Cameco

CAMECO RESOURCES
Smith Ranch-Highland Operation
Mail:
P.O. Box 1210
Glenrock, WY
82637 USA

Tel: (307) 358-6541
Fax: (307) 358-4533
www.cameco.com

July 31, 2012

Mr. Lowell Spackman, District 1 Supervisor
Land Quality Division
Wyoming Department of Environmental Quality
Herschler Building, 3rd FL-West
122 W. 25th Street
Cheyenne, WY 82002

HAND DELIVERED

RE: Permit to Mine 603, Cameco Resources, Highland Uranium Project, 2011-2012 Annual Report

Dear Mr. Spackman:

Enclosed please find two (2) copies of Power Resources, Inc. d/b/a/ Cameco Resources (Cameco) 2011-2012 Annual Report for Permit 603, Highland Uranium Project. The report addresses applicable reporting requirements of the approved permit application, WDEQ Annual Report Form, and W.S. 35-11-411.

In the WDEQ-LQD 2010-2011 Annual Report Review received June 7, 2012, several comments requested information be addressed within the 2011-2012 Annual Report. Attached to this letter are WDEQ-LQD comments 38 through 44 and responses from Cameco.

Please contact me at 307-358-6541, ext. 476 or email to Kenneth_Garoutte@cameco.com if you have any questions.

Sincerely,

Ken Garoutte
Safety, Health, Environment, Quality (SHEQ) Manager

KG/kg

Attachments: Annual Report binders (2 copies), 2010-2011 Annual Report Responses to comments 38 through 44

cc: File HUP 4.3.3.2
D. Mandeville, USNRC, CERTIFIED MAIL #70110470000102020685
Document Control Desk, USNRC, CERTFIED MAIL #70110470000102020692
T. Foertsch, Casper Field Office, BLM, CERTFIED MAIL #70110470000102020708
ec: Cameco-Cheyenne

FSME 20

Cameco Resources

POWER RESOURCES, INC.
dba/Cameco Resources

HIGHLAND URANIUM PROJECT

WDEQ PERMIT #603

ANNUAL REPORT

May 1, 2011 through April 30, 2012

Submitted
July 31, 2012

Permit 603, Highland Uranium Project, Cameco Resources
2010-2011 Annual Report Review Comments

Introduction

WDEQ-LQD provided review and comment to the 2010-2011 Annual Report. LQD requested responses to comments 38 through 44 be provided in the next Annual Report period. Below are the LQD comments and responses from Cameco.

Comments

38. *Appendix C, Surety Estimate, Page 4. Recent inspections of wellfields considered in production but in the very late stages of mining are a concern as LQD remains concerned that restoration is being delayed. The restoration delays continue to be an issue of complexity which CR has demonstrated little success to achieve. Most, if not all of the wellfields included in Permit 603 are in active restoration or late stages of mining. CR discovered a need for wellfield refurbishment in MUs C, D, Dext., E, and F. It would be expected that similar refurbishment will be necessary in MUs H, I and J. Please provide an estimate for the refurbishment costs for these wellfields in the 2011-2012 surety estimate.* ***(PCR)***

Cameco Response: Cameco agrees that refurbishment is necessary in Mine Units H, I and J. The 2011-2012 surety estimate includes 59 well replacements in Mine Unit H, 47 well replacements in Mine Unit I, and 18 well replacements in Mine Unit J at a cost of $14,000 per well. There are also 19 bellhole refurbishments in Mine Unit H and 6 bellholes in Mine Unit I, at a cost of $5,972 per bellhole. Additionally, there are 10 header house refurbishments in Mine Unit H, 6 in MU I and 9 in MU J at a rate of $32,000 per header house. Refurbishment costs for these three mine units total $2,680,800 and are included in the surety estimate.

39. *Appendix C, Surety Estimate, Page 8. Regarding disposal costs, the page shows a transportation and disposal unit cost to the county landfill for Well Head Covers of $8.115/CY. However, only the disposal cost at the county landfill for Header Houses is $8.12/CY. LQD questions the inclusion of the transportation cost in the $8.115/CY. Please distinguish the transportation costs for disposal of all waste taken to the county landfill. Provide the information in the 2011-2012 surety estimate.* ***(PCR)***

Cameco Response: Disposal and transportation costs were updated for the 2011-2012 surety estimate. Current invoicing (billing period 06/01/12-06/30/12) indicates that the cost for disposal in a county landfill is $7.66/CY. This cost includes a fuel and transportation surcharge. Based on this billing, transportation accounts for approximately $0.19 per CY of material disposed. Copies of this invoice are available for review at the Smith Ranch facility. (The $8.12/CY used for Header House disposal is from Guideline 12, Appendix K, which outlines cost estimates for the demolition of facility buildings. This guideline does not address transportation costs.)

40. *Appendix C, Surety Estimate, Page 14. A cost is not included for the Satellite 3 Building Utility Cost. LQD has not been able to verify which facilities will be used in restoration. Documentation of restoration process fluids and the facilities that are used is necessary in the Annual Report. Please provide a utility cost for Satellite 3 or documentation of the facilities that are used to restore all wellfields in the 2011-2012 surety estimate.* ***(PCR)***

Cameco Response: Satellite 3 does not facilitate restoration at Highland. The only facilities used to facilitate restoration at Highland are Satellite 2, the Selenium Plant, and the three deep disposal wells (SRHUP #9, Vollman 33-27, and Morton 1-20).

41. *Appendix C, Surety Estimate, Building Utilities Costs. Satellite No. 2 is showing eleven (11) years of operation required for restoration/reclamation. The approved restoration schedule shows MU-K in restoration through 2029. It could be CR's justification for using eleven years is that the facilities would only be necessary for eleven years from the time the operation ceased in the event of bond forfeiture. However, this cannot be assumed as the restoration is sequenced, based on an approved water balance which includes mining. LQD would be willing to discuss an interim bond water balance and restoration schedule based on the event of bond forfeiture. To accommodate a review of this change, CR would be required to present a separate interim water balance and restoration schedule that effectively demonstrates that multiple wellfields can be restored simultaneously. Until a permit revision is approved to accommodate a change, the full restoration period is required for the use of the facilities. Please correct the number of years of operation. The same applies to the Selenium Plant and the deep disposal wells. As a result of the correction to the years of operation, the costs also need to be corrected. Please correct the surety estimate in the 2011-2012 surety estimate.* ***(PCR)***

Cameco Response: All years of operation for restoration, which includes the selenium plant and deep disposal wells, have been changed to reflect seventeen years of operation, which is consistent with the restoration schedule.

42. *Appendix C, Surety Estimate, Page 24. Please provide itemized costs for the shallow well casing leak mitigation in the 2011-2012 surety estimate.* ***(PCR)***

Cameco Response: An itemized cost from Telesto was obtained and is included in the 2011-2012 surety discussion. Total cost for this work is estimated to $3,055,865 and this number is reflected in the surety estimate.

43. *Appendix C, Surety Estimate, Page 23. The estimated cost to remove 1.0 feet of soil and transport to an 11e(2) waste disposal facility is approximately $11,138,257.70. Note: a cost to replace topsoil has not been added; however, LQD will assess the need to replace the*

topsoil and may require additional costs for replacement in the future. Please correct the surety estimate to show this change. The calculation for the increase to the surety is shown on the attachment to this review. ***An increase in the surety for the amount of $138,740,000.00 is required as shown in the attached calculation (Attachments 1-3). (PCR)***

Cameco Response: Cameco recognizes the need to remediate this area. However, Cameco hopes to remediate this area in a manner that causes less disturbance and is less costly. Currently, Cameco is acquiring a proposal from the University of Wyoming to further analyze the speciation work previously done at the two pivots. Cost estimates for that study from UW are $70,000 to $80,000 and will include payments to UW, sampling and additional speciation. Additionally, a new proposal from Golder and Associates to update a March 30th, 2011 letter has been requested. Golder and Associates have made a remediation plan. Cameco has provided WDEQ-LQD a letter dated July 23, 2012 discussing plans to further characterize the irrigator soil issues and provide recommendations to remediate the area.

44. *Appendix C, Surety Estimate. Staffing to conduct the groundwater restoration and subsequent surface reclamation is not clearly presented in the surety estimate. LQD understands that some of the labor costs are included as operator costs assigned to equipment, however, many labor costs are not clearly identified. For example, in the Equipment section of the surety, labor costs include the number of persons assigned to the task. On the contrary, in the, Groundwater Restoration section, Well Abandonment section, Wellfield Reclamation section, Wellfield and Satellite Surface Reclamation section, Buildings section, and Miscellaneous section, labor costs are not identified. CR has included limited supervisory labor costs in the Groundwater Restoration section, however, these costs are not sufficient to cover the labor costs required to complete the necessary restoration/reclamation work. LQD does not have information on current operational staffing to meet the needs of the operation. Therefore, CR will need to provide a detailed tabulation for the labor requirements for restoration/reclamation and show all associated costs in the surety estimate. Please identify all necessary labor costs in the 2011-2012 surety estimate.* ***(PCR)***

Cameco Response: The Groundwater Restoration section accounts for one manager, one Health Physics (HP) Technician, and five laborers over the life of restoration. For Well Abandonment, labor is included with each estimate on the Unit Cost page, and in many other unit cost calculations. Additionally labor (operator) costs are included with each equipment estimate The Equipment and Building demolition costs include labor based on the number of people required to remove equipment, the number of days it will take, and the dollars per day required to remove. For example, on the Equipment Page, this is found in section I in all subsections.

Cameco Resources
Highland Uranium Project
2011-2012 Annual Report
Permit 603

Table of Contents

Page

1.	Introduction	4
2.	Reporting Period	8
3.	Mining Activities	8
4.	Reclamation Activities	14
5.	Groundwater Restoration Activities:	16
6.	2012-2013 Mining Plans	21
7.	2012-2013 Reclamation Plans	22
8.	Monitoring Activities	25
9.	2012-2013 Reclamation Surety Estimate Revision	33
10.	Additional Information	33
11.	2011-2012 Delineation Drilling	36
12.	2012-2013 Proposed Delineation Drilling	37
13.	Certification and Signature	38

Attachments

Annual Report Attachment

Tables

3-1	Affected Area Summary
3-2	Topsoil Stockpile Summary
3-3	Uranium Production by Year
3-4	Wellfield Release Summary
3-5	Facility Water Balance Report
3-6	Mine Unit A Long Term Monitoring Plan Data
3-7	C Wellfield Selected Mean Water Quality Characteristics at Wells CMP-1 through 32
4-1	Interim Reclamation Activities
7-1	Satellite No. 1 Land Application Facility (Irrigator No. 1) Annual Vegetation Data
7-2	Satellite No. 2 Land Application Facility (Irrigator No. 2) Annual Vegetation Data
7-4	Satellite No. 2 Land Application Facility (Irrigator No. 2) Irrigation Fluid Data

7-5 Satellite No. 1 Land Application Facility (Irrigator No. 1) Fluid Volumes Applied
7-6 Satellite No. 2 Land Application Facility (Irrigator No. 2) Fluid Volumes Applied
7-7 Satellite No. 1 Land Application Facility (Irrigator No. 1) Annual Soil Data
7-8 Satellite No. 2 Land Application Facility (Irrigator No. 2) Annual Soil Data
7-9 Satellite No. 2 Purge Storage Reservoir Shallow Monitoring Wells Quarterly Water Level Data Semi-Annual Water Quality Data
7-10 Satellite No. 2 Purge Storage Reservoir New Shallow Monitoring Wells Quarterly Water Quality Data
7-11 Monthly Radium Grab Samples at the Discharge from the Radium Treatment System, Selenium Plant
8-1 Annual Raptor Nest Survey
10-1 2011-2012 Delineation Drilling Report Table
10-2 Delineation Drilling Bond Release Request
10-3 Vegetation Bond Release Request
10-4 Unplanned Delineation Holes
10-5 Open Delineation Holes Found
10-6 Meteorological Data
10-7 Pre-Restoration Sampling (Guideline 8).

Figures

7-1 Mean Selenium Concentrations (mg/kg) in Vegetation Samples from Irrigator No. 1 During 1996-2011
7-2 Mean Selenium Concentrations (mg/kg) in Vegetation Samples from Irrigator No. 2 During 1996-2011
7-3 Mean Conductivity, Selenium, Uranium, and Radium-226 Concentrations in Soil Samples from Irrigator No. 1 During 1986 and 1990-2011
7-4 Mean Conductivity, Selenium, Uranium, and Radium-226 Concentrations in Soil Samples from Irrigator No. 2 During 1993 and 1995-2011

Appendices

A Current Approved Estimated Mining and Restoration Schedule
B Annual Monitoring Report for Boner Bros. Partnership
C 2012-2013 Reclamation Surety Estimate Revision
D NRC Semi Annual Effluent and Environmental Monitoring Report Data
E Restoration Sampling Data & Iso-concentration Maps
F Wildlife Report

Plates

1 Site Map
1-1 Reference Map (HUP)

1-2 Reference Map (HUP)
1-3 Reference Map (HUP)
1-4 Reference Map (HUP)
1-5 Reference Map (HUP)
1-6 Reference Map (HUP)
1-7 Reference Map (HUP)
2 Acreage Affected
2-1 Reference Map (HUP)
2-2 Reference Map (HUP)
3-1 & 3-5 Abandoned Delineation Drill Hole Maps

REQUIRED ANNUAL REPORT INFORMATION FOR NON-COAL LARGE MINING OPERATIONS

Land Quality Division, Districts I, II & III

RE: Wyoming Environmental Quality as Amended §35-11-411, Annual Report

1. Introduction

(a) Name of Permittee

Power Resources Inc. d/b/a Cameco Resources (Cameco)

(b) Address and Phone Number

P.O. Box 1210
Glenrock, Wyoming 82637
(307) 358-6541

(c) Mining Permit Number

Wyoming Permit to Mine No. 603

(d) Date of Permit Issuance and Amendments

The Permit was issued June 30, 1987. The permit has been revised as follows:

Change No. 1 (Incidental Boundary Revision): April 29, 1988

Change No. 2 (Section 21 Monitor Well Relocation): July 25, 1988

Change No. 3 (Section 14 Amendment): June 27, 1989

Change No. 4 (WDEQ/LQD Approvals Prior to Injection): September 8, 1989

Change No. 5 (Permit Transfer from EMC to PRI): January 9, 1990

Change No. 6 (Incidental Boundary Revision - Pre-mining Construction Activities for the E-Wellfield): May 24, 1991

Change No. 7 (West Highland Amendment, Permit No. 603-A2): October 15, 1991

Change No. 8 (E-Wellfield Hydrologic Test, Authorization for Production Activities in E-Wellfield): November 8, 1991

Change No. 9 (Monitoring Frequency Language Clarification): May 27, 1992

Change No. 10 (Section 14 Haulageway Addition to C-Wellfield Production Zone): November 3, 1992

Change No. 11 (Proposed F-Wellfield Monitoring Plan): November 3, 1992

Change No. 12 (Revised Monitoring Well Density): February 8, 1993

Change No. 13 (Alternate Well Completion Technique): March 17, 1993

Change No. 14 (Contract Drying of Yellowcake Slurry): March 30, 1993

Change No. 15 (Wellfield Instrumentation, Injection Pressure Monitoring): April 5, 1993

Change No. 16 (Reduced Baseline Water Quality Sampling Requirements): February 9, 1994

Change No. 17 (Revised Monitor Well Sampling, One Casing Volume): February 18, 1994

Change No. 18 (F-Wellfield Hydrology Test Data): March 1, 1994

Change No. 19 (F-Wellfield Baseline Water Quality Data, UCL's): March 1, 1994

Change No. 20 (Initial F-Wellfield Monitoring): March 1, 1994

Change No. 21 (Conditional Approval of Satellite No. 2 Wastewater Land Application Facility): March 11, 1994

Change No. 22 (Approval of Responses for F-Wellfield and Satellite No.2 Wastewater Land Application Facility): April 18, 1994

Change No. 23 (F-Wellfield Revised Monitoring Plan): September 29, 1994

Change No. 24 (Satellite No. 2 Wastewater Land Application Facility): December 13, 1994

Change No. 25 (Satellite No. 1 Purge Storage Reservoir Rework Revision Package): April 17, 1995

Change No. 26 (Satellite No. 1 Irrigation Area 1B): May 26, 1995

Change No. 27 (F-Wellfield Revised Monitoring Plan): August 2, 1995

Change No. 28 (Satellite No. 2 Purge Storage Reservoir Berm Designs): August 23, 1995

Change No. 29 (80 Acre Amendment, Satellite No. 1 PSR Corrective Action Plan): October 6, 1995

Change No. 30 (F-Wellfield Revised Monitoring Plan): December 13, 1995

Change No. 31 (Drilling Fluid Storage Cells): December 30, 1996

Change No. 32 (Revised Mining and Reclamation Schedule): April 28, 1997

Change No. 33 (Permit Transfer): July 15, 1997

Change No. 34 (Restoration Wells, Topsoil Management, and Interceptor TrenchDesign): January 14, 1998

Change No. 35 (Modification to Resistivity Surveying): March 16, 1998

Change No. 36 (Directional Drilling): March 17, 1998

Change No. 37 (Irrigation Fluid Monitoring): May 28, 1998

Change No. 38 (FMU-5 and FMU-6 Monitoring): July 31, 1998

Change No. 39 (F-11 Restoration Methodology Investigation): August 28, 1998

Change No. 40 (Permit Reorganization): October 19, 1998

Change No. 41 (Operations at the H-Wellfield): December 21, 1998

Change No. 42 (Groundwater Treatment, CO2 Removal): February 4, 1999

Change No. 43 (Modification to Resistivity Surveying): May 5, 1999

Change No. 44 (Revised UCLs for B-Wellfield): August 31, 1999

Change No. 45 (Irrigation for Well EPI-149 Casing Break): September 13, 1999

Change No. 46 (Well Maintenance Procedures): October 25, 1999

Change No. 47 (Option to Use SDR-17 PVC Well Casing): November 12, 1999

Change No. 48 (Change of Mechanical Integrity Testing Method): December 14, 1999

Change No. 49 (Operations at the D-Extension Wellfield): February 14, 2001

Change No. 50 (Groundwater Monitoring During Restoration): August 13, 2001

Change No. 51 (Bioremediation Test): August 22, 2001

Change No. 52 (Upper Control Limits for Well DMU-6): November 8, 2001

Change No. 53 (Upper Control Limits, Target Restoration Values, and Pump Test for I-Wellfield): May 3, 2004

Change No. 54 (Bioremediation as a Method to Restore Groundwater): May 4, 2004

Change No. 55 (A-Wellfield Long Term Monitoring Plan): June 7, 2004

Change No. 56 (Mine Unit J Boundary Amendment): March 29, 2006

Change No. 57 (Incidental Boundary Revision): May 8, 2006

Change No. 58 (UCL's Mine Unit-J Monitor Wells): May 10, 2006

Change No. 59 (Mining Sequence Mine Unit-J): May 26, 2006

Change No. 60 (Nutrient Change-Bioremediation): August 24, 2006

Change No. 61 (Approved Permit Transfer): November 18, 2008

Change No. 62 (Revision to Restoration Plan): December 31, 2008

Change No. 63 (Selenium Treatment Plant): February 19, 2009

Change No. 64 (Mine Unit-C Restoration Plan): April 3, 2009

Change No. 65 (Reclamation Plan Excursion Reporting): June 15, 2009

Change No. 66 (Correction to Restoration Schedule): July 30, 2009

Change No. 67 (Revision to Seed Mix): November 19, 2009

Change No. 68 (New Restoration Well Installation – Mine Unit D): February 3, 2010

Change No. 69 (Selenium Sampling Plan for Irrigation Use, Concurrence to Use Irrigator 2): April 26, 2010

Change No. 70 (Approval of NSR, Mine Unit J Well UCL Monitoring Revision): May 17, 2010

Change No. 71 (Spill Maintenance, Prevention and Reporting Plan): June 14, 2010

Change No. 72 (Monitor Well Sampling/Reporting Plan): July 8, 2010

Change No. 73 (Mine Unit E, New Restoration Wells): July 12, 2010

Change No. 74 (Approval for Surety Estimate for Permit 603): August 30, 2010

Change No. 75 (Approval of Non-Significant Revision, Mine Unit E, Changes to New Restoration Wells): March 11, 2011

Change No. 76 (Approval of the final Bio-restoration Report for Mine Unit C Bio-restoration Project): June 3, 2011

Change No. 77 (Monitor Wells for Mine Unit A Long-Term Monitoring Plan Approval): October 25, 2011

Change No. 78 (Replacement Wells in Mine Unit C for Restoration): December 7, 2011

Change No. 79 (Delineation Drilling for 2010-2011): March 2, 2012

(e) Mineral(s) Mined

Uranium (U_3O_8)

(f) State and Federal Mineral Lease Numbers

State Lease Numbers

0-40077 0-40211
0-27233B 0-27233A

Federal Claims

Federal Claims within the permit area are shown on the location map (Map 2) within Volume 1, Appendix A of the approved permit application.

2. Reporting Period

July1, 2011 through June 30, 2012. Information contained in this Annual Report represents a cutoff period of May 1, 2011 through April 30, 2012.

3. Mining Activities

There are a total of sixteen site maps provided for the review of this 2011-2012 Annual Report. Plate 1 is the site map and an additional seven expanded maps, Plates 1-1 through 1-7(HUP). At a minimum, these maps illustrate delineation drill hole locations, areas of planned disturbance, new facilities, wellfield releases, excursion locations, roads and pipelines, and areas where surface disturbance occurred during the report period.

Cameco has also provided two additional types of maps for the Annual Report. A set of maps showing affected acreage were created to illustrate interim reclamation of disturbed wellfields, etc. by year. Plate 2 is the site map with affected acreage and an additional two expanded maps, Plates 2-1 and 2-2 have been included. In addition, five maps, Plates 3-1 through 3-5, showing abandoned drill hole locations has been provided. The abandoned drill hole map show enlarged areas where drill holes have been abandoned.

(a) Tabulate acreage disturbed (by pits, roads, facilities, etc.) during the report period and illustrate on map

Refer to Table 3-1, Acreage Affected Summary for a tabulated list of areas disturbed during the report period. Plate 2 and expanded Plates 2-1 and 2-2 illustrate affected acreage by year within the permit area.

(b) Tabulate acreage affected to date by years and illustrate on map

Refer to Table 3-1, Acreage Affected Summary, for a tabulated list of areas that have been disturbed. Plate 2 and expanded Plates 2-1 and 2-2 illustrate affected acreage by year within the permit area.

(c) Tabulate all topsoil stockpile volumes, date of stockpiling and illustrate on map

Table 3-2 Topsoil Stockpile Summary represents a listing of long-term topsoil piles within the permit area. Topsoil stockpiles are shown on Plate 1, 1-1 through 1-7.

(d) Tabulate all out-of-pit spoil volumes, dates of placement and illustrate on map

This item pertains to conventional open-pit mining operations. There are no out-of-pit spoil volumes to be reported due to the nature of in-situ recovery (ISR) mining.

(e) Tabulate quantity of commodity mined by years

Refer to Table 3-3, Uranium Production by Years, for quantity of commodity mined by year. In the 2009-2010 Annual Report adjustments were made to standardize reporting as, uranium production reported for years 2006, 2007, and 2008 did not accurately reflect the same information as reported in the Annual Report for Permit 633.

(f) Describe any new construction during the report period and illustrate on map; include:

(1) Shop facilities, erection sites
No new shops, facilities or erection sites were constructed during the report period.

(2) Roads
No new roads were constructed during the report period.

(3) Culverts
Two new culverts were along the road connecting the Central Processing Plant (CPP) to Satellite 3. These culverts are shown on Plate 1, 1-1 through 1-7.

(4) Diversion ditches, collector ditches, interceptor ditches, etc.
No new ditches were created during the report period.

(5) Sediment ponds, containment ponds

No new ponds were constructed during the report period.

(6) Monitoring sites

No new monitoring sites were constructed during the report period.

(7) Other New Construction

There was no other construction during the reported period.

(g) Describe any environmental problem areas, the proposed plan for mitigating them and illustrate areas on map; including:

(1) Pit stability problems

This item pertains to slope stability issues that occur in conventional open-pit mining operations. Due to the nature of ISR mining, there is no open pit and therefore no slope stability issues.

(2) Subsidence

This item pertains to subsidence issues that occur in conventional underground mining operations. Due to the nature of ISR mining, there is no underground mining and, as a result, no subsidence.

(3) Accidental water discharge, dam failure, etc.

During the report period there were two (2) reportable releases and one (1) release of Reverse Osmosis (RO) permeate water as shown in Table 3-4, Wellfield Release Summary. The locations of the two (2) reportable releases are shown in Plates 1, 1-2 (HUP) and 1-7 (HUP) and were reported to WDEQ/LQD, WDEQ/WQD and NRC pursuant to applicable regulations. The RO permeate release was reported as a courtesy to WDEQ/LQD, WDEQ/WQD and NRC.

(4) Slumping or sliding

This item pertains to slumping or sliding that could occur in conventional open-pit or underground mining operations. Due to the nature of ISR mining, there is no slumping or sliding to be reported.

(5) Revegetation problem areas

There were no revegetation problem areas during the report period.

(h) Other Mining Activities

Highland Central Processing Facility

Following Cameco's acquisition of the Smith Ranch Project on July 22, 2002, the Central Processing Facility (CPF) at Highland was placed on standby status during the 4th Quarter 2002 as uranium (yellowcake) processing activities for the Highland Uranium Project were relocated to the Smith Ranch Central Processing Plant. Cameco began renovating activities at the Highland CPF (interior) and office area (exterior) in November 2011 to accommodate a new resin transfer system, which will include a new dryer facility. A description of the 2012-2013 plans is provided in Section 5, *2012-2013 Mining Plans* of this Annual Report.

Injection/Production Flows

Pursuant to Chapter 11 Section 15(c)(iii), the total quantity of mining fluid injected and extracted for each wellfield area is reported. In accordance with Chapter 11 Section 1, a wellfield area may be all or a portion of the entire area proposed for the injection and production of recovery fluid. Therefore, as injection and production fluids are circulated from and to the satellites, the flows within these facilities are tracked. Flows reporting to the Satellites 2 and 3 are shown on Table 3-5. Wastewater routed to deep disposal wells during the report period totaled 38,920,308 gallons.

Satellite No. 1

Satellite No. 1 was historically used for the processing of production and restoration fluids from Mine Units A and B. With the completion of restoration activities at Mine Units A and B, Satellite No. 1 has been shut down since June 29, 2004. Final decommissioning and reclamation activities associated with Satellite No. 1 will commence upon NRC approval of groundwater restoration in Mine Unit B.

Radium Ponds

During August 2002, the use of the Radium Settling Basins at Satellite No. 1 was discontinued due to escalating maintenance problems with pumps and piping and monitoring data which showed that the settling of residual solids after the filter presses was not needed to meet the NRC's Effluent Concentration Limits. Decommissioning of the Radium Settling Basins commenced in 2004, which included disposal of geotextile and clay liners at a NRC licensed facility.

On July 22, 2010 a plan was presented to WDEQ/LQD. The plan included project survey control, soil sampling field work, counting of the samples, Quality Control (QC) of the

counting effort and how the sampling results would be used to determine the remediation design. On September 27, 2010 WDEQ/LQD accepted the plan.

A reproducible 30 feet square sampling grid was installed prior to the start of soil sampling. In mid-September 2010 the soil sampling was started, 377 soil samples were collected at the site. During this work the 10 percent of the samples were split for counting QC purposes. The QC samples were analyzed for total uranium, thorium-230, radium-226, and lead-210, and results were received in August 2011. A scope of work for the remediation of the radium ponds was submitted on February 10, 2012. After a review of the scope with LQD staff during a site inspection on January 10, 2012, Cameco will apply criteria for remediation as referenced in the NUREG-1569, Section 6.4.2 and will dispose of the contaminated material as 11e (2) product at an NRC approved disposal facility. On March 30, 2012, LQD submitted comments to the February 10, 2012 submittal. These comments will be addressed under TFN 5 2/303.

Satellite No. 2

Satellite No. 2 processes production fluid from a portion of the permit area including Mine Units H and I, and restoration fluids from Mine Units C, D and E. Processing Mine Unit D restoration fluids began in January 2010. During the reporting period, 2,706Acre-feet (AF) (881,811,892 gal) of production fluids were pumped through Satellite No. 2, and 2,631 AF (857,597,282 gal) of injection fluids were pumped from Satellite No. 2 to the wellfields. Injection fluid was withdrawn as "bleed" from the production zone aquifers. A production bleed is maintained by treating a portion of the injection fluid and disposing of it at the Satellite No. 2 Land Application Facility (Irrigator No. 2). The total bleed during this period was 79 AF (25,886,269 gal), which represents 2.9% of the total production fluid volume. In addition to the production bleed, restoration fluids associated with groundwater sweep and/or RO activities in Mine Units C, D, and E were treated at Satellite No. 2, stored in PSR-2 and applied through land application via Irrigator No. 2. The application of these fluids at Irrigator No. 2 was shut down for the winter where waste water disposal is routed to deep disposal wells Morton I-20, Vollman 33-27, and SHRUP #9.

In accordance with the Settlement Agreement for NOV, Docket No. 4231-08, Cameco had submitted a capital improvement plan in 2008 to install a selenium treatment facility which was approved by WDEQ/LQD as Change No. 63 to the permit. The Selenium Treatment Facility was completed in the fall of 2009 and operated through the report period.

Cameco was authorized to resume land application of water from PSR-2 to Irrigator No. 2 in correspondence from WDEQ/LQD dated April 21, 2010 under TFN 5 4/128. The land application occurred during the summer months of 2011.

Satellite No. 3

Satellite No. 3 currently processes production fluid from Mine Units J, F, K and K-North (Mine Unit K and K-North are permitted under Permit No. 633). During the reporting period, 6,082 AF (1,982,112,268 gal) of production fluids were pumped through Satellite No. 3 and 5,991 AF (1,952,567,726 gal) of injection fluids were pumped from Satellite No. 3 to the wellfields. A production bleed is maintained by treating a portion of the injection fluid and disposing of it at Irrigator No. 2. The total bleed during this period was 89 AF (28,843,122 gal), which represents 1.5% of the total production fluid volume.

Wellfields

Mine Units C, D, D-Extension and E were in various phases of restoration during the report period. For additional information on activities associated with these mine units during the report period, see Section 4g *Groundwater Restoration Activities* below. Mine Units F, H, I and J were in production during the report period and are anticipated to be operational during the next report period.

Deep Disposal Wells

The Morton 1-20 was acidized on October 4, 2011 in an effort to increase injectivity. The well was treated with 10,000 gallons of 15% hydrochloric acid (HCl). The pre-acid injectivity was calculated to be 0.047 gpm/psi. The post-acid stimulation injectivity recorded by the plant equipment was 0.093 gpm/psi, which represents a 97.87% increase in the well's ability to accept the injected fluids. However, between October 6 and October 16, 2011, the injectivity in the well decreased to 0.044 gpm/psi. This indicated that any long-term benefit achieved by the application of the HCl acid to the perforations was lost.

On October 5, 2011, SR-HUP #9 was acidized. The well was treated with 10,000 gallons of 15% HCl. The pre-acid injectivity was calculated to be 0.031 gpm/psi. The injectivity recorded with the plant equipment following the acid stimulation was 0.056 gpm/psi, which indicated an 80.65% increase in injectivity. However, between October 5, 2011 and October 13, 2011, the injectivity decreased to 0.028 gpm/psi. This indicated that any long-term benefit achieved by the application of the HCl acid to the perforations was lost.

ScaleTrol (an anti-scalant) was added to Satellite 2 in the 4th Quarter of 2011. ScaleTrol PDC 9313, is a highly stable organic phosphonate that controls fouling caused by suspended solids and precipitation of scaling ions and is a proprietary product of GE Water & Process Technology. It is dosed into the process stream going to the Deep Disposal Wells from Satellite 2 (feeding SR-HUP #9, Morton 1-20, and the Vollman 33-27 wells). It takes into consideration temperature and pressure differences at depth. Its main purpose is to keep scale from forming so that scale does not build up in the deep well and restrict flow. Their costs and dosage rates are listed in the surety estimate.

Total gallons injected for deep disposal wells on Permit 603 for the report period are as follows:

SR-HUP #9	= 12,969,685
Morton I-20	= 10,348,006
Vollman 33-27	= 15,602,617

4. Reclamation Activities

(a) Tabulate the acreage completed during the report period and illustrate on map. Distinguish between:

(1) Backfilled, graded, and contoured, including date of approval for coal permits.
(2) Topsoiled.
(3) Seeded.
(4) Reseeded.
(5) Indicate where special construction or reclamation practices were used such as for sand bodies or alluvial material.

Surface reclamation activities are represented in Table 4-1. Interim reclamation means the re-grading, contouring, and re-vegetation, as may be applicable, on disturbed areas that are associated with on-going or active mine unit construction and/or wellfield development. These interim activities are to be distinguished from "final" reclamation activities that will commence following completion and approval of groundwater restoration in the mine units. These reclamation areas are shown on Plates 2, 2-1, and 2-2.

(b) Submit a map showing the reconstructed contours. The map must be the same scale and contour interval as the PMT map in the approved permit.

This pertains to conventional open-pit mining operations and is not applicable during the report period.

