-2013 bond estimate and will be replaced by the new 2013-2014 bond estimate.

Overall, the bond amount has increased but brief explanations of the changes are offered as follows:

TABLE 6.0-1: Summary of Surety Changes

Summary Item	Bond Worksheet	Change	Explanation of Changes
Groundwater Restoration	Worksheet 1	Increase	Increase in anticipated wellfield affected area and well counts;
Plant Equipment Removal and Disposal	Worksheet 2	Increase	Increased ion exchange system removal costs
Plant Building Demolition and Disposal	Worksheet 3	Increase	Added maintenance shop plus increase in costs overall based on as-built construction
Storage Pond Sludge and Liner Handling	Worksheet 4	Decrease	Reduced sludge volume estimates
Well Abandonment	Worksheet 5	Decrease	Reduced cost of materials
Wellfield Equipment Removal and Disposal	Worksheet 6	Increase	Increase in trunkline, wellfield piping, and well pump removal costs
Topsoil Replacement and Revegetation	Worksheet 7	Increase	Increase in wellfield area restoration cost plus increase in topsoil volume estimates
Miscellaneous Reclamation Activity	Worksheet 8	Decrease	Decrease in cost of Deep Well pipeline removal

The Following ~~6~~ 5 Drawings Specifically Reference

FIGURES
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One–Line Drawings
Provided in
Revised 2013 Annual Report for Lost Creek

Figure 3.1-1A: Site Wells; Figure 3.1-1B: Site Wells Mine Unit 1; Figure 3.3-1: Spill Map; Figure 3.6-1A: Disturbance; Figure 3.6-1B: Infrastructure; Figure 5.1-1: Exploration Activity

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