(c) Tabulate acreage reclaimed (seeded with permanent seed mix) to date by years and illustrate on map.

Information on reclaimed acreage is shown on Table 4-1. These reclamation areas are shown Plates 2, 2-1, and 2-2.

(d) Describe reclamation procedures used during the report period:

(1) Depth of topsoil applied. Indicate whether from stockpile or directly applied.
(2) Type of seed used for seeding during the report period.
(3) Dates of seeding during the report period.
(4) Seeding procedures used.
(5) Rate of seed application.
(6) Type and rate of any fertilizer applied.
(7) Type and rate of mulch applied.
(8) Rate of irrigation water applied.
(9) Any deviation to the approved reclamation plan including, in addition to the items above, changes to the contour or location of post mining features.

See Table 4-1. Top soil is not applied until final reclamation which has not yet taken place. All top soil applications have been interim stabilization.

(e) Describe results of previous revegetation efforts; include:

(1) Types of seed that have germinated and are growing
All seed types utilized for re-vegetation have been germinating and growing.

(2) Types of seed that are not growing successfully
All seed types utilized for re-vegetation have been germinating and growing.

(3) Areas experiencing problems with weeds and weed types
Noxious weed control was completed through contracted parties to provide spray application utilizing herbicide chemicals. The chemicals used include Escort XP, Milestone Specialty, and Tordon 22K and LI-700 for a surfactant. Primary weeds found included Canada Thistle (Cirsium Arvense L.), Musk Thistle (Carduss nutans L.) with a small population of Scotch Thistle (Onopordrum Acanthium L.) Buffalo Bur (Solanum

Rostratum) was also found. Spraying occurred in the vicinity of Satellite 2 and 3.

(4) Significant erosional problems

No significant erosional concerns were noted within the permit area, during the report period.

(5) Areas of unsuitable overburden on the surface

No unsuitable overburden concerns were encountered within the permit area during the report period.

(6) Procedures used or proposed to correct these problems

Not applicable this report period.

(f) Summarize the actual reclamation costs incurred during the report period. Costs should be itemized for each operation (i.e. grading, topsoil replacement, seeding, etc.) and for each type of disturbance (i.e. spoil, haul roads, facilities removal, etc.) on a per-acre basis.

As previously noted in item 4(a) no final surface reclamation occurred during the report period.

5. Groundwater Restoration Activities:

Mine Unit A

WDEQ/LQD approved Mine Unit A restoration plan as Change No. 55; in correspondence dated June 7, 2004. The NRC approved the Mine Unit A groundwater restoration in correspondence dated June 19, 2005. Therefore, in accordance with the approved reclamation plan, CR began plugging the Mine Unit A wells in March 2005 and completed plugging activities in Mine Unit A in May of 2005. Cameco provided plug and abandonment notification to WDEQ/LQD in the 3rd and 4th Quarter Reports to WDEQ/LQD in 2005.

As a condition of approval of the groundwater restoration in Mine Unit A, the WDEQ/LQD required that a long-term monitoring (LTM) plan be developed down gradient of the mining zone. The LTM plan does not contain predicted attenuation values, but rather how the concentration of radium and redox sensitive elements will decrease over time as the restored groundwater moves toward and through the more reducing environment.

MP-4 and I-21 (Plate 1, 1-1 through 1-7) are wells located and completed in the production zone, and samples from these wells are representative of restored production fluids. LTM-4 is a monitor well completed in the flare from the production zone. M-3 and M-4 are wells completed in the 20-sand down gradient of Wells MP-4, I-21, and LTM-4. Refer to Table 3-6, Long Term Monitoring Plan Data, for the most recent data during the reporting period. The last round of LTM data indicates the predicted values from the LTM Plan are accurately showing natural attenuation is occurring. The predicted values of the ring monitor wells are Fe = <0.1 mg/L; Mn = 0.04 mg/L (~60-yrs); Se = <0.0001 mg/L; U-nat = <0.001 mg/L; and Ra = 8 pCi/L (~60-yrs). Water quality for wells M-3 and M-4 show that the results are within the predicted values. U-nat is slightly higher than the predicted values; however, it remains well below the baseline level of 0.05 mg/L at the monitor well ring (M-3 and M-4) as well as well LTM-4, which is located inside the monitor well ring.

Mine Unit B

The report entitled "Mine Unit B Groundwater Restoration Report" was submitted to the WDEQ/LQD under cover dated August 5, 2004. The report detailed the groundwater restoration techniques utilized by Cameco, the volumes of groundwater processed for each stage of restoration, and the final groundwater quality in MU-B at the end of active restoration.

The Stability Period for Mine Unit B began on June 28, 2004 and ended on December 28, 2004. The report entitled "Mine Unit B Groundwater Stability Report" was submitted to the WDEQ/LQD under cover dated May 5, 2005. The report provided the groundwater quality data collected during the Stability Period and responses to WDEQ/LQD comments and concerns derived from the groundwater restoration report.

WDEQ-LQD approved Mine Unit B groundwater restoration on March 31, 2008. Submittals were prepared and presented to NRC for their review under cover dated June 26, 2009. During the previous report period, Cameco received comments from the NRC on the Mine Unit B restoration and stability report submittals and is in the process of preparing responses to those comments. An advanced study is being conducted by Intera, Inc. to assist Cameco in responding to comments. Cameco intends to submit the Alternate Concentration Limts (ACL) application to the NRC in the next year.

Mine Unit C

Production from the 50-sand aquifer in Mine Unit C began by injection of lixiviant in the C8 and C10 pattern groups in July 1989. Injection of lixiviant into the last group of

patterns remaining in production was stopped on May 11, 1999. Preparation for restoration of the groundwater in the northern portion of Mine Unit C began in the spring of 1997.

In February 2011 a well replacement program was developed based on modeling efforts for restoration activities. Cameco submitted a request to WDEQ-LQD to install 55 replacement wells under TFN 5 1/226 that was subsequently approved by the WDEQ-LQD. The well replacement program was deemed as necessary to provide adequate coverage for groundwater restoration, and was largely completed by the end of April 2012.

Restoration flow was increased in December 2011 with the startup of available production wells in Header Houses 15 – 24, located in the south portion of the mine unit. Additional wells were started as wiring and other related tasks were completed. Production was increased toward the end of the reporting period to approximately 200 gpm, with additional gains in production expected afterward. The progress, as measured by MP well constituent levels over time, is shown on a composite (average of all MP wells) and on a MP well by MP well basis is shown in Appendix E. Iso-concentration over time is also shown in Appendix E.

Preparation of a restoration plan for Mine Unit C was initiated in April 2012. Submittal of the plan was made a letter dated June 21, 2012 under TFN 5 6/241.

Bioremediation Project in Mine Unit C

A bioremediation project was conducted in Mine Unit C from April to November of 2009 during which methanol and cheese whey were used as nutrients. The analysis of the test results continued on into 2010, and a report was submitted to the DEQ in December, 2010. That report concluded that the bioremediation test was not successful because of poor hydrologic sweep caused by partially clogged injection wells and an underground mine tunnel that runs through Mine Unit C. The report recommended that any future bioremediation tests be conducted in a much smaller area (encompassing no more than a header house and possibly only an individual pattern or patterns within a header house), and that the experimental protocol carefully define the chemical and physical measurements to be made. A sampling program that consists of six monthly sampling events will be proposed in the Mine Unit C Restoration Plan that has been submitted in June 21, 2012. The sampling program is designed to provide the data needed to make a final evaluation of the effects of the previous bioremediation and bring a close to that project.

Groundwater Quality in the 50-Sand-Bi-Monthly MP-Well Sampling

Routine sampling of Wells CMP-1 through CMP-20, located in the northern section of Mine Unit C, began in August 1997. The water quality data, which is collected every two months, is summarized in the Quarterly Reports to WDEQ/LQD. Routine sampling of Wells CMP-21 through CMP-32 in the southern section of Mine Unit C began in July 1999. Upon approval of the bioremediation project in April, 2009, by WDEQ/LQD, the sampling frequency changed to monthly. Averaged selected parameters from CMP-Well sample data are summarized in Table 3-7.

Underground Mine Workings

It was determined in 1991 that production fluids from the 50-sand within Mine Unit C had entered the abandoned underground workings situated beneath the permitted zone. This was not unexpected, as raises and fan drilling at several locations connect these workings and the Mine Unit C production zone. The underground workings also extend to the 40-sand production zone in Mine Unit D. In November 1992, the WDEQ/LQD approved a permit revision to include the underground workings in the Mine Unit C production zone. Additional wells were installed to monitor the potential movement of production fluids within and surrounding the underground workings. As required in Section 4.2.1 of the approved Restoration Plan, this group of 11 wells (CMU-1, CMU-2, CMU-3, CMU-12, CMU-13, and CRMW-1 through CRMW-6) is monitored to assess the progress of groundwater restoration in the underground workings. Monitoring of these wells began in August 1997 and the results are included in the Quarterly Reports to WDEQ/LQD.

Mine Units D and D-Extension

Production from Mine Unit D commenced in May 1991 and D-Extension commenced in February 1995. Injection of lixiviant into the last group of patterns remaining in production was halted on April 2007 in Mine Unit D and February 2007 in Mine Unit D-Extension. Preparations for ground water restoration in Mine Unit D began in the winter of 2009 with upgrades in infrastructure.

During the report period, groundwater restoration progressed from Header House D-8 on the west side of the mine unit toward Header House 1 on the east side. Based on field monitoring and analytical data, active groundwater recovery has been suspended in header houses D-8, D-7, D-6 and D-5. Limited groundwater production, RO treatment and permeate re-injection is ongoing in Header Houses D-4, D-2/3 and D-1. Restoration flow at the end of the reporting period reached approximately 200 gpm.

End of mining guideline 8 sampling for designated MP Wells, DM-014 and FM-004A were taken during the report period and the results of analyses are shown on Table 10-7. Discussion of these wells was provided in the Q4, Excursion Monitoring Reports for Permit 603 submitted to WDEQ/LQD on March 15, 2012.

The progress, as measured by MP well constituent levels over time, is shown on a composite (average of all MP wells) and on a MP well by MP well basis in Appendix E. Iso-concentration over time is also shown in Appendix E.

Mine Unit E

Production from Mine Unit E commenced in November 1991. Injection of lixiviant into the last group of patterns remaining in production was halted in April 2007. In March 2010, Cameco submitted a proposal for the installation of 177 replacement restoration wells to efficiently deliver restoration fluids evenly throughout the mine unit's production zone.

Cameco completed drilling and well completions on 59 out of 177 replacement wells toward the end of the report period. These wells were located in the header house E-12 through E-18 areas. Additionally, Cameco has refurbished the header houses and completed the work on the southern portion of the mine unit.

Groundwater sweep (GWS) was initiated in Header House E-16 in early 2011. The removal of one pore volume was completed in December 2011 and the header house was converted to RO treatment and permeates re-injection. GWS was initiated in header house E-18 in December 2011. The header houses were converted to RO treatment and permeate re-injection when the removal of one pore volume was completed in March 2012. GWS was initiated in header houses E-15 and E-17 in March 2012 and remained in that status at the end of the reporting period. Conversion of both header houses to RO treatment and re-injection is anticipated in the second quarter of 2012.

The progress, as measured by MP well constituent levels over time, is shown on a composite (average of all MP wells) and on a MP well by MP well basis is shown in Appendix E. Iso-concentration over time is also shown in Appendix E.

GWS flow at the end of the reporting period reached approximately 75 gpm, with restoration flow to the RO units reaching approximately 250 gpm.

Waste Water Treatment

Purchase and engineering of an additional 750 gpm RO treatment capacity was conducted during the report period. This additional capacity will aid in restoration at the facility. In addition, Cameco plans to employ technical means and apply anti-scalant chemicals to treated water to increase the volume of permeate and decrease RO reject (brine) from approximately 25% to 15% of water treated.

6. 2012-2013 Mining Plans

Describe in detail, mining plans for the coming year including revised time schedules and all proposed deviations from previously approved plans. Acreages should be tabulated and illustrated on a map.

In accordance with W.S. 35-11-412(a)(iii) a revised schedule of mining and restoration activities is required to be included in the Annual Report; however the WDEQ-LQD advised, in April 8, 2011 correspondence of the 2009-2010 Annual Report Review, Comment #21, that a revised restoration schedule would not be accepted in the Annual Report, pending responses to TFN 5 1/119. Therefore, no revised restoration schedule has been included with this Annual Report. Cameco has submitted T5 responses to TFN 5 1/119 in correspondence dated April 30, 2012 and is pending review by WDEQ-LQD.

Highland Central Processing Facility

A modernization plan is being developed for the Highland Central Processing Facility (CPF) to accommodate a new Resin Transfer System within existing facilities. The Resin Transfer System is being designed to allow for toll processing of materials and will consist of two processing circuits for elution, batch precipitation (using hydrogen peroxide), clarification and storage of yellowcake slurry. Drying of the yellowcake slurry will be handled by two (2) zero emission (vacuum) rotary dryers located within the existing CPF facilities.

Engineering for the Highland Resin Transfer System was completed in March 2012. Procurement of equipment and other items necessary for construction began in the 1st Quarter of 2012 and Cameco plans to begin construction of the new Resin Transfer System in the second half of 2012. Permitting actions necessary to facilitate this change will be submitted for LQD approval under separate cover. Completion of construction is expected in the 2nd Quarter of 2013.

Mine Unit F

Production is planned to continue during the next report period. Ongoing activities will include refurbishment of existing facilities and infrastructure upgrades as needed. Other planned activities include delineation drilling within existing wellfield areas to define the extent of reserves, followed by well installation in existing header house areas and up to two (2) new header houses in Mine Unit F.

Mine Unit I/ I-Extension

During the next report period, production activities are anticipated to continue in Mine Unit I. Additional delineation drilling is planned to define the extent of reserves for an I-extension in 2012. In 2013, 50 monitor wells are planned in Mine Unit I-Extension, which will be followed by wellfield development and up to four (4) new header houses.

Mine Unit H

Production is planned to continue with existing header houses for the next reporting period.

Mine Unit J

Production is planned to continue with existing header houses for the next reporting period.

Mine Unit K-North

Production in header houses K-13, 14, and 15 will begin in the next reporting period upon approval from WDEQ/LQD under TFN 5 5/304. This wellfield in its entirety will fall under Permit 633 and will be accounted for in future Permit 633 Annual Reports.

7. 2012-2013 Reclamation Plans

Describe in detail reclamation plans for the coming year including revised time schedules and deviations from previously approved plans. Acreages should be tabulated and illustrated on a map.

(a) Groundwater Restoration

Mine Unit A

The Long Term Monitoring (LTM) Plan specifies that the duration of the monitoring plan will continue from five to fifteen years depending on the extent of the zone of flaring and

the placement of the LTM Wells. The most recent monitoring results of the LTM Wells indicate that all parameters are relatively stable throughout the duration of the LTM monitoring plan. Cameco will continue to sample the LTM Wells on a semi-annual schedule in accordance with the approved LTM Plan and will evaluate the need for continuation of the monitoring plan during the next reporting.

Mine Unit B

Cameco is in the process of submitting a response to NRC comments and obtain NRC approval of the Mine Unit B ground water restoration. Upon approval of the Mine Unit B groundwater restoration from the NRC, surface reclamation will proceed with well plugging and abandonment, piping removal and seeding. This will include surface reclamation of Mine Units A, B, and Satellite No. 1.

Mine Unit C

Cameco plans to continue traditional restoration methods using RO treatment and permeate re-injection. It is anticipated that up to three additional pore volumes will be needed to attain the restoration target values (RTVs). A Restoration Plan was prepared and submitted for WDEQ/LQD review on June 21, 2012. Upon approval of that Plan, compliance monitoring of CMP wells will revert back to a bi-monthly sampling schedule of approximately every 60 days. Approximately 55 replacement wells have been installed in Mine Unit C, allowing restoration flow from that mine unit to increase to approximately 400 gpm. LQD provided concurrence to these well completions on June 29, 2012.

Mine Unit D/D-Extension

Cameco plans to continue traditional restoration methods using RO treatment and permeate re-injection. Compliance monitoring of DMP wells will continue on a bi-monthly sampling schedule. RO treatment up to approximately 400 gpm is expected during the next report period. Excursion modeling for wells DM-003 and DM-010 was completed and three excursion control wells have been installed. LQD provided concurrence to these well completions on June 19, 2012. The implementation of active excursion control will begin in the next report period. A Restoration Plan was prepared and submitted for WDEQ/LQD review on July 19, 2012.

Mine Unit E

Approximately 177 replacement wells have been installed in Mine Unit E to allow adequate coverage for groundwater recovery during restoration. Notification of well completions will be provided to WDEQ/LQD in the next report period. Restoration activities planned during the next report period include groundwater sweep by header house network in both the north & south portions of the mine unit, followed by traditional restoration methods of RO treatment by permeate injection. A Restoration Plan will be submitted to the WDEQ/LQD for review by July 31, 2012.

Satellite No. 1 Radium Settling Basins

Cameco submitted a scope of work for the remediation of the radium ponds to the WDEQ/LQD in a letter dated February 10, 2012. LQD assigned the project to TFN 5 2/303 and provided comments to the scope of work on March 20, 2012. Cameco will provide responses and begin remediation work in the next report period upon WDEQ/LQD approval.

Wastewater Treatment and Disposal

During the reporting period, installation of an additional 750 gpm (design capacity) RO treatment system was completed at Satellite No. 2/Selenium Treatment Plant waste water treatment system to accelerate restoration efforts in Mine Units C, D, D-Extension and E.

(b) Additional Restoration Research

Core and Mineralogy Program

This program was presented in the 2009-2010 Annual Report but was not initiated during the report period as previously assessed and is therefore being carried into this Annual Report. The core and mineralogy program will involve retrieval of up to a total of six cores from mine units that have already been produced. The cores will "twin" old core holes that had been cored before mining had been conducted in the area. The proposed mine units for this program initially consisted of Mine Units H (Permit 603), K (Permit 633) and 9 (Permit 633); however, Cameco will re-evaluate wellfield suitability prior to program initiation. The goal of the program will be to look at the mineralogy to assess post-mining alteration to the formation.

8. Monitoring Activities

Describe in detail all monitoring activities during the report period, summarize the data, and describe procedures to correct any noted problems and deviations from previously approved methods, including:

(a) Groundwater Analyses

Windmills/Solar Wells

As part of the environmental monitoring program, the NRC Source Material License requires the sampling of several windmills and solar wells once each quarter for natural uranium and radium. These data are submitted to the NRC in the Semi-Annual Effluent and Environmental Monitoring Reports. The monitoring data collected during the report period show compliance with applicable NRC requirements. A copy of the sampling analysis provided in the February 28, 2012 NRC Semi-Annual Reports pertaining to Windmill, Solar Wells and Stock Ponds is located in Appendix D.

Excursion Monitoring and Reporting

To maintain compliance with the operational hydrologic monitoring program, monitoring wells in the production zone monitor well ring and those installed in overlying and underlying aquifers are monitored for the excursion parameters (chloride, alkalinity, and conductivity) and water levels twice a month at approximate two-week intervals during production operations and every 60 days during restoration. In addition, wells designated as production zone monitoring wells (MP-Wells) are monitored every 60 days during restoration operations to evaluate the progress of groundwater restoration. The results of all operational monitoring and excursions are submitted to the WDEQ/LQD in the routine Quarterly Reports as required by Permit No. 603. In addition, a monthly Excursion Summary Report has been provided to WDEQ/LQD since March, 2010 in accordance with Settlement Agreement for Notice of Violation Docket Number 4598-09.

Other Well Monitoring

As part of the environmental monitoring program, the NRC Source Material License requires sampling of the Main Office drinking water well, when operational, and the Vollman Ranch water well for natural uranium and radium. These data are submitted to the NRC in the Semi-Annual Effluent and Environmental Monitoring Reports which is included in this report as Appendix D. The monitoring data collected during the report period show compliance with all NRC requirements.

(b) Surface Water Analyses and Discharge Data

As part of the environmental monitoring program, the NRC Source Material License requires the sampling of several surface water stock ponds once each quarter for natural uranium and radium. These data are submitted to the NRC in the Semi-Annual Effluent and Environmental Monitoring Report. The monitoring data collected during the report period show compliance with applicable NRC requirements and is included in this report as Appendix D.

Stock Ponds

As part of the environmental monitoring program, the NRC Source Material License requires the sampling of several stock ponds once each quarter for natural uranium and radium. The monitoring data collected during the report period show compliance with all NRC requirements. The location of these monitoring sites is shown on Plate 1. A copy of the sampling analysis provided in the February 28, 2012 NRC Semi-Annual Reports pertaining to Windmill, Solar Wells and Stock Ponds is located in Appendix D.

(c) Precipitation Data

Meteorological data are provided in Table 10-3.

(d) Subsidence Monitoring

This pertains to conventional open-pit mining operations and is not applicable during the report period.

(e) Overburden Analyses

This pertains to conventional open-pit mining operations and is not applicable during the report period.

(f) Topsoil Quantities - compare calculated and actual

Refer to Table 3-2 Topsoil Stockpile Summary. No new long term stockpiles were created during the report period. Stockpiles created from Mine Unit K-North during the report period are contained in the Permit 633 Annual Report. Under TFN 5 5/304, WDEQ/LQD stipulated the entire wellfield of K-North will operate under specification for Permit 633 in a letter dated April 3, 2012.

(g) Vegetation Data

Wellfield purge and groundwater restoration fluids are treated for the removal of uranium and radium prior to disposal at the Satellite No.1 or Satellite No. 2 Land Application Facilities (Irrigators No.1 and No. 2, respectively). Both facilities were permitted by the WDEQ/WQD. Irrigator No.1, located near Satellite No.1, was initially permitted under Permit No. 86-217. It was renewed on April 16, 1992 under Permit No. 92-077. The permit for Irrigator No. 1 (IR-1) was renewed a second time on May 5, 1995 under Permit No. 95-156R. IR-1 was not operated during the report period.

Irrigator No. 2 (IR-2), located at Satellite No. 2, was permitted on April 4, 1994 under Permit No. 93-410. IR-2 operated from May 11, 2009 through October 12, 209 during the report period. Pursuant to NOV 4231-08 Settlement Agreement Item, Cameco ceased land application activities on October 15, 2009 to demonstrate that wastewater disposed via land application has an average selenium level of 0.1 mg/L or less. On October 22, 2009 Cameco submitted to WDEQ/LQD proposed changes to Permit 603 for the use and sampling of the wastewater to be disposed of at the irrigator. WDEQ/LQD approved the non-significant revisions on April 26, 2010 with Change No. 69 to Permit 603.

Permits for each irrigator require annual sampling of vegetation within the irrigation areas. Vegetation samples were obtained and composited according to each quarter of the irrigation circle they represented. The samples were obtained by clipping approximately two to three kilograms of vegetation at each site, and forwarded to Energy Laboratories, Inc. for analysis. Laboratory results for the vegetation samples are included in Tables 7-1 and 7-2.

To assist in assessing any long-term trends, the mean selenium concentration in vegetation at Irrigator No. 1 for the period 1996 through 2011 is shown in Figure 7-1. Also shown in Figure 7-1 are selenium concentrations in vegetation at Irrigator No. 1 background areas for the period 1996 through 2011. A review of the selenium data in Figure 7-1 shows that the mean selenium concentration at IR-1 between the previous year and 2011 increased from 18.78 mg/kg, to approximately 21.1 mg/kg. In comparison, the selenium concentration in the background sample collected during 2011 was approximately .5 mg/kg.

To assist in assessing any long-term trends in vegetation at Irrigator No. 2, Figure 7-2 shows mean selenium concentrations for the period 1996 through 2011. Also shown in Figure 7-2 are selenium concentrations in vegetation at Irrigator No. 2 background areas for the period 1996 through 2011. A review of the data in Figure 7-2 shows that the mean selenium concentration at IR-2 increased to 4.6 mg/kg. In comparison, the selenium concentration in the background sample collected during 2011 was

approximately 1.6 mg/kg. While the selenium increased from 1.4 mg/kg in 2010 to 4.6 mg/kg in 2011, this is the second consecutive year that the mean selenium concentration has been less than 5 mg/kg. In correlation to the startup of the selenium treatment plant, it is significant to recognize that selenium is below the 5 mg/kg level for the first time since the land applications started in 1997-1998.

(h) Wildlife Data

Wildlife surveys were conducted in accordance with the 2010 United States Fish & Wildlife Service (USFWS) and Wyoming Game & Fish Department (WGFD) approved Smith Ranch-Highland/Reynolds Ranch Wildlife Monitoring Plan. Species and surveys conducted in 2011 are described below.

- Three aerial surveys were conducted to locate bald eagle winter roost sites in or within one mile of the combined Permit Area.
- One aerial sage-grouse lek survey was conducted to determine activity on known leks and to search for new leks in or within two miles of the permit area. Three lek counts were performed on known leks to determine activity and to record the number of sage-grouse attending the lek.
- One aerial raptor survey was conducted to determine activity status on known nests and to search for new nests in or within one mile of the permit area. .
- Two ground surveys for raptor nests were conducted on known nests to determine nest activity, productivity and to search for new nests. A third ground survey was conducted to determine productivity of active late nesting raptor nests.
- Presence/absence surveys for black-tailed prairie dogs were conducted within the permit area.
- Mountain plover habitat surveys were conducted to search for breeding and nesting habitat within 0.25 miles of the permit area.
- Swift fox den surveys and spot light surveys were conducted to locate den sites in proposed disturbance areas.
- Wetland/pond areas and waste water disposal sites were surveyed monthly to determine use from wildlife.
- Disturbance and reclamation surveys were conducted to determine the acreage of disturbance and reclamation in different wildlife habitat types.

The survey results and full wildlife report are available in Appendix F. Survey results for the raptors in permit 603 are available in Table 7-3.

(i) Other Monitoring Activities

Ambient Air Monitoring

In accordance with the NRC Source Material License, Cameco currently maintains three air monitoring stations in the Highland licensed area. The stations are used to monitor uranium, radium, thorium, radon, and gamma radiation and are located at the following places: Downwind at the restricted area boundary (Overlook); the nearest downwind residence (Fowler Ranch); and an upwind background site (Vollman Ranch). The Overlook and Fowler Ranch sites are only monitored when the CPF is in operation. Therefore, there was no data collected for these stations during the report period. The Vollman Ranch station is currently being monitored as the downwind site for the Smith Ranch Central Processing Plant. Data are collected from these stations on a quarterly basis and submitted to the NRC in the Semi-Annual Effluent and Environmental Monitoring Reports and are included in this Annual Report as Appendix D. The monitoring data collected during the report period show compliance with applicable NRC requirements.

Particulate Discharge Monitoring

When the CPF at the Highland Uranium Project is operational, Cameco monitors the Yellowcake Dryer and Packaging scrubber exhaust stacks to determine the emission rate of particulates, uranium, radium, and thorium. During the 4th Quarter of 2002, the Highland CPF was placed on standby status as all yellowcake processing activities (elution, precipitation, drying, and packaging) were transferred to the Smith Ranch Central Processing Plant. Therefore, no stack tests were conducted during the report period.

Liquid Effluent Monitoring

When the Highland CPF was operational, wastewater brine generated in the CPF was disposed in the Morton 1-20 waste disposal well permitted with the WDEQ-WQD under the Wyoming UIC program (Permit No. 98-001). To increase water disposal capacity during restoration activities, one new deep disposal well, SRHUP #9 was installed and two existing deep disposal wells, Morton 1-20 and Vollman 33-27, were recompleted. All three wells are permitted under Class I UIC Permit 09-054. Monitoring and reporting is performed in compliance with the WDEQ/WQD quarterly requirements.

Land Application

Irrigation Fluid

Permits for each facility require sampling of the irrigation fluid once each month during operation and reporting of the irrigation fluid quality and quantity. The quality of irrigation fluid applied at Irrigator No. 2 during the report period is provided in Table 7-4. The volumes of irrigation fluid applied at each irrigator from the inception of irrigation activities through October 31, 2011 are shown in Tables 7-5 and 7-6 of this report.

Soil

Permits for each irrigation facility require annual sampling and analysis of soils within the irrigation areas. Soil samples were collected from each irrigator at intervals of zero to six and six to twelve inches in August 2011.

Fourteen sites were sampled at Irrigator No. 1. A background site located outside of the irrigated area was also sampled. The analytical data for Irrigator No.1 are included in Table 7-7 of this report. To assist in assessing any long-term trends in parameters of concern, the mean conductivity and concentration of selenium, uranium, and radium-226 in soil samples from Irrigator No. 1, 1996 through 2011 is shown in Figure 7-3.

Figure 7-3 shows that mean radium conductivity, selenium and uranium concentrations. With the exception of soil samples collected from the zero to six-inch depth in 1994, mean soil conductivity levels have remained below the recommended level of 3.5 mhos/cm (3500 µmhos/cm), and has risen slightly after falling in previous years.

A review of the selenium data in Figure 7-3 shows that, during 1994, mean selenium concentrations in soil reached a maximum of approximately 1.5 and 1.1 mg/kg in samples collected from the zero to six and six to twelve inch depths, respectively. Since 1995, however, mean selenium concentrations have remained relatively constant, ranging from approximately 0.2 to 0.9 mg/kg in the zero to six-inch depth and from approximately 0.1 to 0.7 mg/kg in the six to twelve inch depth.

Mean uranium concentrations in soil during 2011 were approximately 12.04 mg/kg in the zero to six-inch depth and 3.76 mg/kg in the six to twelve inch depth. These levels of uranium in soil are well below the NRC release limit of 30 pCi/g (44 mg/kg) and, as such, pose no undue risk to plant, animal, or human concerns. Background uranium concentrations were 1.05 pCi/g in the zero to six-inch depth and 1.07 pCi/g in the six to twelve inch depth.

At Irrigator No. 2, soil samples were collected from 16 sites within the irrigated area. A background site located outside the irrigated area was also sampled. The analytical data are included in Table 7-8 of this report. To assist in assessing any long-term trends at Irrigator No. 2, the mean conductivity and concentration of selenium, uranium, and radium-226 in soil samples during 1993 and 1995 through 2010 are shown in Figure 7-4.

Similar to the graphs for Irrigator No. 1, Figure 7-4 shows that mean radium, conductivity, selenium, and uranium concentrations in soil have increased above background levels. During 2011, conductivity levels increased from the previous year with mean conductivity levels above the recommended level of 3,500 µmhos/cm. Average selenium levels show an increase in the zero to six-inch depth (from 0.18 mg/kg to approximately 0.45 mg/kg) and average concentrations increased (from 0.18 mg/kg to 0.27 mg/kg) in the six to twelve-inch depth. Similar to Irrigator No. 1, selenium concentrations at IR-2 remain within the range of naturally occurring selenium concentrations for Wyoming soils. During 2011, mean uranium concentrations in the zero to six-inch depth increased to approximately 8.93 mg/kg, while concentrations at the six to twelve inch depth increased to approximately 4.06 mg/kg. These relatively low levels of uranium in soil are well below the NRC release limit of 30 pCi/g (44 mg/kg) and, as such, pose no undue risk to plant, animal, or human concerns. Radium decreased in the zero to six-inch depth from 1.38 pCi/g in 2010, to 1.07 pCi/g in 2011. In the six to twelve inch depth it decreased from 2.36 pCi/g in 2010, to 0.975 pCi/g in 2011.

Soil Water

Cameco evaluated the operational integrity of the lysimeters at the irrigators on June 29, 2009. In the last few years, soil water samples have not been easy to collect. A contracted consultant advised, based on the manufacturer's instructions that Cameco technicians attempt to prime the lysimeters in order to obtain adequate fluid for sampling. Cameco employees did prime the lysimeters by pouring 1 gallon of water down the tubing, waited 24 hours, then pumped dry and pressured the lysimeter. Following this, the sampling of the lysimeters was attempted as per usual method. However, not enough water was present to collect and perform analysis.

Being able to obtain adequate volumes for a sample is still an issue; however, Cameco is evaluating replacing the lysimeters at the Irrigator No. 2. Soil properties are being evaluated to determine the best lysimeter for the area. At Irrigator No. 1, the possibility of removing the lysimeters is perhaps warranted since it is no longer in operation and as such will not contain enough soil water to be sampled.

Purge Storage Reservoir No. 2 Shallow Monitoring Wells

The permit for the Satellite No. 2 Purge Storage Reservoir (PSR-2) requires quarterly monitoring of water levels and semi-annual sampling of groundwater from the two shallow wells adjacent to PSR-2. However, the wells can only be sampled quarterly when water is available. In addition, four new shallow monitoring wells were installed during the report period and are sampled quarterly. The applicable data for the East and South Shallow Wells are included in Table 7-9 and 7-10 of this report. Under TFN 3 1/251, Cameco submitted a shallow aquifer remediation plan to investigate and characterize potential leakage from the reservoir in a letter dated April 30, 2012. Implementation of the plan will take place in the next reporting period.

Radium Monitoring

To ensure that the Selenium Plant radium treatment system is operating properly, a monthly grab sample is obtained downstream of the Selenium Plant radium treatment system and analyzed for total radium-226. The target radium-226 concentration is 30 pCi/L (3.0E-8 μCi/ml). Table 7-11 contains the results of the radium-226 monitoring at Satellite No. 2. The average radium-226 concentration during the report period was approximately 4.2 pCi/L. This is well below the target concentration of 30 pCi/L and the NRC Effluent Concentration Limit of 60 pCi/L.

Annual Monitoring Report for Boner Bros. Partnership

At the request of the WDEQ/LQD, the 2011 Annual Monitoring Report for Boner Bros. Partnership is included as Appendix B. The sampling is performed to assess potential impacts to vegetation at areas adjacent to PSR-1 that were subject to seepage of treated irrigation fluid from PSR-1. The monitoring data collected during the report period, January 1, 2011 through December 31, 2011, showed no significant impacts to surface water or vegetation.

In summary, the samples analyzed for dissolved selenium concentration in water were above the Class III (Livestock) and Class I (Domestic) limit of 0.05 mg/L in the 2nd and 3rd quarter in the East Sump. Selenium concentrations of the vegetation samples were below the 5 mg/kg threshold recommended in WDEQ/LQD Guideline 1 Topsoil and Overburden. It should be noted that Cameco discontinued use of PSR-1 September 2, 2004.

(j) A map showing and identifying monitoring locations.

See Plates 1, and 1-1 through 1-7.

9. 2012-2013 Reclamation Surety Estimate Revision

Operator's Reclamation Performance Bond Estimate as required by Wyoming Statute §3511-417. Reclamation cost estimates should be itemized in detail to reflect the actual estimated costs of reclaiming all lands which have been affected to date and those lands to be affected during the next report period. Costs must reflect procedures as specified in the approved mine and reclamation plan. The estimated cost of dismantling and disposal of all facilities and structures must be included. Salvage value will not be used to offset bonding requirements. Reclamation projected for the coming year will not be used to offset bonding requirements. Pit backfill costs must reflect actual yardages to be moved. Actual yardages to be moved will reflect the removal or placement of additional material to correct any deviations between the PMT map and the map submitted for part 4.(b).

The LQD received responses to the surety comments for the 2010 Annual Report review on June 6, 2011. The responses did not satisfy LQD concerns with regard to covering the cost to restore the groundwater or reclaim the site in the vent of bond forfeiture. To meet this request, Cameco submitted a revised Surety on September 26, 2011 to satisfy the 2009-2010 Annual Report and to supersede the more recent 2010-2011 Annual Report surety. The LQD agreed that the request was appropriate because many of the changes would apply to the time period that would end June 30, 2011.

The 2012-2013 Surety Estimate Revision is included in Appendix C. The revision results in a surety estimate of $109,522,683 which is an increase of $16,792,213 from the current approved and secured amount of $92,730,470. Appendix C includes a detailed description of updates to the surety estimate, which covers corrections from the previous estimate, updated unit costs, planned activities through the end of the next reporting period, and up-to-date information on restoration achievements.

Comments from the WDEQ/LQD were received on June 7, 2012 for the 2010-2011 Annual Report, Permit 603. Seven comments requested information regarding surety that Cameco should address in the 2011-2012 Annual Report. Responses to comments 38 through 44 of the 2010-2011 Annual Report are found in attached to the cover letter of this submittal.

10. Additional Information

Supply any additional information as requested by the Division related to:

(a) Notices of Violation

Current Notices of Violation

During the report period there were no Notices of Violation (NOV) issued in association with Permit No. 603.

Abated Notices of Violation

No Notices of Violation were reported by the LQD as completed during the report period.

Pending Notices of Violation

NOV Docket No. 4122-07, Cameco Resources, H-Wellfield spill remains open. Cameco has responded to all Settlement Agreement stipulations which are pending abatement from LQD.

NOV Docket No. 4419-09, Cameco Resources, Missed Confirmation Sampling CM-14 remains open. Cameco has responded to all Settlement Agreement stipulations which are pending abatement from LQD.

NOV Docket No. 4598-09, Cameco Resources, Missed Confirmation Sampling Monitor Well FM-8 and Topsoil Management remains open. Cameco has responded to all Settlement Agreement stipulations which are pending abatement from LQD.

(b) Orders

Administrative Order on Consent

In December 1999, Cameco submitted the Environmental Audit Report, dated November 21, 1999, which summarized Cameco's internal investigation of casing leaks at injection wells. The report describes the apparent causes for the casing leaks, potential impacts to ground water, mitigative actions, and changes to well construction practices and wellfield operations.

In correspondence dated August 11, 2000, Cameco received an Administrative Order on Consent (Docket No. 3211-00) from the WDEQ/LQD. The items in this Order were negotiated between Cameco and the WDEQ/LQD to address the findings of the audit report and eliminate any impending violations.

In correspondence dated October 19, 2000, Cameco submitted a Compliance Schedule and Minor Permit Revision to the WDEQ/LQD to address Items No. 1 and No. 3 of the

Order. Pursuant to Item No. 2 of the Order, Cameco has been submitting quarterly Progress Reports to keep the WDEQ/LQD informed of the on-going investigative and mitigative activities and will continue to provide quarterly updates under TFN 3 2/290.

In correspondence dated September 14, 2011 - Cameco submitted letter of continuing investigation on the Casing Leak in the C, E, and F Wellfields as part of our ongoing efforts to resolve Administrative Order on Consent Docket No. 3211-00. In correspondence dated April 4, 2012, Cameco submitted the "Sampling and Analysis Plan" completed by Wright Environmental Services, Inc.

(c) Permit stipulations; and

Not applicable

(d) Other special conditions.

No Letters of Conference and Conciliation were issued during the reporting period.

Pending LCC

A LCC was issued by LQD on May 2, 2011 for Missed Uranium Analysis for EMP wells (4th Quarter 2010). LQD indicated that the LCC was applicable to both the 603 and 633 permits. Permit 603 has been assigned TFN 5 5/248 for comments and responses. All but one comment has been accepted. The remaining comment states that the changes to the text are not the same as proposed for Permit 633. Cameco will address this issue and resubmit a revised Index of Change.

Resolved LCC

A LLC was issued by LQD on May 17, 2011 of an Excursion at CM-32. WDEQ\LQD was concerned that the fluid may have migrated outside of the exemption boundary. Two new wells have been installed outside of the monitor well ring to determine if groundwater has been affected outside the monitor well ring. LQD participated in the sampling of these wells. In a letter dated November 11, 2011 LQD stated that Cameco has successfully removed the well from excursion status. Therefore, the concerns of the migration of contaminated fluids proximity to the exemption boundary have been resolved.

On July 26, 2011 the LQD met with several Cameco managers and staff to discuss compliance concerns. LQD detailed the list of compliance issues that are under consideration for issuance of Notice of Violation. The LQD submitted the Summary of Violations in a letter dated August 8, 2011.

1) Wellfield Restoration
2) Drill Hole Abandonment
3) Topsoil Salvage and Protection
4) Erosion and Sediment Control
5) Missed Samples and Other Self-Identified Violations
6) Open Drill Hole
7) Uncapped Wells
8) Drilling Without Notification and/or Without Approval of Notification
9) Mine Unit 15 Wellfield Release (Permit 633)
10) Mine Unit K-North Wellfield Release (Permit 633)
11) Inadequate Plugging of Wells

All of the pending compliance issues listed above have been resolved with the WDEQ/LQD or submittals are currently under LQD review.

11. 2011-2012 Delineation Drilling

All drill holes used for immediate development expansion of the advancing pit(s) shall be tabulated by location and depth and shown on the mining plan map. Pursuant to WS 35-11-404(e), all drill holes used for exploration shall be reported to the LQD.

Refer to Table 10-1 Delineation Drill Holes (May 1, 2011 through April 30, 2012) for drill hole information. Delineation holes drilled during the report period have been plugged and capped in accordance with W.S 35-11-404(c) (i-iii) and Permit 603. 195 new holes have been surface reclaimed and are in the Plugged & Abandoned Report with Bond Release Requests in Table 10-2. Any remaining holes are scheduled for surface reclamation during the next report. Cameco may request inspection for bond release more frequently pursuant to Chapter 8 of the Noncoal Rules & Regulations during the next report period depending how the WDEQ/LQD can accommodate such requests.

Refer to Table 10-2 Plugged and Abandonment Report with Bond Release Requests for Permit 603 and Abandoned Drill Hole Plates 3-1 through 3-5 for information on surface reclamation of drilled delineation holes that were completed during the report period. Seeding and reclamation have been done in accordance with W.S 35-11-404(c) (v) and Permit 603. Seed mix used at different times of the year is presented at the end of Table 10-2. With the submittal of Table 10-2, Cameco is providing notification to WDEQ/LQD with a request to release plug and abandonment bond on holes listed pursuant to Chapter 8 of the Non-Coal Rules & Regulations. An Index of Change to insert Table 10-2 Plugged and Abandonment Report into Appendix D5 Geology as a non-significant revision (NSR) will be provided under separate cover within 7 days of this Annual Report submittal.

Table 10-3 Vegetation Bond Release Request is submitted to provide WDEQ-LQD notification of a request to release vegetation bond on holes abandoned and seeded two or more years prior pursuant to Chapter 8 of WDEQ/LQD Non-Coal Rules & Regulations.

Table 10-4 lists unplanned delineation holes during the report period. All the unplanned holes are a result of well installation in developing wellfields. When a hole cannot be adequately cased to install a well, the hole is given a delineation number and plugged accordingly. Table 10-4 lists 16 unplanned holes drilled on permit 603 and are also shown on Plates 3-1 through 3-5. These holes are accounted for in the proposed surety in Appendix C.

Table 10-5 lists 4 open drill holes found on permit 603 during the report period. Cameco is providing this information as defined in the scope of work for historic Open Drill Hole search submitted to WDEQ/LQD in a letter dated March 16, 2012 under TFN 5 4/310. The open drill holes found are also shown on Plates 3-1 through 3-5.

12. 2012-2013 Proposed Delineation Drilling

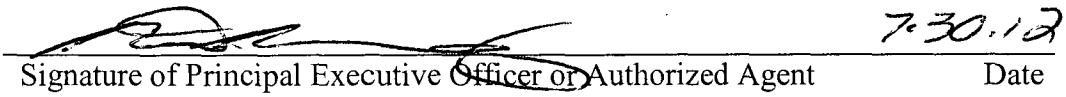
Under TFN 5 4/312, Cameco provided a drilling proposal in March 2012 which lists hole locations where drilling on Permit 603 would be conducted through 2012 and into 2013.

13. Certification and Signature

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 evaluated 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 knowing violations.

Brent Berg **General Manager**

Print Name and Title of Principal Executive Officer or Authorized Agent



Signature of Principal Executive Officer or Authorized Agent Date

7.30.12

Annual Report Attachment

A. Please indicate any change in company name or business organization.

B. List the names, addresses and phone numbers for the following:

1. General Manager:

Brent Berg
P.O. Box 1210
Glenrock, WY 82637
(307) 358-6541

2. Party to Receive Notice

Ken Garoutte
Safety, Health, Environment and Quality (SHEQ) Manager
P.O. Box 1210
Douglas, WY 82637
(307) 358-6541

C. List the names, addresses and phone numbers of all officers, owners and/or controllers. Include titles/positions and beginning and ending dates.

William Paul Goranson, President, Power Resources, Inc. d/b/a Cameco Resources, 2020 Carey Ave., Suite 600, Cheyenne, WY 82001, 307-316-7600 (Effective: 01/03/2010)

Ted A. Robinette, Controller, Power Resources, Inc. d/b/a Cameco Resources, 2020 Carey Ave., Suite 600, Cheyenne, WY 82001, 307-316-7600 (Effective: 03/01/2008)

Rochelle D. Maslin, Assistant Secretary, Cameco Corp., 815-13th St. East, Saskatoon, Saskatchewan, Canada S7M 0M2, 306-956-6200 (Effective: 01/07/2005)

Bryan Auge, Secretary, Cameco Corp., 815-13th St. East, Saskatoon, Saskatchewan, Canada S7M 0M2, 306-956-6200 (Effective: 09/06/2011)

Dave Mark Neuburger, Chairman, Cameco Corp., Chairman, 815-13th St. East, Saskatoon, Saskatchewan, Canada S7M 0M2, 306-956-6200 (Effective: 15/10/2010)

TABLE 3-1
AFFECTED AREAS SUMMARY
2011-2012 ANNUAL REPORT PERMIT 603

Description/Years Affected	Affected Acreage	Temporary Revegetated (Acres)	Permanent Reclamation (Acres)
Central Plant/Office Area; prior to 1987	25	5	3
Radium Settling Basins; 1987-1988	3	1	0
Irrigator No. 1; 1988	55	55	0
Purge Storage Reservoir, Sat 1; 1987-1988	9	4	0
Topsoil Pile No. 3 and Subsoil No. 4	5	5	0
Satellite No. 1; 1987-1988	1	0	0
Satellite No. 1 Access Road; 1987-1988	18	0	0
A/B-Wellfield; 1987-1989	50	50	0
A/B-Wellfield Roads; 1996, 2001	7	0	0
Exxon R & D Site	1	0	0
Satellite No. 2; 1988-1989	2	0	0
Satellite No. 2 Access Road; 1988-1989	1	0	0
C-Wellfield; 1988-1990	50	50	0
C-Wellfield Roads; 1996	7	0	0
Waste Water Pipeline; 1988-1989	11	11	0
D-Wellfield; 1990-1991	14	14	0
D-Wellfield Roads; 1996	2	0	0
E-Wellfield; 1990-1995	44	44	0
E-Wellfield Roads; 1996	8	0	0
F-Wellfield; 1992-1999	134	134	0
F-Wellfield Roads; 1996-1998, 2001	12	0	0
PSR Pumpback System, 1994-1995	1	1	0
Purge Storage Reservoir; Sat 2; 1994-1995	40	8	0
Irrigator No. 2; 1995	116	116	0
Satellite No. 3 and Topsoil Pile; 1995-1996	3	1	0
Satellite No. 3 Access Road and Topsoil	8	2	0
H-Wellfield; 1998-2001 (in production)	61	61	0
H-Wellfield Roads; 1998-2001	8	0	0
Waste Disposal Well No. 2 and Access Road	3	1	0
D-Extension Wellfield; 2001 (in production)	10	10	0
D-Extension Wellfield Roads; 2001	2	0	0
SR-HUP Connecting Road and Topsoil Piles/Borrow	7	2	0
Mine Unit-I Monitor Well Installation; 2005	<1	0	0
Mine Unit-I; 2006	20	20	0
Mine Unit-I Roads; 2006	2	0	0
Mine Unit-I Pipeline Corridor 2006	2	2	0
Mine Unit-J Delineation Drilling, Monitor Wells	10	10	0
Mine Unit-J Access Road and Staging Area 2007	0.8	0	0
Mine Unit-J Wellfield Area 2007	37.2	37.2	0
Mine Unit F-Drill Ponds 2008	8	8	0
Mine Unit H-Drill Ponds 2008	7	7	0
Selenium Treatment Facility 2009	0.7	0	0
SRHUP Deep Disposal well Pad and Access Road	2.74	0	0
Vollman 31-27 DDW Pipe	2.7	0	0
Vollman Powerline	0.5	0	0
Mine Unit I to Water-Well Powerline	0.6	0	0
Mine E Laydown Area	0.46	0	0
2011-2012 Total Affected Area	**7.7**	**0**	**0**
CUMULATIVE TOTALS	**812.7**	**659.2**	**3**

TABLE 3-2
TOPSOIL STOCKPILE SUMMARY
2011-2012 ANNUAL REPORT PERMIT 603

Stockpile No.	Year/Date Stockpiled	Estimated Volume (yd3)	Amount Used (yd3)	Remaining	Source	Scheduled Reclamation Date	Reclamation Date	Area description
8	10/1/1993	100	0	100	F-Wellfield Oxygen Pad			
1	7/1/1987	3,000	0	3,000	Road to Satellite No. 1			
2	7/1/1987	6,000	0	6,000	Satellite No. 1 Pad and Road to Radium Ponds			
3	8/1/1987	45,000	0	45,000	PSR-1			
4(subsoil)	9/1/1987	50,000	0	50,000	PSR-1			
5	11/1/1988	700	0	700	Satellite No. 2 Pad & Road			
6	11/1/1988	450	0	450	Satellite No. 2 Road			
7	4/1/1991	100	0	100	D-Wellfield Oxygen Pad			
9	11/1/1995	0	0	0	Satellite No. 3 Road/Drill Water Ponds (moved to Stockpile No. 52 March 1998)			
10	11/1/1995	1,100	0	1,100	Satellite No. 3 Road			
11	11/1/1995	910	0	910	Satellite No. 3 Road			
12	11/1/1995	1,970	0	1,970	Satellite No. 3 Pond and Road			
13	Oct/Nov96	270	0	270	Road to Irrigator No. 1			
14	Oct/Nov96	350	0	350	C-Wellfield Access Road			
15	Oct/Nov96	600	0	600	C-Wellfield Access Road			
16	Oct/Nov96	50	0	50	C-Wellfield Access Road			
17	Oct/Nov96	720	0	720	C-Wellfield Access Road			
18	Oct/Nov96	0	0	0	C-Wellfield Access Road (Moved to pile #93 - Selenium Plant)			
19	Oct/Nov96	230	0	230	C-Wellfield Access Road			
20	Oct/Nov96	200	0	200	C-Wellfield Access Road			
21	Oct/Nov96	260	0	260	C-Wellfield Access Road			
22	Oct/Nov96	30	0	30	C-Wellfield Access Road			
23	Oct/Nov96	20	0	20	C-Wellfield Access Road			
24	Oct/Nov96	130	0	130	D-Wellfield Access Roads			
25	Oct/Nov96	520	0	520	D-Wellfield Access Roads			
26	Oct/Nov96	450	0	450	E-Wellfield Access Roads			
27	Oct/Nov96	560	0	560	E-Wellfield Access Roads			
28	Oct/Nov96	670	0	670	E-Wellfield Access Roads			
29	Oct/Nov96	320	0	320	E-Wellfield Access Roads			
30	Oct/Nov96	592	0	592	E-Wellfield Access Roads	Fall 2011	Fall 2011	(ADDED BELL HOLE TIE-IN SEDIMENT IN FALL OF 2010). Volume previously 480 (yd3); originally created Oct./Nov. 1996.
31	Oct/Nov96	520	0	520	E-Wellfield Access Roads			
32	Oct/Nov96	900	0	900	E-Wellfield Access Roads			
33	Oct/Nov96	370	0	370	E-Wellfield Access Roads			
34	Oct/Nov96	410	0	410	E-Wellfield Access Roads			
35	Oct/Nov96	550	0	550	F-Wellfield Access Roads			
36	Oct/Nov96	0	0	0	(moved to Stockpile No. 35 in February 1998)			
37	Oct/Nov96	210	0	210	(moved to Stockpile No. 35 in February 1998)			

TABLE 3-2
TOPSOIL STOCKPILE SUMMARY
2011-2012 ANNUAL REPORT PERMIT 603

Stockpile No.	Year/Date Stockpiled	Estimated Volume (yd3)	Amount Used (yd3)	Remaining	Source	Scheduled Reclamation Date	Reclamation Date	Area description
38	Oct/Nov96	560	0	560	(enlarged November 1998)			
39	Oct/Nov96	220	0	220	(enlarged November 1998)			
40	Oct/Nov96	290	0	290	(enlarged November 1998)			
41	Oct/Nov96	110	0	110	(enlarged November 1998)			
42	Oct/Nov96	200	0	200	(enlarged November 1998)			
43	Oct/Nov96	340	0	340	(enlarged November 1998)			
44	Oct/Nov96	240	0	240	(enlarged November 1998)			
45	Oct/Nov96	200	0	200	(enlarged November 1998)			
46	Oct/Nov96	220	0	220	(enlarged November 1998)			
47	Oct/Nov96	420	0	420	(enlarged November 1998)			
48	6/1/1997	320	0	320	(enlarged November 1998)			
48A	6/1/1998	400	0	400	(enlarged November 1998)			
49	Oct/Nov 96	1,160	0	1,160	Drilling Fluid Storage Cell No. 1			
50	Oct/Nov 96	920	0	920	Drilling Fluid Storage Cell No. 1			
51	Oct/Nov 96	350	0	350	Road to Irrigator No. 2			
52	3/1/1998	700	0	700	Drilling Fluid Storage Cell No. 2			
53	4/1/1998	240	0	240	Drilling Fluid Storage Cell No. 3			
54	4/1/1998	300	0	300	Drilling Fluid Storage Cell No. 4			
55	11/1/1998	100	0	100	F-Wellfield Access Roads			
56	11/1/1998	400	0	400	F-Wellfield Access Roads			
57	11/1/1998	100	0	100	F-Wellfield Access Roads			
58	11/1/1998	150	0	150	F-Wellfield Access Roads			
59	11/1/1998	170	0	170	F-Wellfield Access Roads			
60	11/1/1998	280	0	280	F-Wellfield Access Roads			
61	11/1/1998	200	0	200	F-Wellfield Access Roads			
62	11/1/1998	580	0	580	H-Wellfield Access Roads			
63	11/1/1998	520	0	520	H-Wellfield Access Roads			
64	11/1/1998	350	0	350	H-Wellfield Access Roads			
65	11/1/1998	350	0	350	H-Wellfield Access Roads			
66	11/1/1998	710	0	710	H-Wellfield Access Roads			
67	11/1/1998	780	0	780	H-Wellfield Access Roads			
68	11/1/1998	780	0	780	H-Wellfield Access Roads			
69	11/1/1998	1,000	0	1,000	H-Wellfield Access Roads			
70	11/1/1999	60	0	60	H-Wellfield Access Roads			
71	1/1/2000	50	0	50	H-Wellfield Access Roads			
72	4/1/2000	50	0	50	H-Wellfield Access Roads			
73	5/1/2000	50	0	50	H-Wellfield Access Roads			
74	11/1/2000	200	0	200	H-Wellfield Access Road			
75	11/1/2000	75	0	75	H-Wellfield Access Road			
76	11/1/2000	80	0	80	H-Wellfield Access Road			
77	4/1/2001	60	0	60	H-Wellfield Access Road			
78	4/1/2001	50	0	50	F-Wellfield Access Road			

TABLE 3-2
TOPSOIL STOCKPILE SUMMARY
2011-2012 ANNUAL REPORT PERMIT 603

Stockpile No.	Year/Date Stockpiled	Estimated Volume (yd3)	Amount Used (yd3)	Remaining	Source	Scheduled Reclamation Date	Reclamation Date	Area description
79	4/1/2001	40	0	40	F-Wellfield Access Road			
80	6/1/2001	50	0	50	D-Extension WF Access Rd			
81	6/1/2001	130	0	130	D-Extension WF Access Rd			
82	6/1/2001	350	0	350	D-Extension WF Access Rd			
83	4/1/2001	50	0	50	B-Wellfield Access Road			
84	4/1/2001	30	0	30	B-Wellfield Access Road			
85	4/1/2001	250	0	250	RO Unit No. 3 Pad			
86	9/1/2002	325	0	325	SR-HUP Connecting Road			
87	5/1/2005	50	0	50	Mine Unit-I Access Rd			
88	4/1/2006	80	0	80	Mine Unit-I Access Road			
89	4/1/2006	80	0	80	Mine Unit –I Access Road			
90	2/1/2006	50	0	50	Mine Unit-J Access Road			
91	2/1/2006	50	0	50	Mine Unit-J Access Road			
92	11/1/2009	6,755	0	6,755	Selenium Plant Installation	04-04-2011 to 04-08-2011	4) Reclamed on 05-05-2011 with "Soil Amendment Process" No.4 (reseeding topsoil piles)	15) RESEED STOCKPILE NO. 92 - SELENIUM PLANT INSTALLATION
93	11/1/2009	720	0	720	Enlarged pile #18 for Selenium Plant Installation	03-28-2011 to 04-01-2011	4) Reclamed on 05-05-2011 with "Soil Amendment Process" No.4 (reseeding topsoil piles).	14) RESEED STOCKPILE NO. 93 - ENLARGED PILE #18 FOR SELENIUM PLANT INSTALLATION
94	1/1/2010	204	0	204	DDW #9 road and pad	10-18-2010 to 10-20-2010	1) Reclamed on 10-20-2010 with "Soil Amendment Process" No.2 (Non-Tractor Accessible Area - Hydro-Seed). (2) "Soil Amendment Process" No. (Tractor Accessible Areas - Drill-Seed) Drill-Seed on 05-05-2011	12) RESEED STOCKPILE NO. 94 SOURCE: DDW #9 ROAD AND PAD. Volume previously 690 (yd3); originally created 1994.
95	2/1/2010	267	0	267	Driller staging pad by E-15 for restoration wells	03-21-2011 to 03-25-2011	4) Reclamed on 05-05-2011 with "Soil Amendment Process" No.4 (reseeding topsoil piles)	13) RESEED STOCKPILE NO. 95 - DRILLER STAGING PAD BY E-15 FOR RSTN WELLS
96	10/1/2010	600	0	600	Mine Unit K-North access road	Spring 2011	4) Reclamed on 05-05-2011 with "Soil Amendment Process" No.1 (reseeding topsoil piles)	13) RESEEDED STOCKPILE NO. 96 - Mine Unit K-North access road
97	4/1/2011	343	0	343	Mine Unit K-North DAM Topsoil pile	Spring 2011	4) Reclamed on 05-05-2011 with "Soil Amendment Process" No.1 (reseeding topsoil piles)	13) RESEEDED STOCKPILE NO. 97 - Mine Unit K-North DAM Topsoil pile
98	5/1/2010	301	0	301	Vollman 33-27 DDW Topsoil Pile	Spring 2011	4) Reclamed on 05-05-2011 with "Soil Amendment Process" No.1 (reseeding topsoil piles)	13) RESEEDED STOCKPILE NO. 98 - Vollman 33-27 DDW Topsoil Pile
TOTAL		143,322	0	143,322				

TABLE 3-3
URANIUM PRODUCTION BY YEAR
2011-2012 ANNUAL REPORT PERMIT 603

Year	Pounds Uranium
1/7/88 - 6/30/88	412,177
7/1/88 - 5/10/89	621,000
5/11/89 - 4/30/90	886,097
5/1/90 - 6/30/91	1,396,298
7/1/91 - 5/31/92	1,026,676
6/1/92 - 5/31/93	847,082
6/1/93 - 5/31/94	833,542
6/1/94 - 5/31/95	693,804
6/1/95 - 5/31/96	969,023
6/1/96 - 5/31/97	1,373,658
6/1/97 - 5/31/98	1,415,320
6/1/98 - 5/31/99	1,145,228
6/1/99 - 5/31/00	832,477
6/1/00 – 5/31/01	800,753
6/1/01 – 5/31/02	596,541
6/1/02 – 5/31/03	402,264
6/1/03 – 5/31/04	270,306
6/1/04 – 5/31/05	737,093
6/1/05 - 5/31/06	610,435
Total pounds uranium produced (drummed at HUP) as of May 31, 2006	**15,869,774**
6/1/06 – 5/31/07	1,756,761
6/1/07 – 5/31/08	1,359,104
6/1/08 – 5/31/09	1,762,092
6/1/09 - 5/31/10	1,902,403
6/1/10 - 5/31/11	1,615,974
6/1/11 - 5/31/12	1,067,291
***Total combined pounds uranium produced (eluted) as of April 30, 2011**	**9,463,625**

*This number reflects production from both the Smith-Ranch and Highland operations as processing for both facilities occurs in the Central Processing Plant at Smith-Ranch.

TABLE 3-4
WELLFIELD RELEASE SUMMARY
2011-2012 ANNUAL REPORT PERMIT 603

DATE	LOCATION	VOLUME (gal)	SURFACE AREA (FT^2)	CAUSE
2/16/2012	RO Release MU-C HH-15 Well CI-335	9,660	Not Available	Due to a hose being disconnectedd at CI-335, permeate water from an RO systerm was released on the ground.
3/7/2012	MU-J HH-7	774	27,000	During a planned shutdown of the wellfield a one inch ball valve was opened to allow fluid in the injection wells to drain down hole to prevent freezing. The ball valve was not closed prior to startup of the wellfield causing a leak into the header house.
3/10/2012	MU-H Bellhole #41-H	344	2,802	This event was reported because the fluid entered a dry draw, considered Waters of the State. The release was the result of a failure of a steel tee connection in the bellhole.

TABLE 3-5
FACILITY WATER BALANCE REPORT
2011-2012 ANNUAL REPORT PERMIT 603

Location	Recovery Volume (gallons)	Injection Volume (gallons)	Over Recovery Volume (gallons)	Average Production Rate (gpm)
Satellite #2	875,652,088	849,670,920	25,981,167	1,661
Satellite #3	1,981,410,848	1,952,657,726	28,843,122	3,761

TABLE 3-6
LONG TERM MONITORING PLAN DATA (MINE UNIT A)
2011-2012 ANNUAL REPORT PERMIT 603

WELL ID	DATE	Cl	TDS	ALK	pH	Fe	Mn	Se	U nat	Ra 226	Water Level
2005											
MP-4	5/10/2005	16	485	287	6.75	0.71	0.6	0.188	11.9	3580	5049.5
I-21	5/10/2005	18	585	397	7.14	0.04	0.41	0.001	4.65	750	5048.6
LTM-4	5/10/2005	25	515	298	7.64	<0.03	0.06	<0.001	0.018	28.3	5050.6
M-3	5/10/2005	2	326	171	7.87	0.07	0.03	<0.001	0.0151	9	5048.1
M-4	5/10/2005	3	335	174	7.82	0.07	0.04	<0.001	0.0144	6.8	5042.2
2006											
MP-4	4/13/2006	19	472	305	6.99	0.34	0.56	0.191	13.2	1340	
I-21	4/13/2006	18	574	430	7.46	ND	0.4	0.003	3.53	571	
LTM-4	4/13/2006	23	480	312	7.68	ND	0.08	0.002	0.014	22	
M-3	4/13/2006	6	324	182	8.07	0.04	0.03	ND	0.0148	3.5	
M-4	4/13/2006	5	328	182	7.86	ND	0.04	0.002	0.0235	2.7	
MP-4	9/20/2006	18	496	286	6.94	0.33	0.56	0.196	13.4	3260	
I-21	9/20/2006	17	580	414	7.4	ND	0.42	0.004	1.64	480	
LTM-4	9/20/2006	21	490	297	7.63	ND	0.09	ND	0.013	23.7	
M-3	9/20/2006	4	324	174	8.01	ND	0.03	ND	0.0158	6.9	
M-4	9/20/2006	5	336	175	7.01	ND	0.04	0.001	0.02	6.2	
2007											
MP-4	5/11/2007	18	502	294	6.92	0.07	0.52	0.198	13.1	3440	
I-21	5/11/2007	17	602	442	7.54	0.04	0.42	0.013	1.63	585	
LTM-4	5/11/2007	21	498	312	7.67	ND	0.09	ND	0.0188	35	
M-3	5/11/2007	2	330	182	7.96	ND	0.03	ND	0.0162	7.6	
M-4	5/11/2007	3	336	184	7.94	ND	0.03	ND	0.0149	7.7	
MP-4	10/25/2007	17	498	372	7	0.48	0.49	0.194	13.5	3240	
I-21	10/25/2007	16	579	556	7.57	ND	0.4	ND	1.29	475	
LTM-4	10/25/2007	21	484	391	7.69	ND	0.08	ND	0.0129	24.1	
M-3	10/25/2007	2	311	226	7.97	ND	0.03	ND	0.016	9.3	
M-4	10/25/2007	4	333	230	7.99	ND	0.04	ND	0.0275	20	
2008											
MP-4	5/15/2008	16	509	290	6.71	0.66	0.59	0.19	11.8	3830	5029.5
I-21	5/15/2008	16	607	439	7.33	ND	0.48	0.004	1.69	629	5052
LTM-4	5/15/2008	21	494	314	7.6	0.03	0.08	ND	0.0159	28.2	5053.6
M-3	5/15/2008	2	322	175	8	0.07	0.03	ND	0.0233	9.2	5052.3
M-4	5/15/2008	4	334	178	7.53	0.05	0.03	ND	0.0127	7.2	5051.7
MP-4	10/6/2008	18	488	289	6.92	0.33	0.54	0.202	14.7	3380	5029.5
I-21	10/6/2008	17	569	436	7.42	ND	0.45	0.021	2.04	579	5052
LTM-4	10/6/2008	19	473	321	7.57	ND	0.1	ND	0.0137	27	5053.6
M-3	10/6/2008	3	303	175	7.89	0.08	0.02	ND	0.0131	8	5052.3
M-4	10/6/2008	4	313	177	7.87	ND	0.03	ND	0.0134	6.8	5051.7

TABLE 3-6
LONG TERM MONITORING PLAN DATA (MINE UNIT A)
2011-2012 ANNUAL REPORT PERMIT 603

WELL ID	DATE	Cl	TDS	ALK	pH	Fe	Mn	Se	U nat	Ra 226	Water Level
2009											
MP-4	5/18/2009	18	502	299	6.92	0.43	0.55	0.208	14.60	3140	5054.5
I-21	5/18/2009	14	587	449	7.29	ND	0.42	0.005	0.7520	441	5055.6
LTM-4	5/18/2009	18	503	325	7.4	ND	0.09	ND	0.0177	30	5057.8
M-3	5/18/2009	2	326	180	7.82	ND	0.03	ND	0.0130	7.7	5052.9
M-4	5/18/2009	3	318	183	7.81	ND	0.03	ND	0.0117	5.2	5054.4
MP-4	11/4/2009	18	502	315	8.18	0.26	0.53	0.202	14.800	3460	5055.6
I-21	11/4/2009	15	578	468	8.21	ND	0.45	0.002	0.9800	552	5053.9
LTM-4	11/4/2009	19	481	351	8.21	ND	0.10	ND	0.0169	25	5055.6
M-3	11/4/2009	3	299	189	8.27	ND	0.03	ND	0.0148	7.9	5053.4
M-4	11/4/2009	4	308	190	8.3	ND	0.03	ND	0.0130	5.7	5054.8
2010											
MP-4	5/19/2010	19	537	315	6.78	0.51	0.52	0.194	15.7	3690	5052.13
I-21	5/19/2010	16	618	472	7.39	ND	0.43	0.003	1	502	5056
LTM-4	5/19/2010	20	518	352	7.42	ND	0.1	ND	0.0191	27	5058.36
M-3	5/19/2010	3	327	187	7.76	ND	0.03	ND	0.0149	8.1	5054.4
M-4	5/19/2010	4	333	190	7.8	ND	0.03	ND	0.014	5.5	5050.42
2011											
MP-4	11/16/2011	18	515	314	7.78	0.72	0.6	0.204	15.7	3340	5053.33
I-21	11/16/2011	16	607	458	7.77	0.05	0.49	ND	0.663	511	5056.6
LTM-4	11/16/2011	20	518	352	7.42	ND	0.1	ND	0.0191	27	5058.36
M-3	11/16/2011	3	327	187	7.76	ND	0.03	ND	0.0149	8.1	5054.4
M-4	11/16/2011	4	333	190	7.8	ND	0.03	ND	0.014	5.5	5050.42
2012											
MP-4	5/14/2012	19	554	303	6.65	0.65	0.591	0.216	17.3	3140	5052.1
I-21	5/14/2012	18	586	389	7.05	0.17	0.782	0.001	2.13	676	5056
LTM-4	5/14/2012	20	531	361	7.41	ND	0.011	ND	0.0227	28	5057.86
M-3	5/14/2012	3	327	181	7.92	ND	0.03	ND	0.013	9.8	5055.9
M-4	5/14/2012	4	342	183	7.81	ND	0.03	ND	0.014	7.2	5055.12

Note: All parameter values are in mg/L except for pH (std. units) and radium (pCi/L).
Water levels are mean sea level elevations in feet.

TABLE 3-7
C-WELLFIELD SELECTED MEAN WATER QUALITY CHARACTERISTICS AT WELLS CMP-1 THROUGH CMP-32 (mg/L unless noted)
2011-2012 ANNUAL REPORT PERMIT 603

All results are averages

Year	HCO_3	SO_4	Cl	TDS	Cond (µmhos/cm)	Se	U	Radium-226 (pCi/l)
7/1/1997 (CMP1-CMP20)	625	624	198	1979	2355	2.27	23.4	2175
5/1/1998 (CMP1-CMP20)	657	677	228	1968	2360	1.68	30.6	1634
5/1/1999 (CMP1-CMP32)	637	603	210	1843	2289	1.64	30.4	1777
3/1/2000 (CMP1-CMP32)	581	493	154	1578	2098	1.35	22.7	1831
Jun-01	524	--	147	--	2051	--	25.9	--
May-02	468	--	144	--	1846	--	20	--
Apr-03	647	--	167	--	2179	--	17.8	--
Apr-04	528 (Alkalinity)	--	139	--	1781	--	14.4	--
May-05	394 (Alkalinity)	--	106	--	1885	--	11.8	--
May-06	319 (Alkalinity)	--	75	--	1202	--	8.5	--
May-07	261	--	53	--	1115	--		--
May-08	230 (Alkalinity)	--	43	--	1296	--	3.9	--
May-09	283 (Alkalinity)	--	38	--	792	0.351	3	--
May-10	387 (Alkalinity)	--	46	--	920	0.083	6.92	--
11-Jun	285	--	42	--	790	--	5.54	--
Baseline (CMP1-CMP32)	203	210	5	492	721	0.02	2.16	703
Class of Use (Domestic)	NA	250	250	500	NA	0.01	5	5
Class of Use (Livestock)	NA	3000	2000	5000	NA	0.05	5	5

		MINE UNIT/LOCATION	TYPE OF DISTURBANCE (ROAD, WELLFIELD, SPILL AREA, ETC.)	RECLAMATION TYPE (INTERIM OR PERMANENT)	AREA SQ FT	MINE ACRES RECLAIMED BY DATE	TOPSOIL APPLICATION (YES/NO)	TOPSOIL APPLICATION DEPTH (INCHES = ")	TYPE OF SEED	SEEDING DATES	SEEDING PROCEDURE	RATE OF SEED APPLICATION	SEEDING COSTS (1) 2009B = 10.25PLS#/LBS/ACRE @ $126.50 PER ACRE, (2) 2010A = 11PLS#/LBS/ACRE @ $63.00 PER ACRE, (3) 2010B = 10.5PLS#/LBS/ACRE @ $50.00 PER ACRE,() 2010C = 10.32PLS#/LBS/ACRE @ $106.00 PER ACRE,(5) 2011A = 11PLS#/LBS/ACRE @ $105.00 PER ACRE.	TYPE & RATE OF FERTILIZER	TYPE & RATE OF MULCH APPLIED	FERTILIZER & MULCH COSTS ($391.88 W/MULCH PER ACRE, $91.88 W/OUT MULCH PER ACRE)	2010-11 RECLAMATION COST PER MINE UNIT	ACRES RECLAIMED IN 2010-11 BY MINE UNIT	MAP LOCATION
DDW #9- 603 PERMI	69	12) RESEED STOCKPILE NO. 94 SOURCE: DDW #9 ROAD AND PAD;	FACILITY	INTERIM	6,659.85	0.15	NO	N/A	2010B SEED MIX: Western Wheatgrass, Rosana 2.47 Slender Wheatgrass 1.71 Linn Perennial Rye 1.23 Indian Ricegrass 1.23 Blue Grama 2.47 Little Bluestem 1.08 Gardner Saltbrush .31 Total 10.5 PLS # / AC $48.00/AC (14 +/- BULK LBS PER ACRE, BAGS = 45 LBS, USE 1 BAG EVERY 3 ACRES). 10.5 Pls#/ac @ $49 per acre.	MAY, 2ND QUARTER 2011	2.b) THE SOIL AMENDMENT PROCESS SUMMARY FOR CULVERTS, DRAINAGE AREAS, AND SIMILAR AREAS NOT ACCESIBLE BY A TRACTOR INCLUDE:o CONTOUR AREA WITH RAKE/SHOVEL TO ORIGINAL STATE. o SPREAD APPROPRIATE FERTILIZER IN CONTOURED AREA. o SEED AREA WITH HYDRO-SEEDING UNIT OR PORTABLE SEEDING UNIT (CAMECO APPROVED SEED MIX & 1 ANNUAL CROP - OATS). o SPRAY OR RAKE SEED INTO DISTURBED AREA. o INSTALL "EROSION BLANKETS," "WATTLES", OR "SEDIMENT STOP" OVER SEEDED AREA.SEED MIX & 1 ANNUAL CROP (OATS). (10-14 PLS LBS PER ACRE = 17-20 GROSS LBS). 10.5 Pls#/ac @ $49 per acre, BONDED FIBER MATRIX = $1,100.22 COST PER ACRE	10.5 Pls#/ac	$7.49	Fertilizer (18-46-0 Fertilizer) 200LBS PER ACRE (1 x 50 Lb. bag per 10,000 ft, 4 x bags per acre = 200 Lbs)	FERTILIZER = $91.88 COST PER ACRE; BONDED FIBER MATRIX = $1,100.22 COST PER ACRE	$182.26	$189.75		11-RCLMTN-SRHUP9 DDW; VIII-1011-TOPSOIL-RCLMTN-P603-94
													SRHUP NO.9 DDW RECLAMATION TOTAL:	$7.49			$182.26	$189.75	0.15	
MINE UNIT E - 603 PERMIT	53	RESTORATION MINE UNIT E HH E-18 TO 14, HH E-12 & E-13 AREA RECLAMATION	WELLFIELD	INTERIM	730,444.63	16.77	YES	na	2011A SEED MIX: Pls#/ac: Canby Bluegrass - 2, Linn Perennial Rye - 3, Prairie June Grass - 2, Blue Grama - 1, Sideoats Grama - 1, Little Bluestem - 1, Gardner Saltbrush - 1. Total = 11Pls#/ac, Bulk 15lbs per acre bag 1 @ $105 PER ACRE.	MAY, 2ND QUARTER 2011	1.a) THE SOIL AMENDMENT PROCESS SUMMARY FOR TRACTOR ACCESSIBLE AREAS INCLUDE:o CONTOUR AREA TO ORIGINAL STATE. o DISC DISTURBED AREA o SPREAD APPROPRIATE FERTILIZER IN DISCED AREA - (18-46-0 Fertilizer) 200LBS PER ACRE o DRILL-SEED CAMECO APPROVED 2011A SEED MIX & 1 ANNUAL CROP (OATS). (10-14 PLS LBS PER ACRE = 17-20 GROSS LBS). o BROADCAST STRAW OVER SEEDED AREA WITH HAYBUSTER UNIT. o CRIMP STRAW MULCH INTO SEEDED AREA WITH WISHEK STRAWPRESS UNIT. 11 Pls#/ac @ $105 per acre.	11 Pls#/ac	$1,760.71	Fertilizer (18-46-0 Fertilizer) 200LBS PER ACRE (1 x 50 Lb. bag per 10,000 ft, 4 x bags per acre = 200 Lbs)	200LBS FERTLIZER (4 BAGS) & 6 ROUND BALES = $991.88 COST PER ACRE	$6,573.32	$8,332.03		13-RCLMTN-MUD&E
	70	13) RESEED STOCKPILE NO. 95 - DRILLER STAGING PAD BY E-15 FOR RSTN WELLS	WELLFIELD	INTERIM	1,353.56	0.03	NO	N/A	2011A SEED MIX: Pls#/ac: Canby Bluegrass - 2, Linn Perennial Rye - 3, Prairie June Grass - 2, Blue Grama - 1, Sideoats Grama - 1, Little Bluestem - 1, Gardner Saltbrush - 1. Total = 11Pls#/ac, Bulk 15lbs per acre bag 1 @ $105 PER ACRE.	MAY, 2ND QUARTER 2011	2.a) THE SOIL AMENDMENT PROCESS SUMMARY FOR CULVERTS, DRAINAGE AREAS, AND SIMILAR AREAS NOT ACCESIBLE BY A TRACTOR INCLUDE:o CONTOUR AREA WITH RAKE/SHOVEL TO ORIGINAL STATE. o SPREAD APPROPRIATE FERTILIZER IN CONTOURED AREA. o SEED AREA WITH PORTABLE SEEDING UNIT (CAMECO APPROVED SEED MIX & 1 ANNUAL CROP - OATS). o RAKE SEED INTO DISTURBED AREA. o INSTALL "EROSION BLANKETS," "WATTLES", OR "SEDIMENT STOP" OVER SEEDED AREA.SEED MIX & 1 ANNUAL CROP (OATS). (10-14 PLS LBS PER ACRE = 17-20 GROSS LBS). 11 Pls#/ac @ $105 per acre.	11 Pls#/ac	$3.26	Fertilizer (18-46-0 Fertilizer) 200LBS PER ACRE (1 x 50 Lb. bag per 10,000 ft, 4 x bags per acre = 200 Lbs)	FERTILIZER ONLY = $91.88 COST PER ACRE	$2.86	$6.12		13-RCLMTN-MUD&E; IX-1011-TOPSOIL-RCLMTN-P603-95
	73	STOCKPILE NO.30; ADDED BELL HOLE	WELLFIELD	INTERIM	7,322.10	0.17	NO	N/A	2011A SEED MIX: Pls#/ac: Canby Bluegrass - 2, Linn Perennial Rye - 3, Prairie June Grass - 2, Blue Grama - 1, Sideoats Grama - 1, Little Bluestem - 1, Gardner Saltbrush - 1. Total = 11Pls#/ac, Bulk 15lbs per acre bag 1 @ $105 PER ACRE.	MAY, 2ND QUARTER 2011	2.a) THE SOIL AMENDMENT PROCESS SUMMARY FOR CULVERTS, DRAINAGE AREAS, AND SIMILAR AREAS NOT ACCESIBLE BY A TRACTOR INCLUDE:o CONTOUR AREA WITH RAKE/SHOVEL TO ORIGINAL STATE. o SPREAD APPROPRIATE FERTILIZER IN CONTOURED AREA. o SEED AREA WITH PORTABLE SEEDING UNIT (CAMECO APPROVED SEED MIX & 1 ANNUAL CROP - OATS). o RAKE SEED INTO DISTURBED AREA. o INSTALL "EROSION BLANKETS," "WATTLES", OR "SEDIMENT STOP" OVER SEEDED AREA.SEED MIX & 1 ANNUAL CROP (OATS). (10-14 PLS LBS PER ACRE = 17-20 GROSS LBS). 11 Pls#/ac @ $105 per acre.	11 Pls#/ac	$17.65	Fertilizer (18-46-0 Fertilizer) 200LBS PER ACRE (1 x 50 Lb. bag per 10,000 ft, 4 x bags per acre = 200 Lbs)	FERTILIZER ONLY = $91.88 COST PER ACRE	$15.44	$33.09		13-RCLMTN-MUD&E; IX-1011-TOPSOIL-RCLMTN-P603-95
													MINE UNIT E RECLAMATION TOTAL:	$1,781.63			$6,589.62	$8,371.24	16.97	
MINE UNIT F - 603 PERMIT	54	MINE UNIT F/ BELL HOLE REPLACMENT HH 18 - 24	WELLFIELD	INTERIM	115,869.60	2.66	NO	N/A	2011A SEED MIX: Pls#/ac: Canby Bluegrass - 2, Linn Perennial Rye - 3, Prairie June Grass - 2, Blue Grama - 1, Sideoats Grama - 1, Little Bluestem - 1, Gardner Saltbrush - 1. Total = 11Pls#/ac, Bulk 15lbs per acre bag 1 @ $105 PER ACRE.	NOVEMBER, 4th OCTOBER 2011	1.a) THE SOIL AMENDMENT PROCESS SUMMARY FOR TRACTOR ACCESSIBLE AREAS INCLUDE:o CONTOUR AREA TO ORIGINAL STATE. o DISC DISTURBED AREA o SPREAD APPROPRIATE FERTILIZER IN DISCED AREA - (18-46-0 Fertilizer) 200LBS PER ACRE o DRILL-SEED CAMECO APPROVED 2011A SEED MIX & 1 ANNUAL CROP (OATS). (10-14 PLS LBS PER ACRE = 17-20 GROSS LBS). o BROADCAST STRAW OVER SEEDED AREA WITH HAYBUSTER UNIT. o CRIMP STRAW MULCH INTO SEEDED AREA WITH WISHEK STRAWPRESS UNIT. 11 Pls#/ac @ $105 per acre.	11 Pls#/ac	$279.30	Fertilizer (18-46-0 Fertilizer) 200LBS PER ACRE (1 x 50 Lb. bag per 10,000 ft, 4 x bags per acre = 200 Lbs)	200LBS FERTLIZER (4 BAGS) & 3ROUND BALES = $211.88 COST PER ACRE	$563.60	$842.90		54-RCLMTN-VLLMN 33-27 DDW DSPSL RT
													MINE UNIT F - 603 PERMIT	$279.30			$563.60	$842.90	2.66	
													603 PERMIT RECLAMATION TOTAL:	$2,068.42			$7,335.48	$9,403.90	19.78	

TABLE 7-1

SATELLITE NO. 1
LAND APPLICATION FACILITY (IRRIGATOR #1)
ANNUAL VEGETATION DATA
2011-2012 ANNUAL REPORT PERMIT 603

SAMPLE SITE SAMPLE DATE		Quarter 1 (NW) 9-Aug-11	Quarter 2 (NE) 9-Aug-11	Quarter 3 (SE) 9-Aug-11	Quarter 4 (SW) 9-Aug-11	Background 9-Aug-11
TRACE METALS (mg/kg): SW6020 Dry Ash Extracted	Lower Limit of Detection					
Arsenic	0.05	ND	ND	ND	ND	ND
Barium	0.05	22.80	25.90	35.30	29.70	30.10
Boron	5	8.9	17.9	6.7	ND	7.7
Selenium	0.05	18.20	26.70	15.90	23.60	0.50
RADIOMETRIC (µCi/kg): E903.0						
U-Nat		2.6E-04	4.3E-04	1.4E-04	9.0E-04	4.0E-05
U-Nat RL		2.0E-02	2.0E-02	3.0E-01	3.0E-01	2.0E-02
Ra226		2.4E-05	1.1E-05	4.5E-06	7.7E-06	3.5E-06
Ra226 ERR. EST. +/-		2.4E-06	1.6E-06	1.0E-06	1.2E-06	9.0E-07
Ra226 MDC		8.7E-07	8.2E-07	7.2E-07	6.5E-07	7.2E-07

TABLE 7-2

SATELLITE NO. 2
LAND APPLICATION FACILITY (IRRIGATOR #2)
ANNUAL VEGETATION DATA
2011-2012 ANNUAL REPORT PERMIT 603

SAMPLE SITE SAMPLE DATE		Quarter 1 (NW) 10-Aug-11	Quarter 2 (NE) 10-Aug-11	Quarter 3 (SE) 10-Aug-11	Quarter 4 (SW) 10-Aug-11	Background 10-Aug-11
TRACE METALS (mg/kg): SW6020 Dry Ash Extracted	Lower Limit of Detection					
Arsenic	0.05	0.8	0.6	0.5	0.8	ND
Barium	0.05	19.50	17.30	10.90	11.80	22.00
Boron	5	32.9	ND	ND	ND	ND
Selenium	0.05	5.7	5.10	3.30	4.30	1.60
RADIOMETRIC (µCi/kg): E903.0						
U-Nat		4.1E-03	6.2E-03	4.5E-03	3.8E-03	5.8E-04
U-Nat RL		1.0E-05	1.0E-05	1.0E-05	1.0E-05	1.0E-05
Ra226		6.4E-06	1.5E-05	7.8E-06	9.7E-06	6.0E-06
Ra226 ERR. EST. +/-		8.2E-07	1.3E-06	8.3E-07	1.1E-06	1.1E-06
Ra226 MDC		4.1E-07	4.4E-07	3.6E-07	4.8E-07	6.5E-07

TABLE 7-4

SATELLITE NO. 2 LAND APPLICATION FACILITY (IRRIGATOR NO. 2)
2011-2012 ANNUAL REPORT PERMIT 603

IRRIGATION CYCLE		Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12
VOLUME (AF)		40.1	48.90									
DATE SAMPLED												
MAJOR IONS (mg/L)	REP. LIMIT											
Ca	1.0	281.0	298									
Mg	1.0	118.0	115									
Na	1.0	79.0	83									
K	1.0	27.0	28.0									
HCO_3	1.0	147.0	142									
SO_4	1.0	798.0	838									
Cl	1.0	291.0	295									
NON-METALS												
TDS @ 180° C (mg/L)	10.0	1780.0	1830									
pH (standard units)	0.010	8.160	8.12									
SAR	0.01	1	3.6									
TRACE METALS (mg/L)												
As	0.001	ND	ND									
Ba	0.1	ND	ND									
B	0.10	0.10	0.20									
Se	0.001	0.018	0.010									
RADIOMETRIC												
U-nat (uCi/mL)	2.03E-10	4.02E-01	2.16E-07									
Ra-226 (uCi/mL)	2.00E-10	5.60E-10	6.20E-10									
Ra Err. Est. +/-		1.70E-10	2.00E-10									

TABLE 7-5
SATELLITE NO. 1 LAND APPLICATION FACILITY (Irrigator No. 1)
FLUID VOLUMES APPLIED
2011-2012 ANNUAL REPORT PERMIT 603

Irrigation Cycle	Fluid Volumes Applied (AF)	Irrigation Cycle	Fluid Volumes Applied (AF)
Aug 16-Nov 14, 1989	20.9	Nov 16-Nov 30, 1995	2.9
Jul 25-Aug 4, 1990	9.4	Dec 1-Dec 13, 1995	4.3
Apr 28-Jun 5, 1991	20.9	Apr 1-Apr 30, 1996	12.4
Jun 7-10, 1991	2.9	May 1-Jul 10, 1996	27.3
Jul 3-4, 1991	0.9	Jul 11-Sep 11, 1996	30.6
Jul 8-Aug 9, 1991	31.2	Sep 12-Dec 12, 1996	14.2
Sep 30-Oct 23, 1991	19.9	Mar 12-Mar 21, 1997	2.8
Dec 24-Dec 30, 1991	5.7	Apr 3-May 6, 1997	1.7
Jan 28-Mar 5, 1992	21	May 7-Jun 2, 1997	10.2
Mar 24-Apr 6, 1992	13.1	Jun 3-Jul 2, 1997	15.1
Apr 29-May 31, 1992	25.8	Jul 3-Jul 25, 1997	12.2
Jun 1-Jul 2, 1992	23.1	Aug 15-Aug 30, 1997	7.5
Jul 6-Jul 29, 1992	21.1	Sep 2-Sep 28, 1997	11.2
Aug 7-Sep 26, 1992	18.9	Oct 1-Oct 30, 1997	11.4
Oct 6-Oct 13, 1992	7.2	Nov 3-Nov 25, 1997	2.4
Oct 19-Oct 30, 1992	11.8	April-December 1998	87.5
Jan 20-Feb 8, 1993	11	March-December 1999	67.3
Mar 2-Mar 16, 1993	8.5	January-June 2000	40.7
Apr 16-May 28, 1993	22.1	July-October 2000	47
Jun 2-Jul 23, 1993	22.7	Jan-01	3
Jul 26-Aug 20, 1993	10	March-April 2001	8.1
Sep 1-Oct 5, 1993	22.9	June-November 2001	57.8
Oct 6-Oct 29, 1993	19.7	Apr 2002-Jan 2004	122.2
Dec 29, 1993-Jan 28, 1994	5.2	April-October 2004	85.6
Feb 2-Feb 28, 1994	2.2	April – October 2005	0
Mar 1-Mar 31, 1994	9.3	April – October 2006	0
Apr 1-Apr 30, 1994	10.7	April – October 2007	0
May 1-May 31, 1994	16.7	April - October 2008	0
Jun 1-Jul 1, 1994	2.3	April - October 2009	0
Jul 1-Aug 2, 1994	20.6	April - October 2010	0
Aug 2-Aug 31, 1994	21.5	April 2011	0
Sep 1-Sep 30, 1994	20.3	Apr-12	0
Oct 1-Oct 27, 1994	2.6	**TOTAL**	1167
Nov 1-Nov 30, 1994	2.9		
Sep 6-Sep 27, 1995	8.7		
Oct 2-Oct 20, 1995	11.7		

TABLE 7-6
SATELLITE NO. 2 LAND APPLICATION FACILITY (Irrigator No. 2)
FLUID VOLUMES APPLIED
2011-2012 ANNUAL REPORT PERMIT 603

Irrigation Cycle	Fluid Volumes Applied (AF)
Sep 1-Sep 23, 1995	32.2
Oct 6-Oct 30, 1995	22.7
Mar 20-Jun 30, 1996	35.7
May 14-Jul 2, 1996	36.1
Aug 1-Aug 28, 1996	28.1
Sep 10-Oct 15, 1996	16.2
Aug 21-Sep 19, 1997	60.2
June-December 1998	102.5
June-November 1999	130.4
April-June 2000	45.8
July-September 2000	67.6
May-September 2001	156.6
June-September 2002	80.7
June-October 2003	134.0
June-October 2004	28.1
June – October 2005	82.1
June – October 2006	117.9
June – October 2007	132.1
May - October 2008	123.6
May - October 2009	165.9
May-October 2010	57.3
May-October 2011	88.9
TOTAL	1744.7

Irrigation won't begin for 2011 until May

TABLE 7-7
LAND APPLICATION FACILITY (IRRIGATOR 1)
ANNUAL SOIL DATA
2011-2012 ANNUAL REPORT PERMIT 603

SAMPLE ID	SAMPLE DATE	Sat %	pH SAT. PASTE (std. Units)	CONDUCTIVITY (mmhos/cm)	CALCIUM SOLUBLE (meq/L)	MAGNESIUM SOLUBLE (meq/L)	SODIUM SOLUBLE (meq/L)	SAR	POTASSIUM SOLUBLE (mg/kg-dry)	BORON CACL2 (mg/kg-dry)	ARSENIC ABDTPA (mg/kg-dry)	BARIUM ABDTPA (mg/kg-dry)	SELENIUM ABDTPA (mg/kg-dry)	Uranium mg/kg	RADIUM 226 (µCi/g-dry)	TOTAL ERROR ESTIMATE± (pCi/g-dry)	URANIUM - NATURAL TOTAL (µCi/g-dry)
S.E. Location 1 0-6"	8/9/11	39.2	5.6	3.0	23.30	9.54	6.51	1.6	19.5	0.21	<.05	0.8	0.14	2.28	7.0E-10	0.02	1.54E-06
S.E. Location 1 6-12"	8/9/11	47.4	6.1	1.2	6.56	2.84	4.84	2.2	9.2	0.24	0.04	1.8	0.15	2.68	1.1E-09	0.02	1.81E-06
S.E. Location 2 0-6"	8/9/11	58.4	6.5	1.1	6.75	2.88	2.57	1.2	13.5	0.32	0.08	1.6	0.91	13.90	1.1E-09	0.02	9.41E-06
S.E. Location 2 6-12"	8/9/11	60.9	6.8	1.0	4.68	2.13	4.36	2.4	6.6	0.27	0.05	1.5	0.63	4.66	1.0E-09	0.02	3.15E-06
S.E. Location 3 0-6"	8/9/11	43.8	6.2	1.2	7.92	3.48	3.81	1.6	11.4	0.26	0.04	1.0	0.38	17.70	1.0E-09	0.02	1.20E-05
S.E. Location 3 6-12"	8/9/11	44.0	6.3	1.2	5.45	2.40	5.90	3.0	8.3	0.23	0.04	1.5	0.18	3.05	1.2E-09	0.02	2.06E-06
S.W. Location 4 0-6"	8/9/11	61.5	7.3	1.1	6.30	2.52	3.82	1.8	10.7	<.20	0.06	2.5	0.76	14.50	1.2E-09	0.02	9.82E-06
S.W. Location 4 6-12"	8/9/11	59.5	7.6	1.9	11.10	4.34	7.51	2.7	7.5	<.20	0.04	2.0	0.93	3.87	1.0E-09	0.02	2.62E-06
S.W. Location 5 0-6"	8/9/11	37.9	6.8	1.2	8.89	3.77	2.09	0.8	10.4	0.25	0.07	0.4	0.41	15.00	1.2E-09	0.02	1.02E-05
S.W. Location 5 6-12"	8/9/11	57.4	5.9	0.8	3.61	1.68	4.59	2.8	8.5	0.21	0.03	1.6	0.17	2.60	1.0E-09	0.02	1.76E-06
S.W. Location 6 0-6"	8/9/11	58.9	6.2	0.7	4.14	1.88	3.24	1.9	9.9	0.21	0.04	1.9	0.69	8.46	1.0E-09	0.02	5.73E-06
S.W. Location 6 6-12"	8/9/11	60.5	7.1	1.0	4.73	2.08	4.92	2.7	6.7	<.20	0.04	2.1	0.65	2.24	8.0E-10	0.02	1.52E-06
S.W. Location 7 0-6"	8/9/11	58.5	6.4	0.7	3.40	1.62	3.23	2.0	6.3	0.27	0.04	2.7	0.30	6.64	9.0E-10	0.02	4.50E-06
S.W. Location 7 6-12"	8/9/11	59.8	7.6	0.8	3.53	1.67	4.57	2.8	2.8	0.21	0.04	2.2	0.24	2.86	1.2E-09	0.02	1.94E-06
N.W. Location 8 0-6"	8/9/11	59.0	7.5	1.2	5.78	2.43	6.09	3.0	5.8	0.21	0.06	2.4	0.25	4.33	8.0E-10	0.02	2.93E-06
N.W. Location 8 6-12"	8/9/11	63.8	6.2	1.0	5.13	2.30	4.33	2.2	11.7	0.24	0.07	2.3	0.34	5.74	1.2E-09	0.02	3.89E-06
N.W. Location 9 0-6"	8/9/11	63.0	6.2	0.5	2.20	1.02	2.16	1.7	7.7	0.29	0.06	2.4	0.97	9.62	1.0E-09	0.02	6.51E-06
N.W. Location 9 6-12"	8/9/11	61.2	6.5	0.6	1.91	0.98	3.33	2.8	5.4	0.24	0.06	2.3	0.53	3.86	1.0E-09	0.02	2.61E-06
N.W. Location 10 0-6"	8/9/11	42.9	6.0	1.0	4.01	2.01	4.18	2.4	9.6	0.27	0.10	1.5	0.57	9.72	7.0E-10	0.01	6.58E-06
N.W. Location 10 6-12"	8/9/11	73.0	6.5	1.0	3.33	1.75	5.86	3.7	11.3	0.21	0.05	1.2	0.56	4.62	8.0E-10	0.02	3.13E-06
N.E. Location 11 0-6"	8/9/11	36.5	5.8	0.9	4.67	2.22	2.59	1.4	9.9	0.23	0.07	0.9	0.38	4.55	9.0E-10	0.01	3.08E-06
N.E. Location 11 6-12"	8/9/11	64.1	6.4	0.8	3.06	1.53	4.05	2.7	6.7	0.24	0.04	1.9	0.28	2.64	1.1E-09	0.02	1.79E-06
N.E Location 12 0-6"	8/9/11	57.6	6.6	0.6	2.48	1.18	2.93	2.2	6.3	0.31	0.05	1.0	0.64	15.60	9.0E-10	0.02	1.06E-05
N.E. Location 12 6-12"	8/9/11	61.4	6.8	0.8	2.71	1.40	3.83	2.7	4.7	0.26	0.06	1.9	0.49	4.90	9.0E-10	0.01	3.32E-06
N.E. Location 13 0-6"	8/9/11	63.6	6.4	0.9	4.73	2.20	3.80	2.0	12.5	0.31	0.05	2.2	0.34	31.90	1.1E-09	0.02	2.16E-05
N.E. Location 13 6-12"	8/9/11	63.9	6.4	0.8	3.05	1.55	4.46	2.9	8.3	0.27	0.03	2.0	0.24	3.00	1.1E-09	0.02	2.03E-06
N.E. Location 14 0-6"	8/9/11	55.3	7.3	0.9	5.90	2.23	2.70	1.4	10.1	<.20	0.05	2.2	0.23	14.30	1.1E-09	0.02	9.68E-06
N.E. Location 14 6-12"	8/9/11	57.5	7.4	0.8	3.65	1.41	4.73	3.0	5.1	<.20	0.05	2.1	0.31	5.86	1.0E-09	0.02	3.97E-06
Average 0-6"	8/9/11	52.58	6.5	1.1	6.46	2.78	3.55	1.8	10.3	0.26	0.06	1.7	0.50	12.04	9.7E-10		8.15E-06
Average 6-12"	8/9/11	59.60	6.7	1.0	4.46	2.00	4.81	2.8	7.3	0.24	0.05	1.9	0.41	3.76	1.0E-09		2.54E-06
Background 0-6"	8/9/11	42.4	6.4	0.7	5.12	2.57	0.54	0.3	3.2	<.20	0.04	7.4	0.09	1.73	7.0E-10	0.0	1.17E-06
Background 6-12"	8/9/11	58.1	7.7	0.7	3.43	2.02	2.61	1.6	3.4	<.20	0.04	2.1	0.05	1.38	1.0E-09	0.0	9.34E-07

TABLE 7-8
LAND APPLICATION FACILITY (IRRIGATOR 2)
ANNUAL SOIL DATA
2011-2012 ANNUAL REPORT PERMIT 603

SAMPLE ID	SAMPLE DATE	Sat %	pH SAT. PASTI (std. Units)	CONDUCTIVIT SAT. PASTE (mmhos/cm)	CALCIUM SAT. PASTE (meq/L)	MAGNESIUM SAT. PASTE (meq/L)	SODIUM SAT. PASTE (meq/L)	SAR	POTASSIUM (mg/kg-dry)	BORON ABDTPA (mg/kg-dry)	ARSENIC ABDTPA (mg/kg-dry)	BARIUM (mg/kg-dry)	SELENIUM ABDTPA (mg/kg-dry)	SELENIUM ABDTPA (mg/kg-dry)	Uranium mg/kg	RADIUM 226 (µCi/g-dry)	TOTAL ERROR ESTIMATE± (pCi/g-dry)	NIUM - NATURAL TOTAL (µCi/g-dry)
Location 1 0-6"	8/10/11	45.5	6.0	6.0	60.4	25.70	8.85	1.4	24.5	0.31	0.07	<.2		0.36	6.69	8.00E-10	0.02	4.53E-06
Location 1 6-12"	8/10/11	60.1	6.1	6.1	43.0	26.90	14.10	2.4	16.1	<.20	0.04	<.2		0.48	2.14	1.00E-09	0.02	1.45E-06
Location 2 0-6"	8/10/11	68.8	6.8	6.8	22.9	11.20	6.22	1.5	21.8	0.23	0.04	<.2		0.33	9.23	1.30E-09	0.02	6.25E-06
Location 2 6-12"	8/10/11	64.0	7.6	7.6	25.5	11.30	7.15	1.7	9.9	<.20	0.04	0.6		0.19	2.04	1.00E-09	0.02	1.38E-06
Location 3 0-6"	8/10/11	64.3	7.0	7.0	43.5	20.40	10.50	1.8	48.3	0.37	0.16	0.9		0.66	11.80	1.00E-09	0.03	7.99E-06
Location 3 6-12"	8/10/11	58.7	7.6	7.6	67.3	23.10	14.10	2.1	21.6	<.20	0.06	<.2		0.25	4.91	8.00E-10	0.02	3.32E-06
Location 4 0-6"	8/10/11	54.5	6.8	6.8	46.8	22.90	10.90	1.8	20.8	0.24	0.04	<.2		1.40	12.10	1.20E-09	0.02	8.19E-06
Location 4 6-12"	8/10/11	40.0	7.4	7.4	99.1	35.60	13.40	1.6	9.3	<.20	0.04	<.2		0.21	4.59	8.00E-10	0.02	3.11E-06
Location 5 0-6"	8/10/11	59.4	6.8	6.8	16.5	7.55	4.31	1.2	17.0	<.20	0.04	<.2		1.21	13.20	1.10E-09	0.03	8.94E-06
Location 5 6-12"	8/10/11	60.7	7.2	7.2	13.6	6.78	4.55	1.4	8.0	<.20	0.03	0.4		0.45	6.46	1.20E-09	0.02	4.37E-06
Location 6 0-6"	8/10/11	74.9	6.9	6.9	70.8	31.90	13.80	1.9	48.7	<.20	0.05	<.2		0.55	5.14	9.00E-10	0.02	3.48E-06
Location 6 6-12"	8/10/11	73.5	7.2	7.2	58.4	21.10	15.30	2.4	27.4	<.20	0.04	<.2		0.36	2.18	1.10E-09	0.02	1.48E-06
Location 7 0-6"	8/10/11	53.5	6.3	6.3	64.6	27.00	6.53	1.0	18.6	<.20	0.04	<.2		0.20	6.65	1.10E-09	0.03	4.50E-06
Location 7 6-12"	8/10/11	43.3	6.6	6.6	65.6	23.90	9.62	1.4	8.8	<.20	0.03	<.2		0.14	1.76	7.00E-10	0.02	1.19E-06
Location 8 0-6"	8/10/11	46.0	5.9	5.9	12.5	6.34	3.15	1.0	6.2	0.27	0.06	<.2		0.21	6.28	1.00E-09	0.02	4.25E-06
Location 8 6-12"	8/10/11	60.0	6.2	6.2	30.6	18.40	7.69	1.6	8.3	0.20	0.03	<.2		0.17	4.43	1.20E-09	0.02	3.00E-06
Location 9 0-6"	8/10/11	41.8	6.4	6.4	22.2	11.10	6.49	1.6	13.8	0.24	0.05	<.2		0.27	5.41	1.00E-09	0.02	3.66E-06
Location 9 6-12"	8/10/11	66.8	6.1	6.1	47.8	29.10	9.85	1.6	12.4	<.20	0.03	<.2		0.27	3.80	1.10E-09	0.02	2.57E-06
Location 10 0-6"	8/10/11	49.4	6.5	6.5	16.6	7.90	4.27	1.2	19.8	0.21	0.04	<.2		0.34	17.80	1.10E-09	0.02	1.21E-05
Location 10 6-12"	8/10/11	40.2	6.9	6.9	17.0	7.78	4.28	1.2	13.3	<.20	0.01	<.2		0.17	11.00	7.00E-10	0.02	7.45E-06
Location 11 0-6"	8/10/11	44.5	6.1	6.1	14.9	7.33	3.92	1.2	8.0	0.23	0.05	0.5		0.18	4.15	8.00E-10	0.02	2.81E-06
Location 11 6-12"	8/10/11	46.5	6.4	6.4	19.8	8.99	7.01	1.8	6.1	<.20	0.04	<.2		0.10	1.20	7.00E-10	0.02	8.12E-07
Location 12 0-6"	8/10/11	57.6	7.4	7.4	18.6	7.21	3.96	1.1	9.5	0.22	0.06	1.5		0.22	5.34	1.20E-09	0.02	3.62E-06
Location 12 6-12"	8/10/11	58.1	7.5	7.5	33.5	12.70	7.63	1.6	7.9	<.20	0.05	<.2		0.23	3.22	1.00E-09	0.02	2.18E-06
Location 13 0-6"	8/10/11	59.8	6.6	6.6	20.8	9.28	4.36	1.1	8.5	0.22	0.05	<.2		0.23	9.25	1.10E-09	0.02	6.26E-06
Location 13 6-12"	8/10/11	60.4	6.7	6.7	28.9	12.50	7.15	1.6	8.1	0.20	0.05	<.2		0.23	3.73	1.00E-09	0.02	2.53E-06
Location 14 0-6"	8/10/11	56.0	6.6	6.6	43.1	18.80	7.33	1.3	15.6	<.20	0.04	<.2		0.37	12.30	1.10E-09	0.02	8.33E-06
Location 14 6-12"	8/10/11	49.8	7.3	7.3	32.8	13.20	6.12	1.3	9.6	<.20	0.04	0.9		0.40	5.17	1.00E-09	0.02	3.50E-06
Location 15 0-6"	8/10/11	65.7	7.3	7.3	32.5	11.3	6.5	1.4	13.9	0.21	0.06	<.2		0.25	8.19	1.30E-09	0.02	5.54E-06
Location 15 6-12"	8/10/11	66.9	7.4	7.4	51.7	18.7	13.6	2.3	14.6	0.26	0.04	<.2		0.43	4.09	1.20E-09	0.02	2.77E-06
Location 16 0-6"	8/10/11	64.0	6.6	6.6	45.5	25.3	8.4	1.4	21.2	0.25	0.05	<.2		0.46	9.42	1.10E-09	0.02	6.38E-06
Location 16 6-12"	8/10/11	65.6	6.8	6.8	51.7	26.6	15.9	2.5	19.4	0.20	<.01	<.2		<.01	4.18	1.10E-09	0.02	2.83E-06
Average 0-6"	8/10/11	56.6	6.6	6.6	34.5	15.7	6.8	1.4	19.8	0.25	0.06	1.0	#DIV/0!	0.45	8.93	1.07E-09		6.05E-06
Average 6-12"	8/10/11	57.2	6.9	6.9	42.9	18.5	9.8	1.8	12.6	0.22	0.04	0.6	#DIV/0!	0.27	4.06	9.75E-10		2.75E-06
Background 0-6"		57.6	6.2	6.2	4.9	3.0	2.5	1.3	4.7	<.20	0.04	2.4		0.12	2.18	1.30E-09	0.02	1.48E-06
Background 6-12"		60.3	7.3	7.3	5.7	3.5	4.1	1.9	5.1	<.20	0.04	2.1		0.07	1.32	1.20E-09	0.02	8.94E-07

TABLE 7-9

SATELLITE NO. 2 PURGE STORAGE RESERVOIR
SHALLOW MONITORING WELLS
QUARTERLY WATER LEVEL DATA
SEMI-ANNUAL WATER QUALITY DATA
2011-2012 ANNUAL REPORT PERMIT 603

SAMPLE SITE		Shallow Well No. 1 (South)				Shallow Well No. 2 (East)			
SAMPLE DATE		28-Jun-11	19-Sep-11	13-Dec-11	15-Mar-12	28-Jun-11	19-Sep-11	13-Dec-11	15-Mar-12
WATER LEVEL (DTW)		13.4	13.2	13.4	14.3	18.8	10.8	11.4	10.9
MAJOR IONS (mg/L)	Rep. Limit								
HCO_3	1.0					294	294	261	268
SO_4	1.0					2430	2430	2380	2320
Cl	1.0		Not Enough Water to Sample			409	422	383	359
NON-METALS									
Cond (µmho/cm)	1.0					5090	5080	5390	4880
pH (standard units)	0.01					7.30	7.65	7.33	7.1
TRACE METALS (mg/L)									
Ba	0.001					ND	ND	ND	ND
Se	0.0025					0.029	0.04	0.026	0.027
RADIOMETRIC									
U-nat (uCi/mL)	6.77E-10					3.69E-08	2.58E-08	3.07E-08	3.34E-08
Ra-226 (uCi/mL)	2.00E-10					1.10E-09	1.00E-09	7.30E-10	8.5E-10
Ra-226 Err. Est. +/- (uCi/mL)						1.70E-10	2.40E-10	1.8E-10	1.6E-10

TABLE 7-10

SATELLITE NO. 2 PURGE STORAGE RESERVOIR
NEW SHALLOW MONITORING WELLS
QUARTERLY WATER LEVEL DATA
SEMI-ANNUAL WATER QUALITY DATA
2011-2012 ANNUAL REPORT PERMIT 603

SAMPLE SITE	MW-1S WEST				MS-2S NORTH				MW-3S SOUTH				MW-4S EAST			
SAMPLE DATE	28-Jun-11	19-Sep-11	13-Dec-11	15-Mar-12	28-Jun-11	19-Sep-11	13-Dec-11	15-Mar-12	28-Jun-11	19-Sep-11	13-Dec-11	15-Mar-12	28-Jun-11	19-Sep-11	13-Dec-11	15-Mar-12
WATER LEVEL (DTW)	19.6	21.3	20.5	21.4	21.4	23.0	22.6	24.6	22.8	24.0	24.0	23.3	21.4	33.6	33.6	35.3
MAJOR IONS (mg/L)																
HCO_3	357	392	340	360	367	343	331	357	414	402	415	444	488	407	431	434
SO_4	1960	2000	1930	1990	256	260	242	249	1020	1050	997	1030	1580	1430	1540	1400
Cl	320	287	301	316	72	72	70	68	432	441	391	368	139	147	143	143
NON-METALS																
Cond (µmho/cm)	4470	4370	4680	4310	1170	1160	1190	1130	3320	3300	3440	3140	3450	3060	3650	3130
pH (standard units)	7.30	7.54	7.31	7.22	7.70	7.72	7.66	7.41	7.60	7.68	7.48	7.43	7.73	7.70	7.28	7.10
TRACE METALS (mg/L)																
Ba	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Se	2.24	1.82	1.99	2.3	0.004	0.009	0.002	0.004	0.204	0.232	0.147	0.152	0.751	0.391	0.703	0.61
RADIOMETRIC																
U-nat (uCi/mL)	3.40E-08	3.90E-08	3.26E-08	3.80E-08	1.90E-09	ND	1.02E-09	1.80E-09	5.90E-07	3.49E-07	5.50E-07	6.00E-07	1.80E-07	1.97E-07	1.52E-07	1.90E-07
Ra-226 (uCi/mL)	3.50E-10	6.40E-10	7.30E-10	3.20E-10	4.30E-10	5.20E-10	3.40E-10	1.60E-10	6.50E-10	1.60E-10	2.90E-10	2.30E-10	1.70E-09	2.00E-09	3.10E-09	2.20E-09
Ra-226 Err. Est. +/- (uCi/mL)	1.60E-10	2.00E-10	1.80E-10	1.10E-10	1.70E-10	1.90E-10	1.50E-10	1.00E-10	1.90E-10	1.70E-10	1.30E-10	1.00E-10	2.60E-10	3.10E-10	3.50E-10	2.70E-10

TABLE 7-11

SELENIUM PLANT
RADIUM TREATMENT SYSTEM DISCHARGE
MONTHLY RADIUM GRAB SAMPLES
2011-2012

SAMPLE DATE	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12
RADIOMETRIC										
Ra-226 (µCi/mL)	2.00E-10	1.00E-10	1.20E-08	4.50E-09	2.40E-09	1.42E-08	4.30E-09	1.00E-09	1.80E-09	4.50E-09
Ra Err. Est.+/-	1.10E-10	8.00E-11	8.20E-10	4.40E-10	3.00E-10	8.90E-11	5.00E-10	2.30E-10	2.70E-10	4.20E-10

TABLE 8-1
ANNUAL RAPTOR NEST SURVEY
2011-2012 ANNUAL REPORT PERMIT 603

Nest Number (HWA ID)	Survey Dates	2011 Nest Status[1]	Species Code[2]	Nest Structure[3]	Nest Condition	Nest Productivity[4]	Coordinates		Legal Location			
							UTM E	UTM N	QQ	S	T	R
11	6/3, 7/5, 8/8/2011	ACTI	SWHA	ELM	GOOD	2-Class II young	446296	4768463	NWNE	30	36	73
12	6/3/2011	INAC	UNRA	ELM	FAIR		446439	4768523	NENE	30	36	73
13	6/3/2011	INAC	UNRA		GONE		449810	4768840	SESE	21	36	73
14	6/3/2011	INAC	UNRA		GONE		449961	4768930	SWSW	22	36	73
15	6/3, 7/5/2011	ACTF	SWHA	ELM	GOOD	Abandoned-2 eggs left in nest	449348	4769941	SWNE	21	36	73
16	6/3/2011	INAC	UNRA	ELM	FAIR		452752	4770555	SWSE	14	36	73
17	6/3, 7/5, 8/8/2011	ACTI	SWHA	ELM	GOOD	2-Class I young	452835	4770615	SESE	14	36	73
18	6/3/2011	INAC	UNRA	CTL	GOOD		455689	4770287	NENW	19	36	72
19	6/3/2011	INAC	UNRA	CTL	GONE		455578	4768533	NENW	30	36	72
20	6/3/2011	INAC	RETA	CTL	FAIR		456197	4768717	NENE	30	36	72
21	6/3/2011	INAC	UNRA		GONE		456289	4768634	NENE	30	36	72
35	6/3/2011	INAC	RETA	CTL	FAIR		445006	4776561	NWNW	31	35	73
42	6/3/2011	INAC	GOEA	CTL	EXCELLENT		451674	4773731	SWSW	2	36	73
43	6/3/2011	INAC	FEHA	ROP	EXCELLENT		445705	4773083	SENW	7	36	73
44	6/3/2011	INAC	FEHA	ROP	GOOD		448576	4772112	SWSW	9	36	73
45	6/3/2011	INAC	FEHA	GHS	GOOD		446829	4771477	SWNE	17	36	73
46	6/3/2011	INAC	FEHA	GHS	FAIR		445305	4770289	NWNW	19	36	73
47	6/3/2011	INAC	UNRA	ELM	FAIR		448290	4770708	SESE	17	36	73
48	6/3/2011	INAC	UNRA		GONE		449865	4769610	SENE	21	36	73
60	6/3, 7/5/2011	ACTI	GOEA	CTL	EXCELLENT	1-Class III young	451800	4773049	SWNW	11	36	73
61	6/3/2011	INAC	UNRA		GONE		451038	4770280	NWNE	22	36	73
62	6/3/2011	INAC	FEHA	GHS	FAIR		446479	4773176	SESE	7	36	73
30	6/3/2011	INAC	UNRA		GONE		449485	4769807	SWNE	21	36	73

[1] ACTI = Active; INAC = Inactive; ACTF = Active nest failed to produce young to fledgling age

[2] FEHA = Ferrugenous Hawk; GOEA = Golden Eagle; RETA = Red-tailed Hawk; SWHA = Swainson's Hawk; UNRA = Unknown Raptor

[3] WIL = Willow; CTL = Cottonwood-Live; ELM = Elm; ROK = Rock Outcrop; ROP= Rock Pillar; GHS = Ground/Hill Side

[4] Class I = All downey/no feathers; Class II = Feathers visible/downey patches on body or head; Class III = Completely feathered

TABLE 10-1: PERMIT #603 DELINEATION DRILL HOLES (May 1, 2011 THROUGH APRIL 30, 2012)

195 delineation holes

Prepared By Seth Barnes
Operator Name Cameco Resources
Smith Ranch-Highland Operation
P.O. Box 1210, Glenrock, WY 82637

All holes capped and sealed

Mine Unit	Delineation Number	Section	Township	Range	Northing	Easting	Total Drilled Depth	Drill Completion Date	Surface Ownership	Avg. Depth of Topsoil	Avg. yd³
I	3673-24-27	23	36	73	879015	392384	700	6/2/2011	Ruth Whiting, et al	5"	3.3
I	3673-24-28	24	36	73	879036	392303	680	6/1/2011	Ruth Whiting, et al	5"	3.3
I	3673-24-29	24	36	73	879074	392216	680	6/1/2011	Ruth Whiting, et al	5"	3.3
I	3673-24-24	24	36	73	878901	392064	680	5/27/2011	Ruth Whiting, et al	5"	3.3
I	3673-24-25	24	36	73	878964	392019	680	5/26/2011	Ruth Whiting, et al	5"	3.3
I	3673-24-26	24	36	73	878995	391922	680	5/23/2011	Ruth Whiting, et al	5"	3.3
I	3673-24-30	24	36	73	879157	391920	680	5/23/2011	Ruth Whiting, et al	5"	3.3
I	3673-24-33	24	36	73	879293	391746	680	5/18/2011	Ruth Whiting, et al	5"	3.3
I	3673-24-31	24	36	73	879020	391697	680	5/18/2011	Ruth Whiting, et al	5"	3.3
I	3673-24-35	24	36	73	879359	391650	680	5/27/2011	Ruth Whiting, et al	5"	3.3
I	3673-24-34	24	36	73	879122	391563	680	5/31/2011	Ruth Whiting, et al	5"	3.3
I	3673-24-5027	24	36	73	877639	391529	740	5/17/2011	Fowler Ranch Partnership, et al	5"	3.3
I	3673-24-5030	24	36	73	877877	391444	730	5/16/2011	Fowler Ranch Partnership, et al	5"	3.3
I	3673-24-5026	24	36	73	877645	391427	740	5/18/2011	Fowler Ranch Partnership, et al	5"	3.3
I	3673-24-36	24	36	73	879471	391396	685	5/26/2011	Ruth Whiting, et al	5"	3.3
I	3673-24-37	24	36	73	879342	391242	680	5/23/2011	Ruth Whiting, et al	5"	3.3
I	3673-24-5034	24	36	73	877712	391218	730	5/17/2011	Mountain States Tel and Tel Co	5"	3.3
I	3673-24-5014	24	36	73	877697	391137	740	5/16/2011	Mountain States Tel and Tel Co	5"	3.3
I	3673-23-17	23	36	73	879237	390901	700	6/3/2011	Ruth Whiting, et al	5"	3.3
I	3673-23-5	23	36	73	878004	390881	720	6/13/2011	Goldberg Revocable Trust	5"	3.3
I	3673-23-76	23	36	73	877628	390856	800	3/16/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-3	23	36	73	877376	390835	720	6/15/2011	Goldberg Revocable Trust	5"	3.3
I	3673-23-7	23	36	73	878765	390790	700	6/2/2011	Goldberg Revocable Trust	5"	3.3
I	3673-23-79	23	36	73	878767	390692	800	4/11/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-15	23	36	73	879780	390612	700	6/8/2011	Ruth Whiting, et al	5"	3.3
I	3673-23-220	23	36	73	878628	390593	800	4/5/2012	Goldberg Revocable Trust	5"	3.3

TABLE 10-1: PERMIT #603 DELINEATION DRILL HOLES (May 1, 2011 THROUGH APRIL 30, 2012)

195 delineation holes

Mine Unit	Delineation Number	Section	Township	Range	Northing	Easting	Total Drilled Depth	Drill Completion Date	Surface Ownership	Avg Depth of Topsoil	Avg yds
I	3673-23-14	23	36	73	879625	390578	700	6/3/2011	Ruth Whiting, et al	5"	3.3
I	3673-23-74	23	36	73	877276	390527	720	6/16/2011	Goldberg Revocable Trust	5"	3.3
I	3673-23-10	23	36	73	879133	390475	700	6/6/2011	Ruth Whiting, et al	5"	3.3
I	3673-23-77	23	36	73	877630	390466	800	3/19/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-215	23	36	73	878645	390464	800	4/5/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-11	23	36	73	879202	390399	700	6/7/2011	Ruth Whiting, et al	5"	3.3
I	3673-23-13	23	36	73	879665	390397	700	6/6/2011	Ruth Whiting, et al	5"	3.3
I	3673-23-16	23	36	73	879791	390395	700	6/7/2011	Ruth Whiting, et al	5"	3.3
I	3673-23-78	23	36	73	877622	390361	800	3/20/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-218	23	36	73	878649	390347	800	4/5/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-12	23	36	73	879277	390347	700	6/8/2011	Ruth Whiting, et al	5"	3.3
I	3673-23-109	23	36	73	877428	390311	800	3/22/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-103	23	36	73	877541	390310	800	3/21/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-110	23	36	73	877332	390310	800	3/23/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-52	23	36	73	877730	390261	800	3/20/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-104	23	36	73	877636	390253	800	3/20/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-68	23	36	73	877206	390242	700	6/16/2011	Goldberg Revocable Trust	5"	3.3
I	3673-23-9	23	36	73	878908	390234	700	6/3/2011	Ruth Whiting, et al	5"	3.3
I	3673-23-41	23	36	73	878018	390228	720	6/13/2011	Goldberg Revocable Trust	5"	3.3
I	3673-23-55	23	36	73	877327	390214	800	3/26/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-58	23	36	73	877534	390200	800	3/22/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-59	23	36	73	878753	390196	800	3/26/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-6	23	36	73	878564	390195	700	6/15/2011	Goldberg Revocable Trust	5"	3.3
I	3673-23-101	23	36	73	877731	390160	800	3/21/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-108	23	36	73	877441	390160	800	3/23/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-116	23	36	73	877238	390159	800	3/27/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-102	23	36	73	877646	390157	800	3/21/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-115	23	36	73	877334	390156	800	3/27/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-211	23	36	73	878651	390144	800	4/5/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-83	23	36	73	877437	390065	800	3/26/2012	Goldberg Revocable Trust	5"	3.3

TABLE 10-1: PERMIT #603 DELINEATION DRILL HOLES (May 1, 2011 THROUGH APRIL 30, 2012)

195 delineation holes

Mine Unit	Delineation Number	Section	Township	Range	Northing	Easting	Total Drilled Depth	Drill Completion Date	Surface Ownership	Avg. Depth of Topsoil	Avg. yd³
I	3673-23-84	23	36	73	877543	390061	800	3/22/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-67	23	36	73	876724	390060	1200	6/15/2011	Goldberg Revocable Trust	5"	3.3
I	3673-23-85	23	36	73	877642	390059	800	3/22/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-117	23	36	73	877234	390058	800	3/28/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-70	23	36	73	877546	390031	700	7/21/2011	Goldberg Revocable Trust	5"	3.3
I	3673-23-18	23	36	73	879638	389979	720	6/15/2011	Ruth Whiting, et al	5"	3.3
I	3673-23-100	23	36	73	877438	389962	800	3/27/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-99	23	36	73	877329	389959	800	3/28/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-86	23	36	73	877731	389957	800	3/23/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-95	23	36	73	877543	389954	800	3/23/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-94	23	36	73	877641	389953	800	3/23/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-40	23	36	73	877996	389948	720	6/13/2011	Goldberg Revocable Trust	5"	3.3
I	3673-23-201	23	36	73	878146	389945	800	4/5/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-212	23	36	73	878650	389943	800	3/28/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-202	23	36	73	878247	389943	800	4/5/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-214	23	36	73	878550	389939	800	4/5/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-75	23	36	73	878748	389937	800	3/23/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-69	23	36	73	877227	389900	700	6/17/2011	Goldberg Revocable Trust	5"	3.3
I	3673-23-118	23	36	73	877230	389861	800	3/29/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-96	23	36	73	877434	389860	800	3/28/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-61	23	36	73	877726	389859	800	3/26/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-51	23	36	73	877330	389856	800	3/28/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-221	23	36	73	877636	389850	880	4/10/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-56	23	36	73	877544	389845	800	3/23/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-39	23	36	73	878135	389843	720	6/15/2011	Goldberg Revocable Trust	5"	3.3
I	3673-23-19	23	36	73	879703	389813	720	6/10/2011	Ruth Whiting, et al	5"	3.3
I	3673-23-36	23	36	73	878657	389808	720	6/14/2011	Goldberg Revocable Trust	5"	3.3
I	3673-23-20	23	36	73	880013	389782	720	6/8/2011	Ruth Whiting, et al	5"	3.3
I	3673-23-113	23	36	73	877723	389768	800	3/26/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-88	23	36	73	877436	389763	800	3/28/2012	Goldberg Revocable Trust	5"	3.3

TABLE 10-1: PERMIT #603 DELINEATION DRILL HOLES (May 1, 2011 THROUGH APRIL 30, 2012)

195 delineation holes

Mine Unit	Delineation Number	Section	Township	Range	Northing	Easting	Total Drilled Depth	Drill Completion Date	Surface Ownership	Avg Depth of Topsoil	Avg yd³
I	3673-23-105	23	36	73	877541	389760	800	3/26/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-89	23	36	73	877231	389759	800	4/4/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-87	23	36	73	877636	389759	800	3/21/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-97	23	36	73	877333	389758	800	3/29/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-119	23	36	73	877135	389754	800	3/27/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-80	23	36	73	878547	389736	800	3/22/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-81	23	36	73	878446	389732	800	3/21/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-82	23	36	73	878344	389731	800	3/20/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-21	23	36	73	879783	389666	720	6/9/2011	Ruth Whiting, et al	5"	3.3
I	3673-23-98	23	36	73	877436	389664	800	3/29/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-71	23	36	73	877543	389657	700	6/14/2011	Goldberg Revocable Trust	5"	3.3
I	3673-23-111	23	36	73	877635	389654	800	3/20/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-38	23	36	73	878296	389645	720	6/14/2011	Goldberg Revocable Trust	5"	3.3
I	3673-23-42	23	36	73	878137	389633	720	6/14/2011	Goldberg Revocable Trust	5"	3.3
I	3673-23-35	23	36	73	879195	389595	800	3/29/2012	Ruth Whiting, et al	5"	3.3
I	3673-23-43	23	36	73	877945	389592	700	6/14/2011	Goldberg Revocable Trust	5"	3.3
I	3673-23-92	23	36	73	877538	389560	800	3/26/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-90	23	36	73	877737	389556	800	3/26/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-91	23	36	73	877632	389550	800	3/21/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-112	23	36	73	877334	389513	800	3/27/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-106	23	36	73	877239	389510	800	3/28/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-93	23	36	73	877433	389510	800	3/29/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-72	23	36	73	877542	389498	700	6/15/2011	Goldberg Revocable Trust	5"	3.3
I	3673-23-66	23	36	73	876713	389474	700	6/16/2011	Goldberg Revocable Trust	5"	3.3
I	3673-23-73	23	36	73	876707	389472	700	6/15/2011	Goldberg Revocable Trust	5"	3.3
I	3673-23-114	23	36	73	877638	389451	800	3/22/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-120	23	36	73	877151	389450	800	3/28/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-65	23	36	73	877440	389409	800	3/28/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-27	23	36	73	879899	389397	800	3/26/2012	Ruth Whiting, et al	5"	3.3
I	3673-23-57	23	36	73	878145	389372	800	3/27/2012	Goldberg Revocable Trust	5"	3.3

TABLE 10-1: PERMIT #603 DELINEATION DRILL HOLES (May 1, 2011 THROUGH APRIL 30, 2012)

195 delineation holes

Mine Unit	Delineation Number	Section	Township	Range	Northing	Easting	Total Drilled Depth	Drill Completion Date	Surface Ownership	Avg. Depth of Topsoil	Avg. yd³
I	3673-23-4	23	36	73	878351	389369	800	3/27/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-53	23	36	73	877957	389364	800	3/26/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-64	23	36	73	877637	389352	800	3/23/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-128	23	36	73	877150	389351	800	3/28/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-24	23	36	73	880103	389349	800	3/29/2012	Ruth Whiting, et al	5"	3.3
I	3673-23-219	23	36	73	877053	389347	800	4/4/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-62	23	36	73	877440	389310	800	3/27/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-44	23	36	73	878262	389271	720	6/16/2011	Goldberg Revocable Trust	5"	3.3
I	3673-23-54	23	36	73	878580	389244	800	3/26/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-217	23	36	73	877048	389243	800	3/29/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-125	23	36	73	877149	389150	800	3/28/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-126	23	36	73	877246	389150	800	4/4/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-216	23	36	73	877042	389143	800	3/29/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-60	23	36	73	878171	389118	800	3/27/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-46	23	36	73	877969	389115	720	6/16/2011	Goldberg Revocable Trust	5"	3.3
I	3673-23-23	23	36	73	879850	389102	800	3/28/2012	Ruth Whiting, et al	5"	3.3
I	3673-23-34	23	36	73	880204	389097	800	4/4/2012	Ruth Whiting, et al	5"	3.3
I	3673-23-63	23	36	73	876751	389056	700	6/17/2011	Goldberg Revocable Trust	5"	3.3
I	3673-23-124	23	36	73	877243	389050	800	3/28/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-127	23	36	73	877148	389050	800	3/29/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-213	23	36	73	877048	389046	800	4/5/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-45	23	36	73	878588	389040	720	6/17/2011	Goldberg Revocable Trust	5"	3.3
I	3673-23-30	23	36	73	879856	389003	800	3/28/2012	Ruth Whiting, et al	5"	3.3
I	3673-23-123	23	36	73	877149	388949	800	3/29/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-122	23	36	73	877245	388949	800	3/28/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-37	23	36	73	878436	389629	720	6/14/2011	Goldberg Revocable Trust	5"	3.3
I	3673-23-203	23	36	73	877042	388946	800	3/29/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-121	23	36	73	877339	388946	800	3/27/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-33	23	36	73	879854	388900	800	3/27/2012	Ruth Whiting, et al	5"	3.3
I	3673-23-47	23	36	73	877984	388900	720	6/16/2011	Goldberg Revocable Trust	5"	3.3

TABLE 10-1: PERMIT #603 DELINEATION DRILL HOLES (May 1, 2011 THROUGH APRIL 30, 2012)

195 delineation holes

Mine Unit	Delineation Number	Section	Township	Range	Northing	Easting	Total Drilled Depth	Drill Completion Date	Surface Ownership	Avg Depth of Topsoil	Avg. yd³
I	3673-23-204	23	36	73	877049	388849	800	4/4/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-174	23	36	73	878001	388797	800	4/9/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-205	23	36	73	877049	388750	800	4/4/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-48	23	36	73	878082	388696	720	6/17/2011	Goldberg Revocable Trust	5"	3.3
I	3673-23-206	23	36	73	877048	388649	800	4/5/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-207	23	36	73	877052	388548	800	4/9/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-29	23	36	73	880233	388500	800	4/5/2012	Ruth Whiting, et al	5"	3.3
I	3673-23-26	23	36	73	879808	388498	800	4/6/2012	Ruth Whiting, et al	5"	3.3
I	3673-23-173	23	36	73	877842	388457	800	3/29/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-165	23	36	73	877539	388362	800	4/4/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-172	23	36	73	877741	388359	800	3/29/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-49	23	36	73	878386	388338	720	6/17/2011	Goldberg Revocable Trust	5"	3.3
I	3673-23-166	23	36	73	877533	388270	800	4/4/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-168	23	36	73	877638	388261	800	4/5/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-171	23	36	73	877838	388261	800	3/20/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-170	23	36	73	877737	388157	800	4/5/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-169	23	36	73	877638	388157	800	4/4/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-167	23	36	73	877537	388156	800	3/30/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-208	23	36	73	877148	388151	800	4/9/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-209	23	36	73	877052	388148	800	4/10/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-210	23	36	73	876951	388148	800	4/10/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-25	23	36	73	880154	387949	800	4/9/2012	Goldberg Revocable Trust	5"	3.3
I	3673-23-28	23	36	73	880050	387948	800	4/4/2012	Ruth Whiting, et al	5"	3.3
I	3673-23-107	23	36	73	877635	389856	800	3/27/2012	Goldberg Revocable Trust	5"	3.3
I	3673-14-3	14	36	73	882485	388225	580	2/10/2012	Ruth Whiting, et al	5"	3.3
I	3673-22-67	22	36	73	880837	383942	630	2/13/2012	Ruth Whiting, et al	5"	3.3
I	3673-22-66	22	36	73	880917	383928	630	2/21/2012	Ruth Whiting, et al	5"	3.3
I	3673-22-65	22	36	73	880921	383921	630	2/21/2012	Ruth Whiting, et al	5"	3.3
I	3673-22-64	22	36	73	880810	383865	640	2/15/2012	Ruth Whiting, et al	5"	3.3
I	3673-22-63	22	36	73	879808	381896	600	12/13/2011	Vollman Ranches Inc.	5"	3.3

TABLE 10-1: PERMIT #603 DELINEATION DRILL HOLES (May 1, 2011 THROUGH APRIL 30, 2012)

195 delineation holes

Mine Unit	Delineation Number	Section	Township	Range	Northing	Easting	Total Drilled Depth	Drill Completion Date	Surface Ownership	Avg. Depth of Topsoil	Avg. yd³
I	3673-23-31	23	36	73	880051	387799	800	4/10/2012	Ruth Whiting, et al	5"	3.3
CLI- C	3673-14-1	14	36	73	883307	387641	400	9/23/2011	Boner Brothers	5"	3.3
I	3673-23-32	23	36	73	880259	387608	800	4/9/2012	Ruth Whiting, et al	5"	3.3
CLI-Background	3673-15-1	15	36	73	882494	383510	400	9/23/2011	Ruth Whiting, et al	5"	3.3
CLI- E	3673-22-62	22	36	73	879967	382601	400	9/23/2011	Vollman Ranches Inc.	5"	3.3
CLI-Background	3673-21-48	21	36	73	881296	378389	400	9/22/2011	Duck Creek Ranches, Inc	5"	3.3
F	3673-21-42	21	36	73	876288	377208	820	5/23/2011	Vollman Ranches Inc.	5"	3.3
F	3673-28-36	28	36	73	875617	377042	820	5/18/2011	Duck Creek Ranches, Inc	5"	3.3
F	3673-21-41	21	36	73	876336	377042	820	5/23/2011	Duck Creek Ranches, Inc	5"	3.3
F	3673-21-39	21	36	73	876259	376964	820	5/24/2011	Vollman Ranches Inc.	5"	3.3
F	3673-21-40	21	36	73	876303	376962	820	5/18/2011	Vollman Ranches Inc.	5"	3.3
F	3673-21-43	21	36	73	876547	376951	820	5/18/2011	Vollman Ranches Inc.	5"	3.3
F	3673-28-35	28	36	73	875655	376921	820	5/17/2011	Vollman Ranches Inc.	5"	3.3
F	3673-28-37	28	36	73	876090	376919	800	5/26/2011	Vollman Ranches Inc.	5"	3.3
CLI-F	3673-21-47	21	36	73	876685	375611	400	9/22/2011	Vollman Ranches Inc.	5"	3.3
F	3673-28-30	28	36	73	875747	375504	800	5/17/2011	Vollman Ranches Inc.	5"	3.3
CLI-F	3673-20-525	20	36	73	876689	374781	400	9/22/2011	Vollman Ranches Inc.	5"	3.3
CLI-F	3673-20-524	20	36	73	877176	373863	400	9/22/2011	Vollman Ranches Inc.	5"	3.3
CLI-F	3673-20-523	20	36	73	876623	373839	400	9/22/2011	Vollman Ranches Inc.	5"	3.3

TABLE 10-2: 2011-2012 ANNUAL REPORT: PLUGGED AND ABANDONMENT REPORT WITH BOND RELEASE REQUEST, PERMIT #603

91 delineation holes

Prepared By Ken Garoutte
Operator Name Cameco Resources
Smith Ranch-Highland Operation
P.O. Box 1210, Glenrock, WY 82637

All coordinates are in Converse County

Mine Unit	Delineation Number	Sect	Twnshp	Range	Northing	Easting	Total Depth	Drill Date	Seed Date	Abandonmnt Bond Release Request Date	LQD Abandonment Bond Release Date	Surface Ownership
KN	3673-19-1000	19	36	73	880516	365807	840	11/20/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-1001	19	36	73	880584	365739	860	12/1/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-1002	19	36	73	880391	365852	860	11/16/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-1003	19	36	73	880523	365543	860	11/19/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-1004	19	36	73	880056	365730	860	11/20/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-1005	19	36	73	879920	365696	860	11/23/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-1006	19	36	73	880559	365621	840	11/25/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-1007	19	36	73	880310	365315	840	11/30/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-1008	19	36	73	880181	365664	860	11/23/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-1009	19	36	73	880108	365545	860	11/23/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-1010	19	36	73	879813	364704	880	11/20/2009	10/27/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-1011	19	36	73	879979	365774	860	11/24/2009	1/0/1900	6/30/2011		Vollman Ranches Inc.
KN	3673-19-1012	19	36	73	879901	365794	860	11/24/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-1013	19	36	73	880385	365861	860	11/24/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-1015	19	36	73	880297	364625	880	1/25/2010	10/27/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-1016	19	36	73	880281	365947	840	1/5/2010	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-1017	19	36	73	880237	365875	840	12/18/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-1018	19	36	73	880288	365807	840	1/4/2010	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-1019	19	36	73	880063	365851	840	1/14/2010	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-1020	19	36	73	880154	365867	840	1/11/2010	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-1021	19	36	73	880199	365795	840	1/5/2010	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-1022	19	36	73	880483	365970	840	1/13/2010	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-1023	19	36	73	880201	365941	840	1/12/2010	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-1024	19	36	73	880154	365867	840	1/11/2010	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-1025	19	36	73	880154	365867	840	1/11/2010	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-1026	19	36	73	880114	365941	1000	1/13/2010	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-1027	19	36	73	880378	364688	880	1/28/2010	10/27/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-1029 (19-129, 2010 Annual Report)	19	36	73	881022	365552	880	2/24/2010	10/27/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-938	19	36	73	880281	365702	860	11/2/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-939	19	36	73	880375	365673	860	11/2/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-940	19	36	73	880389	365512	100	10/28/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-941	19	36	73	880346	365445	860	10/27/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-942	19	36	73	880056	365559	1000	11/3/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-943	19	36	73	880044	365363	880	10/23/2009	10/27/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-944	19	36	73	880110	365354	880	10/26/2009	10/27/2010	6/30/2011		Vollman Ranches Inc.

TABLE 10-2: 2011-2012 ANNUAL REPORT: PLUGGED AND ABANDONMENT REPORT WITH BOND RELEASE REQUEST, PERMIT #603

91 delineation holes

KN	3673-19-945	19	36	73	880139	365256	880	10/27/2009	10/27/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-946	19	36	73	880118	365141	1000	10/23/2009	10/27/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-947	19	36	73	880226	365137	840	11/3/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-948	19	36	73	880261	364938	860	11/4/2009	10/27/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-949	19	36	73	880267	364818	860	11/6/2009	10/27/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-950	19	36	73	880243	364711	860	11/9/2009	10/27/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-951	19	36	73	880155	364664	980	11/23/2009	10/27/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-952	19	36	73	880059	364616	880	9/9/2009	10/27/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-953	19	36	73	879903	364671	880	11/12/2009	10/27/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-954	19	36	73	879711	364682	880	10/6/2009	10/27/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-955	19	36	73	879657	364760	920	10/2/2009	10/27/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-956	19	36	73	879550	364676	920	9/30/2009	10/27/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-957	19	36	73	879615	364843	880	10/7/2009	10/27/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-958	19	36	73	880503	365502	860	12/18/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-959	19	36	73	879820	364905	880	10/22/2009	10/27/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-960	19	36	73	880222	364630	880	12/2/2009	10/27/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-961	19	36	73	880056	365776	860	12/16/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-962	19	36	73	880110	365718	860	12/15/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-963	19	36	73	880041	364862	880	11/11/2009	10/27/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-964	19	36	73	880085	364908	880	11/10/2009	10/27/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-965	19	36	73	880125	364964	880	11/3/2009	10/27/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-966	19	36	73	880132	365796	860	12/17/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-967	19	36	73	879977	365849	860	12/17/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-968	19	36	73	879628	365061	880	10/21/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-969	19	36	73	880584	365831	840	12/18/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-970	19	36	73	879588	365134	880	9/29/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-971	19	36	73	879596	365223	880	9/28/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-972	19	36	73	879596	365305	880	10/8/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-973	19	36	73	879618	365382	900	10/16/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-974	19	36	73	879741	365655	880	10/16/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-975	19	36	73	819671	365650	880	10/19/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-976	19	36	73	879605	365616	1000	10/20/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-977	19	36	73	879261	364774	900	9/30/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-978	19	36	73	879207	364899	890	9/28/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-979	19	36	73	879261	364965	900	9/29/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-980	19	36	73	880453	365901	860	12/17/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-981	19	36	73	880385	365936	860	12/16/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-982	19	36	73	879123	364904	900	9/25/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-987	19	36	73	878813	364916	900	10/8/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-988	19	36	73	880312	365878	860	12/15/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-989	19	36	73	879912	365868	860	12/16/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-990	19	36	73	879845	365845	860	12/16/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-991	19	36	73	880346	365036	860	11/5/2009	10/27/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-992	19	36	73	880118	365152	1000	11/4/2009	10/27/2010	6/30/2011		Vollman Ranches Inc.

TABLE 10-2: 2011-2012 ANNUAL REPORT: PLUGGED AND ABANDONMENT REPORT WITH BOND RELEASE REQUEST, PERMIT #603

91 delineation holes

KN	3673-19-993	19	36	73	880448	365543	860	11/5/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-994	19	36	73	880454	365638	860	11/6/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-995	19	36	73	880391	365752	860	11/11/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-996	19	36	73	880017	365647	880	11/13/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-997	19	36	73	880469	365726	860	11/10/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-998	19	36	73	880523	365543	860	11/12/2009	10/26/2010	6/30/2011		Vollman Ranches Inc.
KN	3673-19-999	19	36	73	880336	364938	860	11/11/2009	10/27/2010	6/30/2011		Vollman Ranches Inc.
D	3673-22-1	22	36	73	880331	385490	220	2/24/2010	4/15/2011	6/30/2011		Ruth Whiting, et al
D	3673-23-1	23	36	73	880310	386098	400	3/12/2010	4/15/2011	6/30/2011		Ruth Whiting, et al
D	3673-23-139	23	36	73	880240	386266	700	4/21/2010	5/30/2011	7/31/2012		Numrich, et al
E	3673-22-19	22	36	73	879578	385211	640	9/29/2010	5/30/2011	7/31/2012		Vollman Ranches
E	3673-22-20	22	36	73	878676	384648	600	11/4/2010	5/30/2011	7/31/2012		Vollman Ranches

Mix 2011-A
(Used Feb 1, 2011 to the end of 2011)

SEED MIX APPLIED	lbs PLS/acre
Canby Bluegrass	2
Linn Perennial Rye	3
Praire June Grass	2
Blue Grama	1
Side Oats Grama	1
Little Bluestern	1
Gardner Saltbrush	1
Total PLS#lbs/acre	11

Mix 2010-C
(Used Oct '10 thru 2011)

SEED MIX APPLIED	lbs PLS/acre
Western Wheatgrass, Rosanna	5.6
Canby Bluegrass	0.1
Sheeps Fescue, Covar	0.3
Sand Bluestream	1.4
Praire Sandreed	1.1
Sideoats Grama	1.8
Gardner Saltbrush	0.02
Total PLS#lbs/acre	10.32

TABLE 10-3: 2011-2012 ANNUAL REPORT: VEGETATION BOND RELEASE REQUEST, PERMIT #603

86 delineation holes

Prepared By Seth Barnes

Operator Name Cameco Resources
Smith Ranch-Highland Operation
P.O. Box 1210, Glenrock, WY 82637

All coordinates are in Converse County

HOLE ID	MINE UNIT	DRILL DATE	TOWN SHIP	RANGE	SECTION	EAST	NORTH	TOTAL DEPTH (ft.)	VEGETATION BOND RELEASE REQUEST DATE	LQD VEGETATION BOND RELEASE DATE	SURFACE OWNERSHIP
3673-19-1000	KN	11/20/2009	36	73	19	365807	880516	840	7/31/2012		Vollman Ranches Inc.
3673-19-1001	KN	12/1/2009	36	73	19	365739	880584	860	7/31/2012		Vollman Ranches Inc.
3673-19-1002	KN	11/16/2009	36	73	19	365852	880391	860	7/31/2012		Vollman Ranches Inc.
3673-19-1003	KN	11/19/2009	36	73	19	365543	880523	860	7/31/2012		Vollman Ranches Inc.
3673-19-1004	KN	11/20/2009	36	73	19	365730	880056	860	7/31/2012		Vollman Ranches Inc.
3673-19-1005	KN	11/23/2009	36	73	19	365696	879920	860	7/31/2012		Vollman Ranches Inc.
3673-19-1006	KN	11/25/2009	36	73	19	365621	880559	840	7/31/2012		Vollman Ranches Inc.
3673-19-1007	KN	11/30/2009	36	73	19	365315	880310	840	7/31/2012		Vollman Ranches Inc.
3673-19-1008	KN	11/23/2009	36	73	19	365664	880181	860	7/31/2012		Vollman Ranches Inc.
3673-19-1009	KN	11/23/2009	36	73	19	365545	880108	860	7/31/2012		Vollman Ranches Inc.
3673-19-1010	KN	11/20/2009	36	73	19	364704	879813	880	7/31/2012		Vollman Ranches Inc.
3673-19-1011	KN	11/24/2009	36	73	19	365774	879979	860	7/31/2012		Vollman Ranches Inc.
3673-19-1012	KN	11/24/2009	36	73	19	365794	879901	860	7/31/2012		Vollman Ranches Inc.
3673-19-1013	KN	11/24/2009	36	73	19	365861	880385	860	7/31/2012		Vollman Ranches Inc.
3673-19-1015	KN	1/25/2010	36	73	19	364625	880297	880	7/31/2012		Vollman Ranches Inc.
3673-19-1016	KN	1/5/2010	36	73	19	365947	880281	840	7/31/2012		Vollman Ranches Inc.
3673-19-1017	KN	12/18/2009	36	73	19	365875	880237	840	7/31/2012		Vollman Ranches Inc.
3673-19-1018	KN	1/4/2010	36	73	19	365807	880288	840	7/31/2012		Vollman Ranches Inc.
3673-19-1019	KN	1/14/2010	36	73	19	365851	880063	840	7/31/2012		Vollman Ranches Inc.
3673-19-1020	KN	1/11/2010	36	73	19	365867	880154	840	7/31/2012		Vollman Ranches Inc.
3673-19-1021	KN	1/5/2010	36	73	19	365795	880199	840	7/31/2012		Vollman Ranches Inc.
3673-19-1022	KN	1/13/2010	36	73	19	365970	880483	840	7/31/2012		Vollman Ranches Inc.
3673-19-1023	KN	1/12/2010	36	73	19	365941	880201	840	7/31/2012		Vollman Ranches Inc.
3673-19-1024	KN	1/11/2010	36	73	19	365867	880154	840	7/31/2012		Vollman Ranches Inc.
3673-19-1025	KN	1/11/2010	36	73	19	365867	880154	840	7/31/2012		Vollman Ranches Inc.
3673-19-1026	KN	1/13/2010	36	73	19	365941	880114	1000	7/31/2012		Vollman Ranches Inc.
3673-19-1027	KN	1/28/2010	36	73	19	364688	880378	880	7/31/2012		Vollman Ranches Inc.
3673-19-1029 (19-129, 2010 Annual Report)	KN	2/24/2010	36	73	19	365552	881022	880	7/31/2012		Vollman Ranches Inc.
3673-19-938	KN	11/2/2009	36	73	19	365702	880281	860	7/31/2012		Vollman Ranches Inc.
3673-19-939	KN	11/2/2009	36	73	19	365673	880375	860	7/31/2012		Vollman Ranches Inc.
3673-19-940	KN	10/28/2009	36	73	19	365512	880389	100	7/31/2012		Vollman Ranches Inc.
3673-19-941	KN	10/27/2009	36	73	19	365445	880346	860	7/31/2012		Vollman Ranches Inc.
3673-19-942	KN	11/3/2009	36	73	19	365559	880056	1000	7/31/2012		Vollman Ranches Inc.
3673-19-943	KN	10/23/2009	36	73	19	365363	880044	880	7/31/2012		Vollman Ranches Inc.
3673-19-944	KN	10/26/2009	36	73	19	365354	880110	880	7/31/2012		Vollman Ranches Inc.
3673-19-945	KN	10/27/2009	36	73	19	365256	880139	880	7/31/2012		Vollman Ranches Inc.
3673-19-946	KN	10/23/2009	36	73	19	365141	880118	1000	7/31/2012		Vollman Ranches Inc.
3673-19-947	KN	11/3/2009	36	73	19	365137	880226	840	7/31/2012		Vollman Ranches Inc.
3673-19-948	KN	11/4/2009	36	73	19	364938	880261	860	7/31/2012		Vollman Ranches Inc.
3673-19-949	KN	11/6/2009	36	73	19	364818	880267	860	7/31/2012		Vollman Ranches Inc.
3673-19-950	KN	11/9/2009	36	73	19	364711	880243	860	7/31/2012		Vollman Ranches Inc.
3673-19-951	KN	11/23/2009	36	73	19	364664	880155	980	7/31/2012		Vollman Ranches Inc.
3673-19-952	KN	9/9/2009	36	73	19	364616	880059	880	7/31/2012		Vollman Ranches Inc.

TABLE 10-3: 2011-2012 ANNUAL REPORT: VEGETATION BOND RELEASE REQUEST, PERMIT #603

86 delineation holes

HOLE ID	MINE UNIT	DRILL DATE	TOWN SHIP	RANGE	SECTION	EAST	NORTH	TOTAL DEPTH (ft.)	VEGETATION BOND RELEASE REQUEST DATE	LQD VEGETATION BOND RELEASE DATE	SURFACE OWNERSHIP
3673-19-953	KN	11/12/2009	36	73	19	364671	879903	880	7/31/2012		Vollman Ranches Inc.
3673-19-954	KN	10/6/2009	36	73	19	364682	879711	880	7/31/2012		Vollman Ranches Inc.
3673-19-955	KN	10/2/2009	36	73	19	364760	879657	920	7/31/2012		Vollman Ranches Inc.
3673-19-956	KN	9/30/2009	36	73	19	364676	879550	920	7/31/2012		Vollman Ranches Inc.
3673-19-957	KN	10/7/2009	36	73	19	364843	879615	880	7/31/2012		Vollman Ranches Inc.
3673-19-958	KN	12/18/2009	36	73	19	365502	880503	860	7/31/2012		Vollman Ranches Inc.
3673-19-959	KN	10/22/2009	36	73	19	364905	879820	880	7/31/2012		Vollman Ranches Inc.
3673-19-960	KN	12/2/2009	36	73	19	364630	880222	880	7/31/2012		Vollman Ranches Inc.
3673-19-961	KN	12/16/2009	36	73	19	365776	880056	860	7/31/2012		Vollman Ranches Inc.
3673-19-962	KN	12/15/2009	36	73	19	365718	880110	860	7/31/2012		Vollman Ranches Inc.
3673-19-963	KN	11/11/2009	36	73	19	364862	880041	880	7/31/2012		Vollman Ranches Inc.
3673-19-964	KN	11/10/2009	36	73	19	364908	880085	880	7/31/2012		Vollman Ranches Inc.
3673-19-965	KN	11/3/2009	36	73	19	364964	880125	880	7/31/2012		Vollman Ranches Inc.
3673-19-966	KN	12/17/2009	36	73	19	365796	880132	860	7/31/2012		Vollman Ranches Inc.
3673-19-967	KN	12/17/2009	36	73	19	365849	879977	860	7/31/2012		Vollman Ranches Inc.
3673-19-968	KN	10/21/2009	36	73	19	365061	879628	880	7/31/2012		Vollman Ranches Inc.
3673-19-969	KN	12/18/2009	36	73	19	365831	880584	840	7/31/2012		Vollman Ranches Inc.
3673-19-970	KN	9/29/2009	36	73	19	365134	879588	880	7/31/2012		Vollman Ranches Inc.
3673-19-971	KN	9/28/2009	36	73	19	365223	879596	880	7/31/2012		Vollman Ranches Inc.
3673-19-972	KN	10/8/2009	36	73	19	365305	879596	880	7/31/2012		Vollman Ranches Inc.
3673-19-973	KN	10/16/2009	36	73	19	365382	879618	900	7/31/2012		Vollman Ranches Inc.
3673-19-974	KN	10/16/2009	36	73	19	365655	879741	880	7/31/2012		Vollman Ranches Inc.
3673-19-975	KN	10/19/2009	36	73	19	365650	819671	880	7/31/2012		Vollman Ranches Inc.
3673-19-976	KN	10/20/2009	36	73	19	365616	879605	1000	7/31/2012		Vollman Ranches Inc.
3673-19-977	KN	9/30/2009	36	73	19	364774	879261	900	7/31/2012		Vollman Ranches Inc.
3673-19-978	KN	9/28/2009	36	73	19	364899	879207	890	7/31/2012		Vollman Ranches Inc.
3673-19-979	KN	9/29/2009	36	73	19	364965	879261	900	7/31/2012		Vollman Ranches Inc.
3673-19-980	KN	12/17/2009	36	73	19	365901	880453	860	7/31/2012		Vollman Ranches Inc.
3673-19-981	KN	12/16/2009	36	73	19	365936	880385	860	7/31/2012		Vollman Ranches Inc.
3673-19-982	KN	9/25/2009	36	73	19	364904	879123	900	7/31/2012		Vollman Ranches Inc.
3673-19-987	KN	10/8/2009	36	73	19	364916	878813	900	7/31/2012		Vollman Ranches Inc.
3673-19-988	KN	12/15/2009	36	73	19	365878	880312	860	7/31/2012		Vollman Ranches Inc.
3673-19-989	KN	12/16/2009	36	73	19	365868	879912	860	7/31/2012		Vollman Ranches Inc.
3673-19-990	KN	12/16/2009	36	73	19	365845	879845	860	7/31/2012		Vollman Ranches Inc.
3673-19-991	KN	11/5/2009	36	73	19	365036	880346	860	7/31/2012		Vollman Ranches Inc.
3673-19-992	KN	11/4/2009	36	73	19	365152	880118	1000	7/31/2012		Vollman Ranches Inc.
3673-19-993	KN	11/5/2009	36	73	19	365543	880448	860	7/31/2012		Vollman Ranches Inc.
3673-19-994	KN	11/6/2009	36	73	19	365638	880454	860	7/31/2012		Vollman Ranches Inc.
3673-19-995	KN	11/11/2009	36	73	19	365752	880391	860	7/31/2012		Vollman Ranches Inc.
3673-19-996	KN	11/13/2009	36	73	19	365647	880017	880	7/31/2012		Vollman Ranches Inc.
3673-19-997	KN	11/10/2009	36	73	19	365726	880469	860	7/31/2012		Vollman Ranches Inc.
3673-19-998	KN	11/12/2009	36	73	19	365543	880523	860	7/31/2012		Vollman Ranches Inc.
3673-19-999	KN	11/11/2009	36	73	19	364938	880336	860	7/31/2012		Vollman Ranches Inc.

TABLE 10-4: PERMIT #633 UNPLANNED DELINEATION DRILL HOLES (May 1, 2011 THROUGH APRIL 30, 2012)

16 delineation holes

Prepared By Seth Barnes
Operator Name Cameco Resources
Smith Ranch-Highland Operation
P.O. Box 1210, Glenrock, WY 82637

All holes capped and sealed

Mine Unit	Delineation Number	Section	Township	Range	Northing	Easting	Total Drilled Depth	Drill Completion Date	Surface Ownership
C	3673-14-4	14	36	73	885904	390642	590	3/23/2012	3/23/2012
C	3673-14-6	14	36	73	885784	390518	620	2/21/2012	2/21/2012
C	3673-14-5	14	36	73	885170	390403	600	2/9/2012	2/9/2012
C	3673-14-2	14	36	73	886087	390236	620	2/8/2012	2/8/2012
K	3673-19-1050	19	36	73	879450	365644	860	6/3/2011	6/3/2011
K	3673-19-1059	19	36	73	879954	365629	860	5/27/2011	5/27/2011
K	3673-19-1053	19	36	73	879467	365555	860	6/13/2011	6/13/2011
K	3673-19-1051	19	36	73	879470	365553	860	6/3/2011	6/3/2011
K	3673-19-1047	19	36	73	879942	365428	860	5/5/2011	5/5/2011
K	3673-19-1049	19	36	73	879992	365379	880	5/31/2011	5/31/2011
K	3673-19-1052	19	36	73	880038	365326	880	6/8/2011	6/8/2011
K	3673-19-1055	19	36	73	879933	365322	880	5/23/2011	5/23/2011
K	3673-19-1048	19	36	73	879895	365269	880	5/16/2011	5/16/2011
K	3673-19-1056	19	36	73	880099	365183	880	7/5/2011	7/5/2011
K	3673-19-1058	19	36	73	880012	364988	860	8/1/2011	8/1/2011
K	3673-19-1057	19	36	73	879646	364868	860	7/18/2011	7/18/2011

Table 10-5, 603 Open Delineation Holes Found/Dug Up (5/1/2011-4/30/2012

All holes plugged and sealed

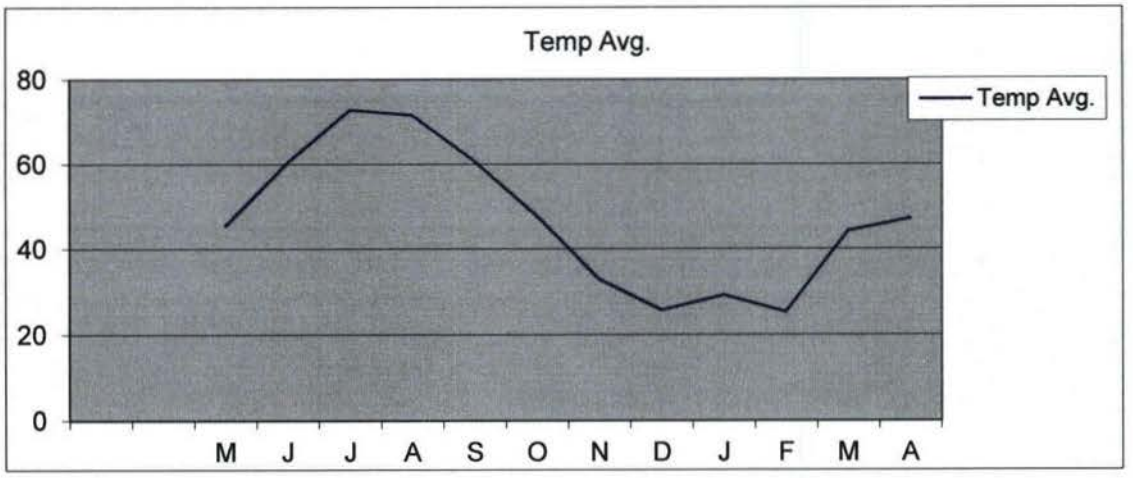
Date Surveyed	Location	Delineation Number	Northing	Easting
8/23/2011	Near KP-311	3673-19-420H	879914	364786
10/19/2011	between K-13 and K-14	3673-19-990	879846	365851
3/5/2012	near FI-1396	2425-1750	878650	376797
4/12/2012	MU-E, in secondary pit EI-193A	3673-22-4400-3170	880629	383566

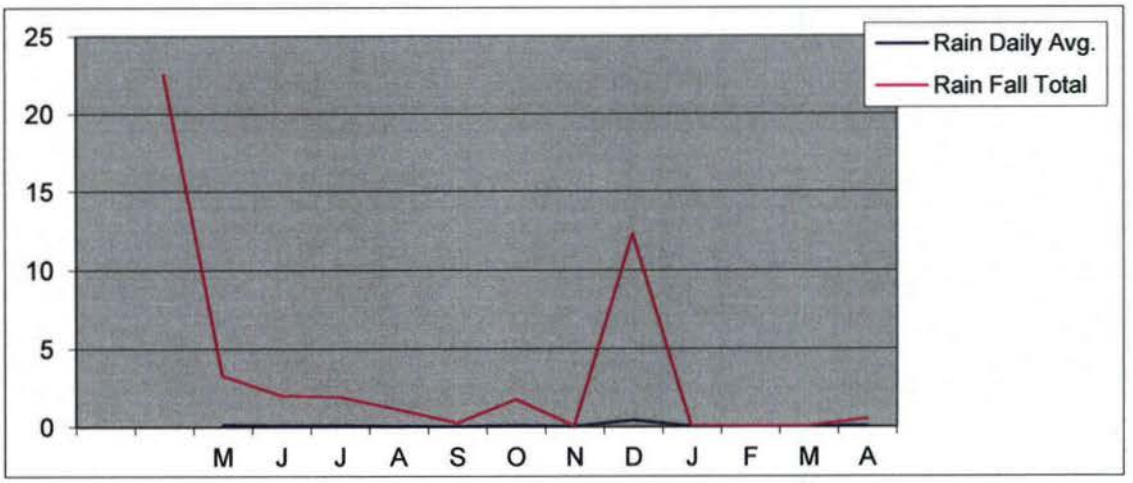
Table 10-6
Weather Station Data Summary
May 2011 - April 2012

Date	Temp Avg. (F)	Rain Daily Avg.	Rain Fall Total (in)
May-11	45.4	0.11	3.27
Jun-11	60.4	0.07	2.00
Jul-11	72.8	0.06	1.89
Aug-11	71.5	0.03	1.08
Sep-11	60.7	0.01	0.21
Oct-11	47.7	0.06	1.72
Nov-11	32.8	0.00	0.03
Dec-11	25.7	0.40	12.30
Jan-12	29.2	0.00	0.04
Feb-12	25.2	0.00	0.03
Mar-12	44.2	0.00	0.03
Apr-12	47.2	0.02	0.48
		Total Rainfall Rpt. Period	**23.08**

Date	Wind Speed Avg. (mph)	Wind Angle Avg.	Wind Direction Avg.
May-11	13.20	220.61	South West
Jun-11	11.92	215.80	South West
Jul-11	10.03	208.33	South West
Aug-11	10.23	199.09	South
Sep-11	15.38	205.07	South West
Oct-11	11.64	240.63	South West
Nov-11	14.51	225.42	South West
Dec-11	13.28	258.73	West
Jan-12	15.21	255.02	West
Feb-12	12.62	247.22	South West
Mar-12	14.32	233.94	South West
Apr-12	13.56	216.47	South West

Table 10-6
Weather Station Data Summary
May 2011 - April 2012





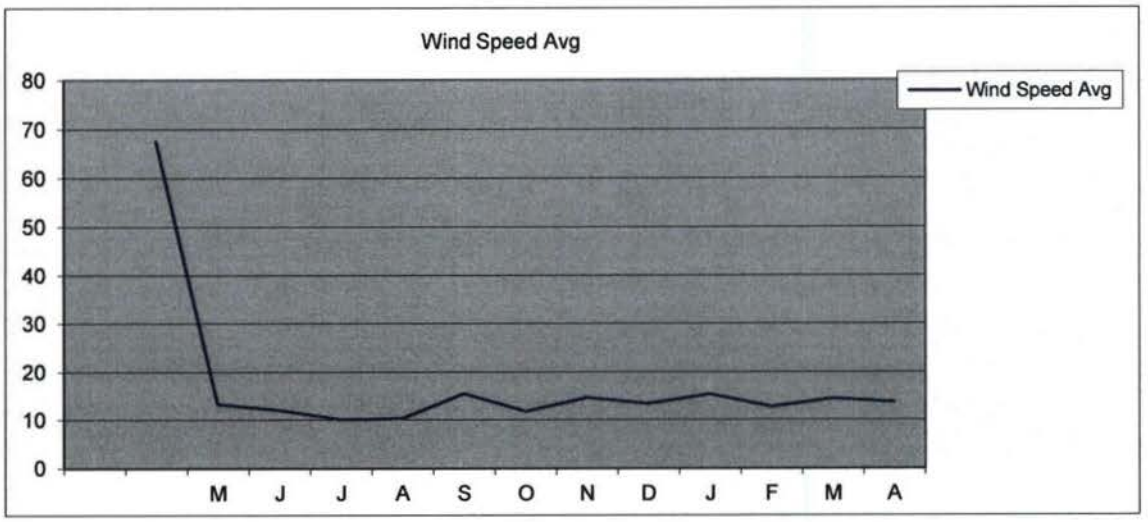


Table 10-7
Pre-Restoration Sample Results for Guideline 8 Constituents in Mine Unit D
2011-2012 Annual Report Permit 603

			Well		
			DM-14	FM-004A	FM-4
Analyte	**PQL**	**Units**			
A/C Balance (± 5)	-250.01	%	-1.68	1.18	1.31
Anions	-250.01	meq/L	11.3	11.4	15.3
Bicarbonate as HCO3	5	mg/L	300	232	405
Carbonate as CO3	5	mg/L	ND	13	ND
Cations	-250.01	meq/L	11	11.7	15.7
Chloride	1	mg/L	14	41	59
Conductivity @ 25 C	1	umhos /cm	992	1060	1340
Fluoride	0.1	mg/L	0.1	0.3	0.2
pH	0.01	s.u.	8	8.83	7.85
TDS Calculated	-250.01	mg/L	661	723	918
TDS Balance (.80-1.20)	10	mg/L	1.03	1.02	0.98
Sulfate	4	mg/L	289	291	335
Aluminum	0.1	mg/L	ND	ND	ND
Arsenic	0.001	mg/L	ND	0.001	0.002
Barium	0.1	mg/L	ND	ND	ND
Boron	0.1	mg/L	ND	ND	0.1
Cadmium	0.005	mg/L	ND	ND	ND
Calcium	1	mg/L	132	118	181
Chromium	0.05	mg/L	ND	ND	ND
Copper	0.01	mg/L	ND	ND	ND
Iron	0.03	mg/L	0.04	0.09	0.75
Lead	0.001	mg/L	ND	0.003	ND
Magnesium	1	mg/L	31	16	41
Manganese	0.01	mg/L	0.07	0.01	0.07
Mercury	0.001	mg/L	ND	ND	ND
Molybdenum	0.1	mg/L	ND	ND	ND
Nickel	0.05	mg/L	ND	ND	ND
Potassium	1	mg/L	11	17	14
Selenium	0.001	mg/L	0.13	0.007	ND
Silica	0.21392	mg/L	20.2	17.4	25.6
Sodium	1.831	mg/L	37	91	57
Uranium	0.1044	mg/L	0.255	0.0411	0.103

Table 10-7
Pre-Restoration Sample Results for Guideline 8 Constituents in Mine Unit D
2011-2012 Annual Report Permit 603

Analyte	PQL	Units	MP-432	FM-004A	FM-4
Vanadium	0.1	mg/L	ND	ND	ND
Nitrogen, Ammonia as N	0.053	mg/L	ND	1.93	7.2
Nitrogen, Nitrate+Nitrite as N	0.1	mg/L	ND	ND	ND
Gross Alpha	-1000	pCi/L	348	75.9	237
Gross Alpha MDC	0	pCi/L	5.8	5.5	7.1
Gross Alpha precision (±)	0	pCi/L	13	4.2	12.2
Gross Beta	-1000	pCi/L	103	25.9	71.5
Gross Beta MDC	0	pCi/L	4.2	6.3	5.8
Gross Beta precision (±)	0	pCi/L	4	4.2	4.6
Radium 226	-1000	pCi/L	24	7.7	10
Radium 226 MDC	0	pCi/L	0.15	0.13	0.13
Radium 226 precision (±)	0	pCi/L	0.97	0.53	0.59
Radium 228	-1000	pCi/L	2.1	1.5	1.9
Radium 228 MDC	0	pCi/L	1	1.5	0.9
Radium 228 precision (±)	0	pCi/L	0.7	1	0.7

Figure 7-1
Mean Selenium Concentrations (mg/kg) in Vegetation Samples from Irrigator No. 1
During 1996-2011

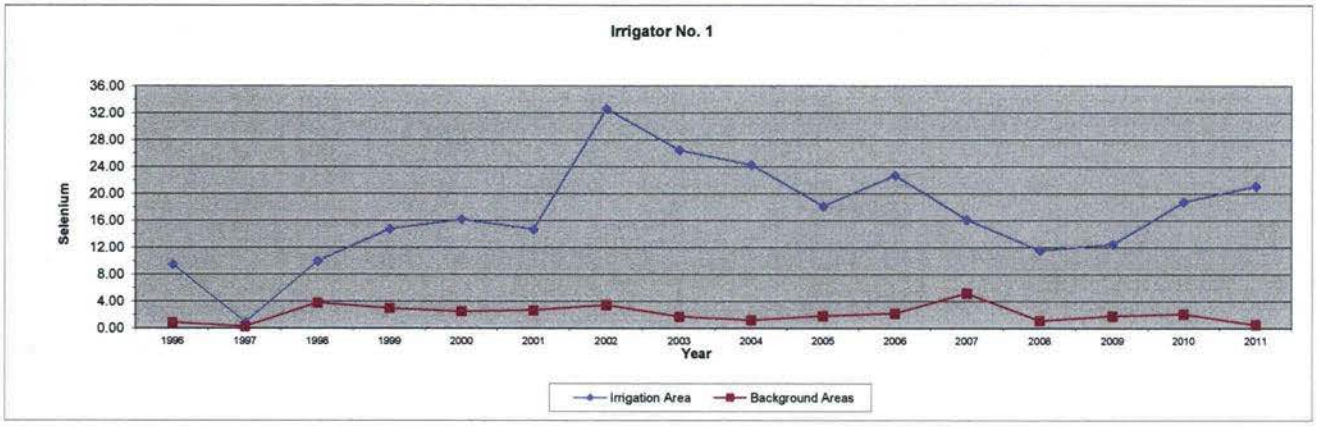
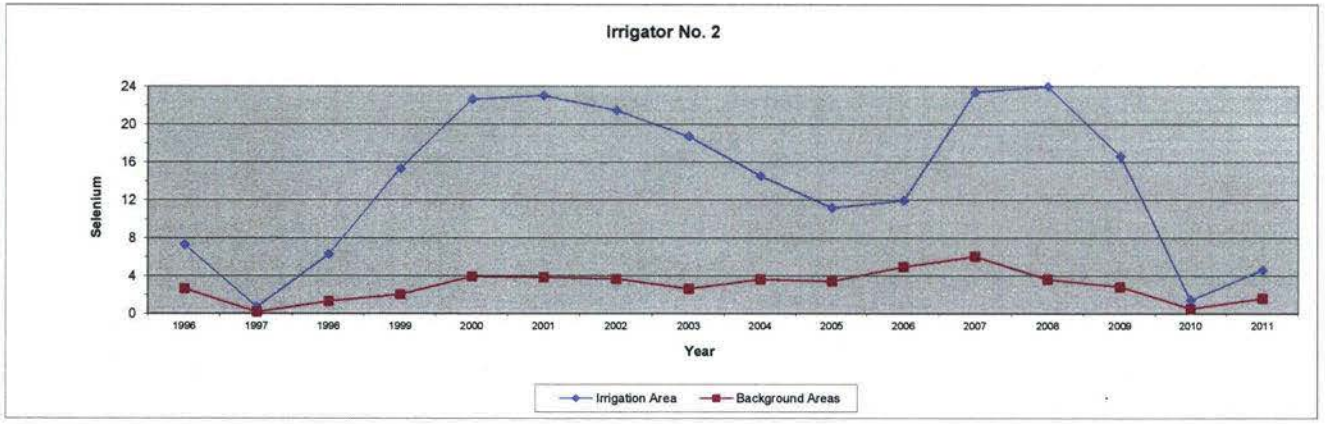


Figure 7-2
Mean Selenium Concentrations (mg/kg) in Vegetation Samples from Irrigator No. 2
During 1996-2011



* data values for 2005 were inadvertently entered wrong for both irrigators - these values were checked and corrected in the data tables and the graph was updated

Figure 7-3
Mean Conductivity, Selenium, Uranium, and Radium-226 Concentrations in Soil Samples from Irrigator No. 1 During 1986 and 1990-2011

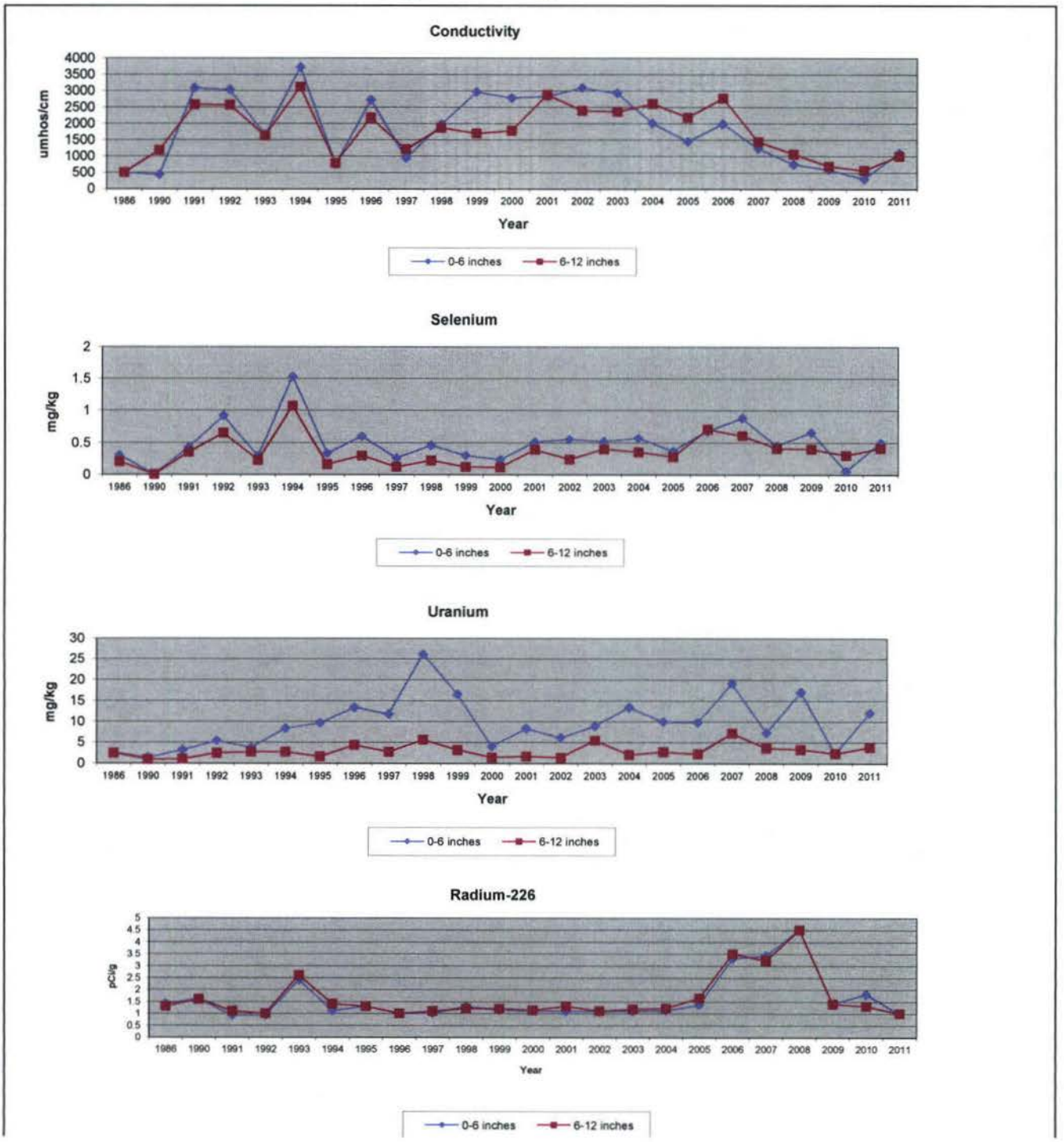
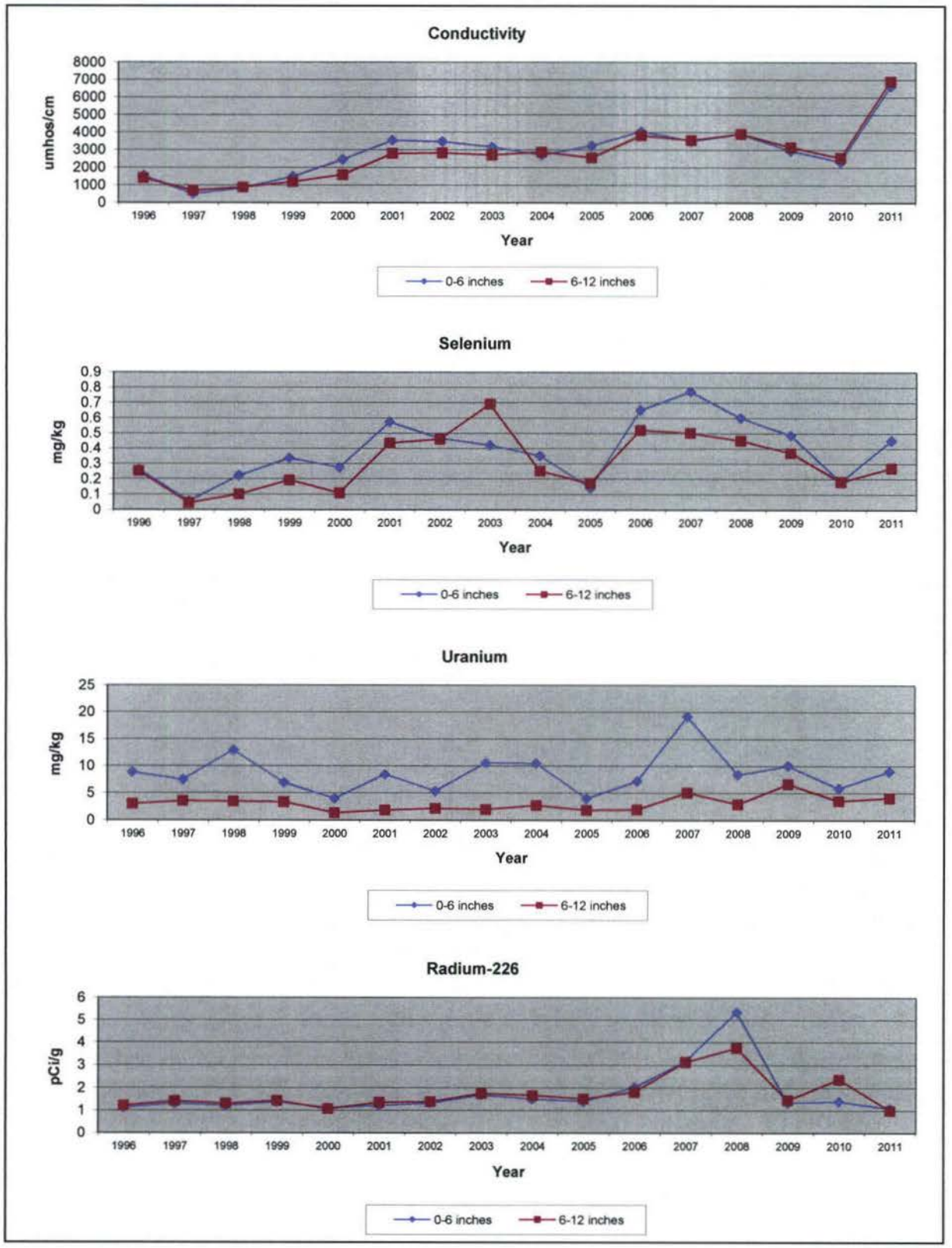
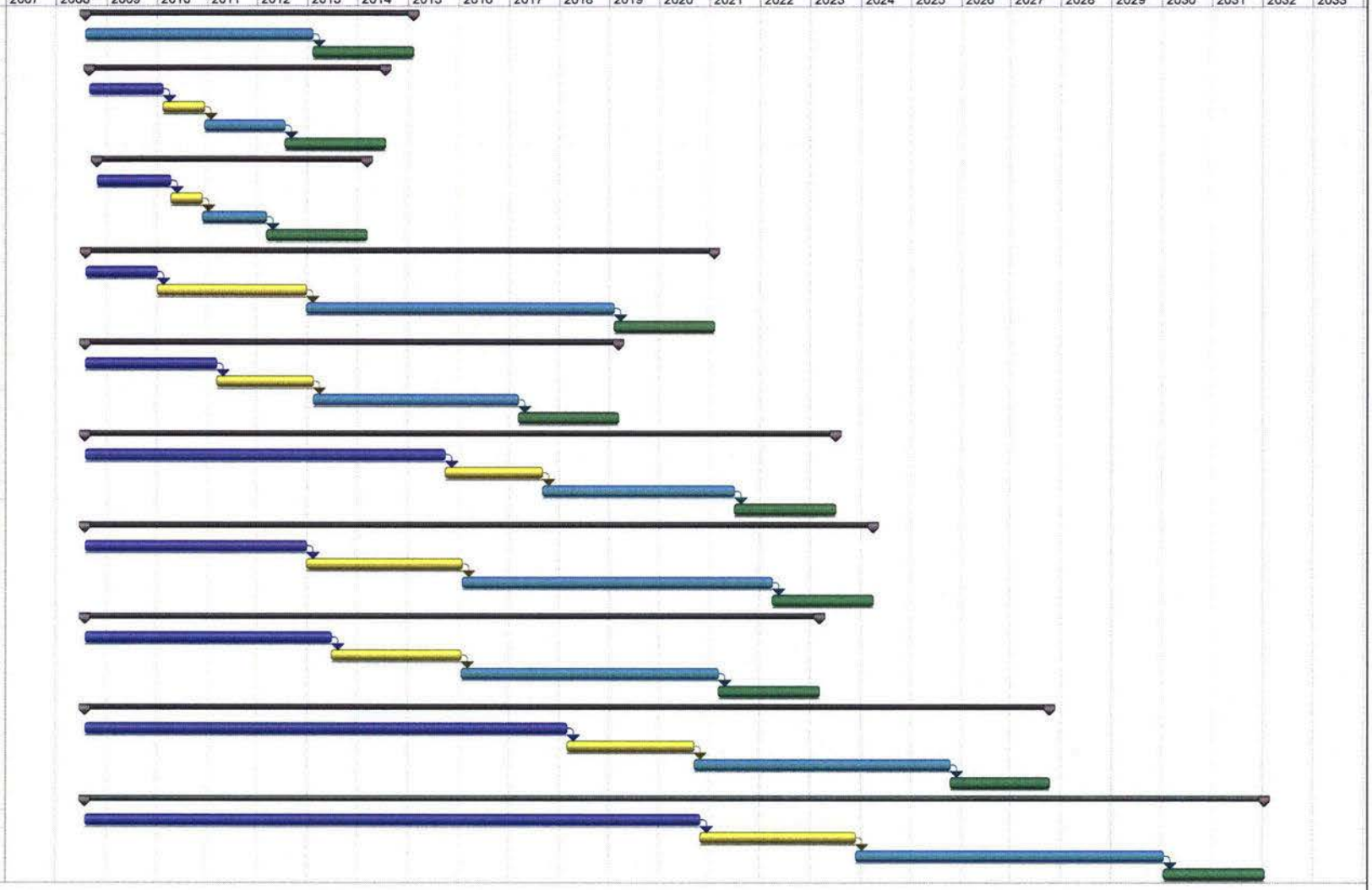


Figure 7-4
Mean Conductivity, Selenium, Uranium, and Radium-226 Concentrations in Soil Samples from Irrigator No. 2 During 1993 and 1995-2011



ATTACHMENT 1 - 2009 HUP RESTORATION SCHEDULE
CONSIDERING 9.0 PV: 1GWS + 8 RO

ID	Task Name
1	**Mine Unit C**
2	Reverse Osmosis
3	Stabilization Monitoring/Approval
4	**Mine Unit D**
5	Production/Prerestoration
6	Groundwater Sweep
7	Reverse Osmosis
8	Stabilization Monitoring/Approval
9	**Mine Unit D Extension**
10	Production/Prerestoration
11	Groundwater Sweep
12	Reverse Osmosis
13	Stabilization Monitoring/Approval
14	**Mine Unit E**
15	Production/Prerestoration
16	Groundwater Sweep
17	Reverse Osmosis
18	Stabilization Monitoring/Approval
19	**Mine Unit F East**
20	Production/Prerestoration
21	Groundwater Sweep
22	Reverse Osmosis
23	Stabilization Monitoring/Approval
24	**Mine Unit F West**
25	Production/Prerestoration
26	Groundwater Sweep
27	Reverse Osmosis
28	Stabilization Monitoring/Approval
29	**Mine Unit H**
30	Production/Prerestoration
31	Groundwater Sweep
32	Reverse Osmosis
33	Stabilization Monitoring/Approval
34	**Mine Unit I**
35	Production/Prerestoration
36	Groundwater Sweep
37	Reverse Osmosis
38	Stabilization Monitoring/Approval
39	**Mine Unit J**
40	Production/Prerestoration
41	Groundwater Sweep
42	Reverse Osmosis
43	Stabilization Monitoring/Approval
44	**Mine Unit K**
45	Production/Prerestoration
46	Groundwater Sweep
47	Reverse Osmosis
48	Stabilization Monitoring/Approval



CAMECO RESOURCES
Project: HUP Restoration Schedule
Date: Wed 3/18/09

Task | Progress | Summary | External Tasks | Deadline
Split | Milestone | Project Summary | External Milestone

2011
ANNUAL MONITORING REPORT
FOR BONER BROS. PARTNERSHIP
SECTION 22 SW¼ NW¼

A. Introduction

The Lease and Monitoring Agreement No. 25008 (effective January 1, 1995, and renewed November 19, 2009) by, and between, Boner Bros. Partnership and Power Resources, Inc. (PRI), within Section IV-Monitoring plan, requires PRI to conduct water monitoring of the pumpback sumps, vegetation monitoring of areas downstream from the pumpback sumps, visual inspections of the area, and the submittal of an Annual Monitoring Report which summarizes the results of the monitoring activities. The report contained herein constitutes the required Annual Monitoring Report for the Calendar Year 2011.

B. Visual Inspections

In accordance with the Lease and Monitoring Agreement, the seepage area, pumpback sumps and potentially affected lands were inspected on at least a monthly basis. The Interceptor Trench installed in August 1996 and between the Satellite No. 1 Purge Storage Reservoir (PSR-1) and the P-1 through P-5 seep areas (see Figure 1) continues to be very effective at intercepting seepage in the vicinity of the seep areas. At the time that the Interceptor Trench became operational, pumping of the South Pumpback Sump was discontinued.

During the period December 27, 2010 through December 26, 2011 both the East Pumpback Sump and South Pumpback Sumps were off. It is unlikely that any seepage flowed directly onto Boner lands at either area, or any seepage would be from natural precipitation, as PSR-1 has been dry since usage was discontinued in 2004.

C. Water Monitoring

In accordance with the Lease and Monitoring agreement, water collected in the East and South Pumpback Sumps was sampled and analyzed for dissolved selenium on a quarterly basis. The samples were obtained directly from the sump vaults.

Results of the monitoring are shown in Table 1, and on Figure 1. A review of the results shows that selenium concentration at both locations remained low. The mean selenium concentration at the East Pumpback Sump was .084 mg/L. The mean selenium concentration at the South Pumpback Sump was less than 0.001 mg/L. These mean concentrations shown are below Class III (Livestock) and Class I (Domestic) standards of 0.05 mg/L.

Table 1

Dissolved Selenium Concentrations (mg/L) in Water

Date	East Pumpback Sump	South Pumpback Sump
2/08/10	0.043	<0.001
5/23/10	0.141	0.001
8/08/10	0.122	<0.001
11/2/10	0.030	0.002
Mean	**0.084**	**0.002**

D. Vegetation Monitoring

In accordance with the Lease and Monitoring Agreement, vegetation samples were obtained during the "growing season" portion of 2011. Samples were obtained on June 8, 2011. Consistent with previous monitoring, the vegetation samples were obtained from the drainage bottom, downstream of the East Pumpback Sump at locations just upstream of the Section 22 fence (Site #1, Background) and approximately 100 ft. and 300 to 400 ft downstream of the Section 22 fence (Sites #2 and #3, respectively). Sample locations are shown on the attached map.

The vegetation samples were obtained by clipping similar grasses at each location. The samples were submitted to Energy Labs for total selenium analysis. Results of the laboratory analysis are included in Table 2. A review of the results shows that the selenium concentrations at Site #3, as well as Site #1-Background decreased from the previous year, and Site #2 increased. Site #3 is below the detectable limit and Site #2 exceeded the background concentration.

All selenium concentrations are below the generally accepted 5-20 mg/kg livestock forage threshold.

Table 2
Selenium Concentrations (mg/kg)
In Vegetation at Section 22 Drainage

Date	Site #1 (Background)	Site #2	Site #3
06/08/09	0.5	2.4	<0.5

E. Conclusions

The monitoring requirements specified in the Lease and Monitoring Agreement were conducted during 2011. Results of the monitoring requirements, including visual observations, show that there have been no significant impacts to surface water or vegetation on lands owned by Boner Bros. Partnerships during 2011.

Figure 2 shows a graph of the selenium concentration in the vegetation from 1996 through 2011. This figure illustrates that the selenium concentrations in the vegetation at the potentially affected area (Sample Sites #2 and #3) are generally below the background levels (Site #l). Although there are a few samples that show selenium concentrations above background levels, they are within the natural variability of the vegetation types and sampling method. Additionally, these concentrations are below the extremely conservative threshold of 5 mg/kg selenium that the WDEQ typically uses as a "level of concern", with the exception of the background area (Site #1) in 2008.

As of July 2004, operations have ceased at Satellite No. 1 and wastewater is no longer being discharged into PSR No. 1. As a result, water levels in PSR No. 1 have consequently dried up. A small amount of water accumulates due to natural precipitation events. Both The East Pumpback Sump and South Pumpback sumps were off the entire year, and the Interceptor Trench has been off since May 15, 2005

603 - Highland Uranium Project

	2011- 2012 Annual Report Surety Estimate	2010-2011 Annual Report Surety Estimate	Change
Total Surety	$108,218,308	$92,730,470	$15,487,838
Ground Water Restoration	$41,345,987	$34,613,100	$6,732,887
Well Abandonment	$13,497,257	$12,503,045	$994,212
Wellfield Reclamation	$12,997,592	$10,380,553	$2,617,039
Wellfield and Satellite Surface Reclamation	$467,527	$448,972	$18,555
Equipment Costs	$628,991	$538,415	$90,576
Building Costs	$3,990,985	$3,705,613	$285,372
Miscellaneous Reclamation	$13,550,802	$11,993,678	$1,557,124

Summary of Major Changes

The RO bleed to the deep disposal wells are 20% based on the approved groundwater restoration schedule. This is consistent with assumptions made for the water balance being submitted to the WDEQ for approval as well. Additionally, the restoration period for each mine unit was updated to match the submitted water balance, which is not significantly different than the approved water balance. This update caused a decrease in the surety estimate by over $2,500,000.

Quotes were received for wellfield refurbishment costs and these cost estimates were updated in the surety estimate. Progress made in wellfield refurbishment was also taken off of surety, which included progress made in Mine Units C, E, F, and H. Over $3,000,000 was reduced from the estimate based on the work already accomplished.

The cost estimate for a DDW MIT was increased from the previous estimate of $5907.53. It is unclear where the previous estimate originated; however, actual MIT costs for this submittal included a consultant, CaCl fluid & CaCl trucking, logging, and a pump truck. The actual cost incurred was $41,986.80 and is reflected in this surety and is carried out as a cost incurred every five years for each well over the life of restoration.

The life of the selenium plant was increased to seventeen years, which matched the water balance being submitted to WDEQ for approval. This increased the overall surety by over $1,000,000.

It was discovered that Deep Disposal Well abandonment was based on tubing length instead of total depth. The total depth and tubing lengths were corrected; however, this decreased the surety estimate by $70,000.

Development of monitor wells, production wells, and header houses were estimated in Mine Unit I-Extension, which also expects to see in increased in overall area. This development increased the overall surety estimate by over $1,000,000.

Additional wells and production area was expected in Mine Unit F, which accounted for roughly $300,000 of additional surety.

Other wells were requested in Mine Unit C and Mine Unit E for restoration, which added over $500,000 in additional surety.

A formula regarding piping was found to be incorrect in Mine Unit D. By correcting this formula, the surety estimate increased by $110,000.

A bid from Telesto to continue with the Casing Leak Investigation was received and included in the surety estimate at its face value, which is $3,000,000.

The need to remediate the irrigator areas was recognized. A proposal from the University of Wyoming to further analyze the speciation work previously done at the two pivots was included in the estimate at $80,000 to demonstrate the commitment to remediation.

Cameco Resources
Highland Uranium Project
2012-13 Surety Estimate

Highland Uranium Project 2012-13 Surety Estimate Update

I.	Groundwater Restoration (GW REST Sheet)			$40,637,924
II.	Well Abandonment (WA Sheet)			$14,828,922
III.	Wellfield Reclamation (WF REC Sheet)			$12,997,512
IV.	Wellfield and Satellite Surface Reclamation (WF-SAT-SURF Sheet)			$497,578
V.	Equipment Costs (EQUIP Sheet)			$628,991
VI.	Building Costs (BLDGS Sheets)			$4,212,662
VII.	Miscellaneous Site Reclamation (MISC REC Sheet)			$13,736,557
	Subtotal Reclamation Cost			$87,540,146
		Contingency	25%	$21,885,037
			TOTAL	$109,425,183

Permit 603

Cameco Resources
Highland Uranium Project
2012-13 Surety Estimate

Ground Water Restoration

	Mine Unit-A	Mine Unit-B	Mine Unit-C	Mine Unit-C22	Mine Unit-C Haul Drifts	Mine Unit-D	Mine Unit-D Ext	Mine Unit-E	Mine Unit-F	Mine Unit-H	Mine Unit-I	Mine Unit-I Ext	Mine Unit-J	
I. Ground Water Sweep Costs														
Estimated PV's	0	0	0	0	0	0	0	1	1	1	1	1	1	
Total Kgals for GWS	0	0	0	0	0	0	0	81658	233691	94815	115820	75937	86995	
Bleed to Deep Disposal Well (%)	100	100	100	100	100	100	100	100	100	100	100	100	100	
Groundwater Sweep Unit Cost ($/Kgal)	$2.21	$2.21	$2.21	$2.21	$2.21	$2.21	$2.21	$2.21	$2.21	$2.21	$2.21	$2.21	$2.21	
Subtotal Ground Water Sweep Costs per Wellfield	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$180,077**	**$515,350**	**$209,092**	**$255,414**	**$167,461**	**$191,847**	
Total Ground Water Sweep Costs	**$1,519,241**													
II. Reverse Osmosis Costs														
Estimated PV's	0	0	0	0	0	0.5	0.5	4.5	4.5	4.5	4.5	4.5	4.5	
Total Kgals for RO	0	0	0	0	0	14,023	8,648	367,461	1,051,610	426,668	521,190	341,717	391,478	
Bleed to Deep Disposal Well (%)	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	
Reverse Osmosis Unit Cost ($/Kgal)	$0.67	$0.67	$0.67	$0.67	$0.67	$0.67	$0.67	$0.67	$0.67	$0.67	$0.67	$0.67	$0.67	
Brine volume for disposal	0	0	0	0	0	2,805	1,730	73,492	210,322	85,334	104,238	68,343	78,296	
DDW Disposal Cost($/Kgal)	$2.07	$2.07	$2.07	$2.07	$2.07	$2.07	$2.07	$2.07	$2.07	$2.07	$2.07	$2.07	$2.07	
Disopsal Cost per wellfield	$0.00	$0.00	$0.00	$0.00	$0.00	$5,798.67	$3,576.05	$151,949.35	$434,852.62	$176,431.92	$215,518.06	$141,303.70	$161,880.45	
Subtotal Reverse Osmosis Costs per Wellfield	**$0**	**$0**	**$0**	**$0**	**$0**	**$15,194**	**$9,370**	**$398,148**	**$1,139,431**	**$462,299**	**$564,715**	**$370,254**	**$424,170**	
Total Reverse Osmosis Costs	**$3,383,582**													
III. Reverse Osmosis with Chemical Reductant Costs														
Estimated PV's	0	0	3	1	1	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
Total Kgals for RO	0	0	206,883	19,691	0	98,161	60,536	285,803	817,919	331,853	405,370	265,780	304,483	
Bleed to Deep Disposal Well (%)	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	
Reverse Osmosis with chemical reductant Unit Cost ($/Kgal)	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	
Brine volume for disposal	0	0	41,377	3,938	0	19,632	12,107	57,161	163,584	66,371	81,074	53,156	60,897	
DDW Disposal Cost($/Kgal)	$2.07	$2.07	$2.07	$2.07	$2.07	$2.07	$2.07	$2.07	$2.07	$2.07	$2.07	$2.07	$2.07	
Disposal Cost per wellfield	$0.00	$0.00	$85,548.50	$8,142.45	$0.00	$40,590.70	$25,032.33	$118,182.83	$338,218.70	$137,224.82	$167,625.16	$109,902.88	$125,907.01	
Subtotal Reverse Osmosis Chemical Reductant & Disposal Costs	**$0**	**$0**	**$233,900**	**$22,262**	**$0**	**$110,980**	**$68,441**	**$323,126**	**$924,730**	**$375,189**	**$458,307**	**$300,487**	**$344,245**	
Total Reverse Osmosis Chemical Reductant Costs	**$3,161,667**													
IV. Bioremediation														
Estimated PV's	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Kgals for Treatment	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bleed to Deep Disposal Well (%)	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	
Bioremediation Unit Cost ($/Kgal)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	
Subtotal Bioremediation Costs per Wellfield	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	
Total Bioremediation Costs	**$0.00**													
V. Selenium Plant Operation														
Years	19													
$/year	$281,964													
Subtotal Selenium Plant Operation Costs	**$5,357,309.84**													
VI. MIT Costs														
MIT Costs per Well	$180.00	$180.00	$180.00	$180.00	$180.00	$180.00	$180.00	$180.00	$180.00	$180.00	$180.00	$180.00	$180.00	
Restoration period, plus stabilization (months)	12	12	36	12	12	36	24	60	168	72	96	96	144	
Number of MIT's req'd for Prod & Inj Wells	0	66	313	0	0	100	17	507	4,192	558	576	368	845	
Subtotal MIT Mine Unit	**$0.00**	**$11,844.00**	**$56,376.00**	**$0.00**	**$0.00**	**$17,928.00**	**$3,024.00**	**$91,260.00**	**$754,488.00**	**$100,440.00**	**$103,680.00**	**$66,240.00**	**$152,064.00**	$1,357,344.00
5-year MIT Costs for Disposal Wells $41,986.80														
*MIT Cost is from ACTUAL cost of an MIT on DDW by Petrotek on Q2 of 2012														
Number of DDWs 3														
Years of Restoration 19														
Number of MITs per DDW 4														
Subtotal MIT DDW Costs	**$503,841.60**													
Total MIT Costs	**$1,861,185.60**													
VII. Monitoring and Sampling Costs														
Modified Guidline 8 = $337.00 analysis														
6 parameter contract laboratory analysis = $100.00 analysis														
Total monitor wells	9	69	104	0	0	38	15	72	109	86	34	55	46	
Groundwater sweep duration (months)	0	0	0	0	0	0	0	24	48	24	36	36	48	
Reverse Osmosis duration (months)	0	0	24	0	0	24	12	24	108	36	48	48	84	
Stabilization duration (months)	12	12	12	12	12	12	12	12	12	12	12	12	12	
A. Monitor Well Sampling														
1. Well Sampling prior to restoration start														
# of Wells	9	69	104	0	0	38	15	72	109	86	34	55	46	
$/sample	$337.00	$337.00	$337.00	$337.00	$337.00	$337.00	$337.00	$337.00	$337.00	$337.00	$337.00	$337.00	$337.00	
2. Groundwater Sweep Sampling (quarterly)														
# of Wells	9	69	104	0	0	38	15	72	109	86	34	55	46	
Total # samples	0	0	0	0	0	0	0	576	1744	688	408	660	736	
$/sample	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	

Cameco Resources
Highland Uranium Project
2012-13 Surety Estimate

Ground Water Restoration

		Mine Unit-A	Mine Unit-B	Mine Unit-C	Mine Unit-C22	Mine Unit-C Haul Drifts	Mine Unit-D	Mine Unit-D Ext	Mine Unit-E	Mine Unit-F	Mine Unit-H	Mine Unit-I	Mine Unit-I Ext	Mine Unit-J
3. RO Sampling (quarterly)														
# of Wells		9	69	104	0	0	38	15	72	109	86	34	55	46
Total # samples		0	0	832	0	0	304	60	576	3924	1032	544	880	1288
$/sample		$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00
4. Stabilization Sampling (Guideline 8, quarterly)														
# of Wells		6	56	44	6	2	19	16	28	89	69	33	6	33
Total # samples		24	224	176	24	8	76	64	112	356	276	132	24	132
$/sample		$337.00	$337.00	$337.00	$337.00	$337.00	$337.00	$337.00	$337.00	$337.00	$337.00	$337.00	$337.00	$337.00
5. Stabilization Sampling (6 parameter bi-monthly)														
# of Wells		6	56	44	6	2	19	16	28	89	69	33	6	33
Total # samples		36	336	264	36	12	114	96	168	534	414	198	36	198
$/sample		$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00
6. Monitor Well Sampling														
# of Wells		9	69	104	0	0	38	15	72	109	86	34	55	46
$/sample		$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00
Total # samples (2.2/mo for entire period)		54	414	1872	0	0	684	180	2160	9156	3096	1632	2640	3312
7. Other Laboratory Costs														
Radon, etc. *	$1,000.00 month													
Total for Other Laboratory Costs:		$12,000.00	$12,000.00	$36,000.00	$12,000.00	$12,000.00	$36,000.00	$24,000.00	$60,000.00	$168,000.00	$72,000.00	$96,000.00	$0.00	$144,000.00
Subtotal Monitoring and Sampling Costs per Mine Unit		**$32,121.00**	**$185,741.00**	**$427,160.00**	**$23,688.00**	**$15,896.00**	**$184,618.00**	**$84,223.00**	**$470,008.00**	**$1,860,505.00**	**$716,994.00**	**$430,142.00**	**$448,223.00**	**$757,386.00**
Total Monitoring and Sampling Costs		**$5,636,705.00**												
VIII. Labor Cost (for all Reclamation)														
Environmental Manager/RSO Support	$10,786.55 month													
Restoration Manager Support	$8,779.75 month													
HP Technician support	$6,020.40 month													
Total Restoration Period	19 years													
Manager support during restoration	$4,461,116.40													
HP Technician support during restoration	$1,372,651.20													
Labor Support 5 each	$6,589,960.00													
Total Supervisory Labor Costs		**$12,423,727.60**												
TOTAL RESTORATION COST PER WELLFIELD		**$32,121.00**	**$197,585.00**	**$717,435.67**	**$45,950.43**	**$15,896.00**	**$328,719.84**	**$165,058.55**	**$1,462,619.39**	**$5,194,503.97**	**$1,864,014.02**	**$1,812,257.89**	**$1,352,665.27**	**$1,869,711.87**
		$15,058,538.90												
Wellfield Refurbishment to Facilitate Restoration														
Well Replacement (#)		0	0	5	0	0	0	0	10	200	59	47	0	18
Replacement ($/well)		$14,000	$14,000	$14,000	$14,000	$14,000	$14,000	$14,000	$14,000	$14,000	$14,000	$14,000	$14,000	$14,000
Bellhole Refurbishment (#)		0	0	0	0	0	0	0	15	22	19	6	0	0
Refurbishment ($/bellhole)		$5,792	$5,792	$5,792	$5,792	$5,792	$5,792	$5,792	$5,792	$5,792	$5,792	$5,792	$5,792	$5,792
Header House Refurbishment (#)		0	0	0	0	0	0	0	5	31	10	6	0	9
Refurbishment ($/header house)		$32,000	$32,000	$32,000	$32,000	$32,000	$32,000	$32,000	$32,000	$32,000	$32,000	$32,000	$32,000	$32,000
Subtotal Refurbishment Cost per Wellfield		**$0**	**$0**	**$70,000**	**$0**	**$0**	**$0**	**$0**	**$386,880**	**$3,919,424**	**$1,256,048**	**$884,752**	**$0**	**$540,000**
Total Wellfield Refurbishment Cost		**$7,057,104**												
Booster Pumping Costs (Wellfield to RO)		**$237,402**												
Assumptions: 15 40 hp pumps														
$12,494.84 annual operating cost														
TOTAL GROUND WATER RESTORATION COSTS		**$40,637,924**												

Cameco Resources
Highland Uranium Project
2012-13 Surety Estimate

Well Abandonment

	Mine Unit-A	Mine Unit-B	Mine Unit-C	Mine Unit-C 22	Mine Unit-C Haul Drifts	Mine Unit-D	Mine Unit-D Ext	Mine Unit-E	Mine Unit-F	Mine Unit-H	Mine Unit-I	Mine Unit-I Ext	Mine Unit-J	Totals
I. Well Abandonment (Wellfields)														
# of Production Wells	0	141	148	0	0	56	13	134	594	136	129	80	117	1548
# of Injection Wells	0	188	374	0	0	110	29	373	903	329	231	150	235	2922
# of Monitoring Wells	9	69	104	0	0	38	15	72	109	86	34	55	46	637
# of Previously Abandoned Wells Pending Release	109	170	223	0	0	96	0	273	400	59	47	0	18	
Total Number of Wells	118	568	849	0	0	300	57	852	2006	610	441	285	416	6502
Average Diameter of Casing (inches)	5	5	5	5	5	5	5	5	5	5	5	5	5	
Production, Injection and Perimeter Well Average Depth (ft)	500	450	550	550	550	600	600	550	650	500	650	650	540	565
Total Mine Unit Well Depth (ft), production wells	0	63450	81400	0	0	33600	7800	73700	386100	68000	83850	52000	63180	913080
Total Mine Unit Well Depth (ft), all others	59000	192150	385550	0	0	146400	26400	394900	917800	237000	202800	133250	161460	2856710
Well Abandonment Unit Cost ($/ft. of well)	$2.50	$2.50	$2.50	$2.50	$2.50	$2.50	$2.50	$2.50	$2.50	$2.50	$2.50	$2.50	$2.50	
Well Abandonment (w/pump) Unit Cost ($/ft. of well)	$2.80	$2.80	$2.80	$2.80	$2.80	$2.80	$2.80	$2.80	$2.80	$2.80	$2.80	$2.80	$2.80	
Subtotal Abandonment Cost per Wellfield	**$147,500**	**$658,035**	**$1,191,795**	**$0**	**$0**	**$460,080**	**$87,840**	**$1,193,610**	**$3,375,580**	**$782,900**	**$741,780**	**$478,725**	**$580,554**	**$9,698,399**

III. Removal of Contaminated Soil Around Wells

# of Production and Injection Wells	4470	
Cost per well ($/well)	$138.39	
Subtotal Removal of Soil Around Wells	**$618,603.30**	**$618,603.30**

IV. Delineation Hole Abandonment

	Unit Cost	Units	Quantity	Total
# of Holes Pending Bond Release (2009-10)				
Site Location ($10/site)	$10.00	site	89	$890
Sealing of Holes using High Solids Bentonite Grout				$0
assume average depth per hole = 750	$6.28	linear foot	89	$419,190
Concrete Plug Cap, pre-cast	$8.00	plug	89	$712
Mud pit backfill, Rough site grading	$30.00	site	89	$2,670
Subtotal Drill Hole Reclamation				$423,462
# of Holes Pending Bond Release (2010-11)				
Site Location ($10/site)	$10.00	site	133	$1,330
Sealing of Holes using High Solids Bentonite Grout				$0
assume average depth per hole = 725	$6.28	linear foot	133	$605,549
Concrete Plug Cap, pre-cast	$8.00	plug	133	$1,064
Mud pit backfill, Rough site grading	$30.00	site	133	$3,990
Subtotal Drill Hole Reclamation				$611,933
# of Projected Holes (2011-12)				
Site Location ($10/site)	$10.00	site	300	$3,000
Sealing of Holes using High Solids Bentonite Grout				$0
assume average depth per hole = 750	$6.28	linear foot	300	$1,413,000
Concrete Plug Cap, pre-cast	$8.00	plug	300	$2,400
Mud pit backfill, Rough site grading	$30.00	site	300	$9,000
Subtotal Drill Hole Reclamation				$1,427,400
# of Projected Holes (2012-13)				
Site Location ($10/site)	$10.00	site	305	$3,050
Sealing of Holes using High Solids Bentonite Grout				$0
assume average depth per hole = 850	$6.28	linear foot	305	$1,628,090
Concrete Plug Cap, pre-cast	$8.00	plug	305	$2,440
Mud pit backfill, Rough site grading	$30.00	site	305	$9,150
Subtotal Drill Hole Reclamation				$1,642,730
Subtotal Hole Abandonment				**$4,105,525.00**

V. Waste Disposal Well Abandonment	Morton No. 1-20	Vollman No. 33-27	SRHUP # 9
A. Well Sealing			
Total Depth of Well	9206	14412	9500
Sealing cost per foot (in UIC permit)	$11.91	$11.91	$11.91
Subtotal Plugging Costs per Well	$109,643	$171,647	$113,145
B. Pump Dismantling and Decontamination			
Number of Persons	2	2	2
Number of Pumps	2	2	2
Pumps/Day	0.5	0.5	0.5
Number of Days	4	4	4
$/Day/Person	$302	$302	$302
Subtotal Dismantling and Decon Costs per Well	$2,413	$2,413	$2,413
C. Tubing String Disposal (NRC-Licensed Facility)			
Length of Tubing String (ft)	8,498	8,869	8,820
Diameter of Tubing String (inches)	2.875	2.875	2.875
Volume of Tubing String (ft^3)	198	207	205
Transportation and Disposal Unit Cost ($/$ft^3$)	$7.74	$7.74	$7.74
Subtotal Tubing String Disposal Costs per Well	$1,532	$1,599	$1,590
Subtotal Waste Disposal Well Abandonment Costs per Well	$113,588.26	$175,658.72	$117,147.80
Total Waste Disposal Well Abandonment Costs	**$406,394.78**		

Total Wellfield Abandonment Costs	**$14,828,922**

Cameco Resources
Highland Uranium Project
2012-13 Surety Estimate

Wellfield Buildings and Equipment Removal and Disposal		Mine Unit-A	Mine Unit-B	Mine Unit-C	Mine Unit-C 19N	Mine Unit-C Haul Drifts	Mine Unit-D	Mine Unit-D Ext	Mine Unit-E	Mine Unit-F	Mine Unit-H	Mine Unit-I	Mine Unit-I Ext	Mine Unit-J	
I. **Wellfield Piping**					Not Used, Included w/MU-C										
Number of Header Houses per Wellfield		5	18	20	0	0	4	3	15	45	10	6	4	9	
Approximate Length of Piping per Header House (ft)		13800	13800	13800	13800	13800	13800	13800	13800	13800	13800	13800	13800	13800	
*average 46 wells per with 300 ft pipeline/well)															
Approximate Total Length of Piping (ft)		69000	248400	276000	0	0	55200	41400	207000	621000	138000	82800	55200	124200	1918200
A. Removal and Loading															
Wellfield Piping Removal Unit Cost ($/ft of pipe)		$2.26	$2.26	$2.26	$2.26	$2.26	$2.26	$2.26	$2.26	$2.26	$2.26	$2.26	$2.26	$2.26	
Subtotal Wellfield Piping Removal and Loading Costs		$155,940	$561,384	$623,760	$0	$0	$124,752	$93,564	$467,820	$1,403,460	$311,880	$187,128	$124,752	$280,692	
B. Transport and Disposal Costs (NRC-Licensed Facility)															
Average Diameter of Piping (inches)		2	2	2	2	2	2	2	2	2	2	2	2	2	
Chipped Volume Reduction (ft^3/ft)		0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	
Chipped Volume per Wellfield (ft^3)		740	2663	2959	0	0	592	444	2219	6658	1480	888	592	1332	
Volume for Disposal Assuming 10% Void Space (ft^3)		814	2930	3255	0	0	651	488	2441	7324	1628	977	651	1465	
Transportation and Disposal Unit Cost ($/$ft^3$)		$7.74	$7.74	$7.74	$7.74	$7.74	$7.74	$7.74	$7.74	$7.74	$7.74	$7.74	$7.74	$7.74	
Subtotal Wellfield Piping Transport and Disposal Costs		$6,303	$22,687	$25,203	$0	$0	$5,041	$3,779	$18,901	$56,709	$12,606	$7,565	$5,041	$11,343	
Wellfield Piping Costs per Wellfield		$162,243	$584,071	$648,963	$0	$0	$129,793	$97,343	$486,721	$1,460,169	$324,486	$194,693	$129,793	$292,035	
Total Wellfield Piping Costs		**$4,510,310**													
II. **Well Pumps and DownholeTubing**															
Assumptions:															
60% of production/injection wells contain pumps and/or tubing															
A. Pump and Tubing Transportation and Disposal															
Number of Production Wells		0	141	148	0	0	56	13	134	594	136	129	80	117	
Number of Injection Wells		0	188	374	0	0	110	29	373	903	329	231	150	235	
Number of Monitor Wells		9	69	104	0	0	38	15	72	109	86	34	55	46	
1. Pump Volume															
Number of Production Wells with Pumps		0	141	148	0	0	56	13	134	594	136	129	80	117	
Average Pump Volume (ft^3) 66"X 3.8" Diam =	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	
Pump Volume per Wellfield (ft^3)		0.0	732.9	769	0	0	291	68	697	3088	707	671	416	608	
2. Tubing Volume															
Assumptions:															
Average tubing length/wellfield based on average well depth minus 25 ft															
Number of Production & Monitor Wells with Tubing		9	210	252	0	0	94	28	206	703	222	163	135	163	
Number of Injection Wells with Tubing		0	141	148	0	0	56	13	134	594	136	129	80	117	
Average Tubing Length per Well (ft)		475	425	525	525	525	575	575	525	625	475	625	625	515	
Tubing Length per Wellfield (ft)		4,275	149,175	210,000	0	0	86,250	23,575	178,500	810,625	170,050	182,500	134,375	144,200	
Diameter of Production Well Fiberglass Tubing (inches)		2	2	2	2	2	2	2	2	2	2	2	2	2	
Diameter of Injection Well HDPE Tubing (inches)		1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	
Chipped Volume Reduction (ft^3/ft)		0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	
Chipped Volume per Wellfield (ft^3)		46	1599	2251	0	0	925	253	1914	8691	1823	1957	1441	1546	
Volume of Pump and Tubing (ft^3)		46	2332	3020	0	0	1216	321	2611	11779	2530	2628	1857	2154	
Volume for Disposal Assuming 10% Void Space (ft^3)		51	2565	3322	0	0	1338	353	2872	12956	2783	2890	2043	2370	
Transportation and Disposal Unit Cost ($/$ft^3$)		$7.74	$7.74	$7.74	$7.74	$7.74	$7.74	$7.74	$7.74	$7.74	$7.74	$7.74	$7.74	$7.74	
Pump and Tubing Transport and Disposal Costs Per Wellfield		$395	$19,861	$25,722	$0	$0	$10,360	$2,733	$22,238	$100,318	$21,549	$22,377	$15,819	$18,351	
Total Pump and DownholeTubing Costs		**$259,723**													
III. **Buried Trunkline (Includes $ for fiber optic cable removal)**															
Assumptions:			inc w/MU-A		inc w/MU-C	inc w/MU-C				inc w/MU-D					
Length of Trunkline Trench (ft)		6500	0	5900	0	0	12000	5500	0	11700	13200	10750	0	2500	68050
A. Removal and Loading															
Main Pipeline Removal Unit Cost ($/ft of trench)		$2.26	$2.26	$2.26	$2.26	$2.26	$2.26	$2.26	$2.26	$2.26	$2.26	$2.26	$2.26	$2.26	
Subtotal Trunkline Removal and Loading Costs		$14,690	$0	$13,334	$0	$0	$27,120	$12,430	$0	$26,442	$29,832	$24,295	$0	$5,650	
B. Transport and Disposal Costs (NRC-Licensed Facility)															
1. 1" Carbon Steel Trunkline															
Piping Length (ft)		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Volume (ft^3)		0	0	0	0	0	0	0	0	0	0	0	0	0	
2. 1.5" HDPE Trunkline															
Piping Length (ft)		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chipped Volume per Lft (ft^3/ft)		0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	
Chipped Volume (ft^3)		0	0	0	0	0	0	0	0	0	0	0	0	0	
3. 3" HDPE Trunkline															
Piping Length (ft)		6500	0	5900	0	0	12000	5500	0	11700	13200	10750	0	0	29900
Chipped Volume per Lft (ft^3/ft)		0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	
Chipped Volume (ft^3)		151	0	137	0	0	279	128	0	272	307	250	0	0	
4. 6" HDPE Trunkline															
Piping Length (ft)		0	0	0	0	0	0	11000	0	0	0	3000	0	0	14000
Chipped Volume per Lft (ft^3/ft)		0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.083	
Chipped Volume (ft^3)		0	0	0	0	0	0	917	0	0	0	250	0	0	
5. 8" HDPE Trunkline															
Piping Length (ft)		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chipped Volume per Lft (ft^3/ft)		0.141	0.141	0.141	0.141	0.141	0.141	0.141	0.141	0.141	0.141	0.141	0.141	0.141	
Chipped Volume (ft^3)		0	0	0	0	0	0	0	0	0	0	0	0	0	
6. 10" HDPE Trunkline															
Piping Length (ft)		13000	0	0	0	0	0	0	0	0	0	750	0	2000	13750
Chipped Volume per Lft (ft^3/ft)		0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	
Chipped Volume (ft^3)		2854	0	0	0	0	0	0	0	0	0	165	0	439	
7. 12" HDPE Trunkline															
Piping Length (ft)		0	0	11800	0	0	24000	0	0	0	0	0	0	2000	35800
Chipped Volume per Lft (ft^3/ft)		0.309	0.309	0.309	0.309	0.309	0.309	0.309	0.309	0.309	0.309	0.309	0.309	0.309	
Chipped Volume (ft^3)		0	0	3644	0	0	7411	0	0	0	0	0	0	618	
8. 14" HDPE Trunkline															

Cameco Resources
Highland Uranium Project
2012-13 Surety Estimate

Wellfield Buildings and Equipment Removal and Disposal	Mine Unit-A	Mine Unit-B	Mine Unit-C	Mine Unit-C 19N	Mine Unit-C Haul Drifts	Mine Unit-D	Mine Unit-D Ext	Mine Unit-E	Mine Unit-F	Mine Unit-H	Mine Unit-I	Mine Unit-I Ext	Mine Unit-J	
Piping Length (ft)	0	0	0	0	0	0	0	0	23400	26400	8500	0	0	23400
Chipped Volume per Lft (ft^3/ft)	0.372	0.372	0.372	0.372	0.372	0.372	0.372	0.372	0.372	0.372	0.372	0.372	0.372	
Chipped Volume (ft^3)	0	0	0	0	0	0	0	0	8712	9829	3165	0	0	
9. 16" HDPE Trunkline														
Piping Length (ft)	0	0	0	0	0	0	0	0	23400	26400	8500	0	0	23400
Chipped Volume per Lft (ft^3/ft)	0.486	0.486	0.486	0.486	0.486	0.486	0.486	0.486	0.486	0.486	0.486	0.486	0.486	
Chipped Volume (ft^3)	0	0	0	0	0	0	0	0	11381	12841	4134	0	0	
10. 18" HDPE Trunkline														
Piping Length (ft)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chipped Volume per Lft (ft^3/ft)	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	
Chipped Volume (ft^3)	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Trunkline Chipped Volume (ft^3)	3006	0	3781	0	0	7691	1045	0	20366	22977	7964	0	1057	
Volume for Disposal Assuming 10% Void Space (ft^3)	3306	0	4159	0	0	8460	1150	0	22403	25275	8761	0	1162	
Transportation and Disposal Unit Cost ($/$ft^3$)	$7.74	$7.74	$7.74	$7.74	$7.74	$7.74	$7.74	$7.74	$7.74	$7.74	$7.74	$7.74	$7.74	
Subtotal Trunkline Transport and Disposal Costs	$25,598	$0	$32,203	$0	$0	$65,505	$8,904	$0	$173,466	$195,703	$67,836	$0	$8,997	
Trunkline Decommissioning Costs per Wellfield	$40,288	$0	$45,537	$0	$0	$92,625	$21,334	$0	$199,908	$225,535	$92,131	$0	$14,647	
Total Trunkline Decommissioning Costs	**$732,005**													
IV. Well Head Covers				Inc w/MU-C	Inc w/MU-C									
Total Quantity	0	329	522	0	0	166	42	507	1497	465	360	230	352	4470
Average Well Head Cover Volume (ft^3)	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	
A. Removal														
Total Volume (ft^3)	0	611.94	970.9	0	0	308.76	78.12	943.02	2784.42	864.9	669.6	427.8	654.72	
Demolition Unit Cost per WDEQ Guideline No.12,App.K ($/$ft^3$)	$0.262	$0.262	$0.262	$0.262	$0.262	$0.262	$0.262	$0.262	$0.262	$0.262	$0.262	$0.262	$0.262	
Subtotal Well Head Cover Demolition Costs	$0	$160	$254	$0	$0	$81	$20	$247	$729	$227	$175	$112	$171	
B. Survey and Decontamination														
Cost per Wellhead cover	$8.07	$8.07	$8.07	$8.07	$8.07	$8.07	$8.07	$8.07	$8.07	$8.07	$8.07	$8.07	$8.07	
Subtotal Survey and Decontamination Costs	$0	$2,655	$4,213	$0	$0	$1,340	$339	$4,091	$12,081	$3,753	$2,905	$1,856	$2,841	
C. Disposal at County landfill facility														
Total Volume (cy)	0	23	36	0	0	11	3	35	103	32	25	16	24	
Volume for disposal assuming 10% void space (cy)	0	25	40	0	0	13	3	38	113	35	27	17	27	
Transportation and Disposal Unit Cost ($/cy)	$7.66	$7.66	$7.66	$7.66	$7.66	$7.66	$7.66	$7.66	$7.66	$7.66	$7.66	$7.66	$7.66	
Subtotal Disposal Costs	$0	$192	$307	$0	$0	$100	$23	$291	$866	$268	$207	$130	$207	
Well Head Covers Removal and Disposal Costs per Mine Unit	*$0*	*$3,007*	*$4,774*	*$0*	*$0*	*$1,521*	*$382*	*$4,629*	*$13,676*	*$4,248*	*$3,287*	*$2,098*	*$3,219*	
Total Well Head Cover Removal and Disposal Costs	**$40,841**													
V. Header Houses (Includes Booster Stations)														
Total Quantity	5	18	20	0	0	4	3	15	45	10	6	4	9	
Average Header House Volume (ft^3)	800	800	800	800	800	800	800	800	800	800	800	800	800	
A. Removal														
Total Volume (ft^3)	4000	14400	16000	0	0	3200	2400	12000	36000	8000	4800	3200	7200	
Demolition Unit Cost per WDEQ Guideline No.12,App.K ($/$ft^3$)	$0.262	$0.262	$0.262	$0.262	$0.262	$0.262	$0.262	$0.262	$0.262	$0.262	$0.262	$0.262	$0.262	
Subtotal Building Demolition Costs	$1,048	$3,771	$4,190	$0	$0	$838	$629	$3,143	$9,428	$2,095	$1,257	$838	$1,886	
B. Survey and Decontamination														
Cost per Header House	$670	$670	$670	$670	$670	$670	$670	$670	$670	$670	$670	$670	$670	
Subtotal Survey and Decontamination Costs	$3,350	$12,060	$13,400	$0	$0	$2,680	$2,010	$10,050	$30,150	$6,700	$4,020	$2,680	$6,030	
C. Disposal														
Total Volume (cy)	148	533	593	0	0	119	89	444	1333	296	178	119	267	
Volume for Disposal Assuming 10% Void Space (cy)	163	587	652	0	0	130	98	489	1467	326	196	130	293	
Disposal Unit Cost per WDEQ Guideline No.12,App.K ($/cy)	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	
Subtotal County Landfill Disposal Costs	$1,292	$4,652	$5,167	$0	$0	$1,030	$777	$3,875	$11,626	$2,584	$1,553	$1,030	$2,322	
Headerhouse Soil Removal Volume ft3 (assumes 10'Wx20'Lx2.5'D)	500	500	500	500	500	500	500	500	500	500	500	500	500	
11e.(2) Disposal Unit Cost ($/ft3)	$11.14	$11.14	$11.14	$11.14	$11.14	$11.14	$11.14	$11.14	$11.14	$11.14	$11.14	$11.14	$11.14	
Subtotal 11e.(2) Disposal Costs	$27,855	$100,277	$111,418	$0	$0	$22,284	$16,713	$83,564	$250,691	$55,709	$33,426	$22,284	$50,138	
Header House Removal and Disposal Costs per Wellfield	$33,545	$120,760	$134,175	$0	$0	$26,832	$20,129	$100,632	$301,895	$67,088	$40,256	$26,832	$60,376	
Total Header House Removal and Disposal Costs	**$932,519**													
TOTAL REMOVAL AND DISPOSAL COSTS PER WELLFIELD	$236,471	$727,699	$859,171	$0	$0	$261,131	$141,921	$614,220	$2,075,966	$642,906	$352,744	$174,542	$388,628	
VI. Vehicle Operation Costs														
Number of Pickup Trucks/Pulling Units (Gas)	10													
Unit Cost in $/hr (UC-Equipment Costs)	$19.92													
Average Operating Time (Hrs/Year)	1000													
Total Number of Years (Average)	19													
Total Vehicle Operation Costs	**$3,784,800**													
VII. Header Houses (Includes Booster Stations)	5	18	20	0	0	4	3	15	45	10	6	4	9	
Years of Active Restoration	0	0	2	0	0	2	1	4	13	5	7	7	11	
Heating Cost per Year per header house	$2,992	$2,992	$2,992	$2,992	$2,992	$2,992	$2,992	$2,992	$2,992	$2,992	$2,992	$2,992	$2,992	
Heating Costs per year	$0	$0	$119,664	$0	$0	$23,933	$8,975	$179,496	$1,750,086	$149,580	$125,647	$83,765	$296,168	
Total Header Heating cost	**$2,737,314**													
TOTAL WELLFIELD BUILDINGS AND EQUIPMENT REMOVAL	**$12,997,512**													

Cameco Resources
Highland Uranium Project
2012-13 Surety Estimate

Wellfield and Satellite Surface Reclamation	Mine Unit-A/B	Mine Unit-C	Mine Unit-D	Mine Unit-E	Mine Unit-F	Mine Unit-H	Mine Unit-D Ext.	Mine Unit-I	Mine Unit-I Ext	Mine Unit-J
I. Wellfield Pattern Area Reclamation										
Pattern Area (acres)	42.75	67.5	12.375	49.5	171	56.25	9	26.33	17.5	60.75
Discing/Seeding Unit Cost ($/acre)	$606	$606	$606	$606	$606	$606	$606	$606	$606	$606
Subtotal Pattern Area Reclamation Costs per Wellfield	$25,922	$40,930	$7,504	$30,015	$103,689	$34,108	$5,457	$15,966	$10,611	$36,837
Total Wellfield Pattern Area Reclamation Costs	**$311,039**									
II. Wellfield Road Reclamation										
Road Construction										
Length of Wellfield Roads (1000 ft)	12.8	11.3	2.4	13.3	18	15.7	5	5	5	5
Wellfield Road Reclamation Unit Cost ($/1000 ft)	$1,337	$1,337	$1,337	$1,337	$1,337	$1,337	$1,337	$1,337	$1,337	$1,337
Wellfield Road Reclamation Costs	$17,114	$15,108	$3,209	$17,782	$24,066	$20,991	$6,685	$6,685	$6,685	$6,685
Total Wellfield Road Reclamation Costs	**$126,347**									
III. Laydown area reclamation										
Area of Disturbance (acres)	1	1	1	1	1	1	1	1	1	1
Average Depth of Stripped Topsoil (ft)	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Surface Grade: Level Ground										
Average Length of Topsoil Haul (ft)	500	500	500	500	500	500	500	500	500	500
A. Ripping Overburden with Dozer										
Ripping Unit Cost per WDEQ Guideline No.12, App.I1 ($/acre)	$1,195.44	$1,195.44	$1,195.44	$1,195.44	$1,195.44	$1,195.44	$1,195.44	$1,195.44	$1,195.44	$1,195.44
Subtotal Ripping Costs	$1,195.00	$1,195.00	$1,195.00	$1,195.00	$1,195.00	$1,195.00	$1,195.00	$1,195.00	$1,195.00	$1,195.00
B. Topsoil Application with Scraper										
Volume of Topsoil Removed (cy)	1081	1081	1081	1081	1081	1081	1081	1081	1081	1081
Application Unit Cost per WDEQ Guideline No.12, App.C ($/cy)	$1.07	$1.07	$1.07	$1.07	$1.07	$1.07	$1.07	$1.07	$1.07	$1.07
Subtotal Topsoil Application Costs	$1,153	$1,153	$1,153	$1,153	$1,153	$1,153	$1,153	$1,153	$1,153	$1,153
C. Discing and Seeding										
Discing/Seeding Unit Cost ($/acre)	$606	$606	$606	$606	$606	$606	$606	$606	$606	$606
Subtotal Discing/Seeding Costs	$606	$606	$606	$606	$606	$606	$606	$606	$606	$606
Subtotal Surface Reclamation Costs per WF laydown area	$2,954	$2,954	$2,954	$2,954	$2,954	$2,954	$2,954	$2,954	$2,954	$2,954
Total Wellfield Laydown Area Reclamation Costs	**$32,494**									
SUBTOTAL SURFACE RECLAMATION COSTS PER WELLFIELD	**$45,990**	**$58,992**	**$13,667**	**$50,751**	**$130,709**	**$58,053**	**$15,096**	**$25,605**	**$20,250**	**$46,476**
TOTAL WELLFIELD SURFACE RECLAMATION COSTS	**$469,880**									

IV. Satellite Area Reclamation	Satellite No.1	Satellite No.2	Satellite No.3	Se Plant
Assumptions:				
Area of Disturbance (acres)	1	3	2.5	2
Average Depth of Stripped Topsoil (ft)	1	0.67	0.67	0.67
Surface Grade: Level Ground				
Average Length of Topsoil Haul (ft)	1000	500	500	500
A. Ripping Overburden with Dozer				
Ripping Unit Cost per WDEQ Guideline No.12, App.I1 ($/acre)	$1,195.44	$1,195.44	$1,195.44	$1,195.44
Subtotal Ripping Costs	$1,195.00	$3,586.00	$2,989	$2,391
B. Topsoil Application with Scraper				
Volume of Topsoil Removed (cy)	1613	3243	2702	2162
Application Unit Cost per WDEQ Guideline No.12, App.C ($/cy)	$1.27	$1.27	$1.27	$1.27
Subtotal Topsoil Application Costs	$2,055	$4,131	$3,443	$2,754
C. Discing and Seeding				
Discing/Seeding Unit Cost ($/acre)	$606	$606	$606	$606
Subtotal Discing/Seeding Costs	$606	$1,819	$1,516	$1,213
Subtotal Surface Reclamation Costs per Satellite	$3,856	$9,536	$7,948	$6,358
Total Satellite Building Area Reclamation Costs	**$27,698**			
TOTAL WELLFIELD AND SATELLITE SURFACE RECLAMATION COSTS	**$497,578**			

Cameco Resources
Highland Uranium Project
2012-13 Surety Estimate

Equipment Removal and Loading	Central Plant	Satellite No. 1	Satellite No. 2	Satellite No. 3	Se Plant
I. Removal and Loading Costs					
A. Tankage					
Number of Tanks	26	8	14	18	7
Volume of Tank Construction Material (ft^3)	1028	162	290	397	290
Labor					
Number of Persons	4	4	4	4	4
Ft^3/Day	25	25	25	25	25
Number of Days	41	6	12	16	12
$/Day/Person	$302	$302	$302	$302	$302
Subtotal Labor Costs	$49,607	$7,817	$13,994	$19,158	$13,994
Equipment					
Number of Days	41	6	12	16	12
$/Day	$2,251	$2,251	$2,251	$2,251	$2,251
Subtotal Equipment Costs	$92,543	$14,584	$26,106	$35,739	$26,106
Subtotal Tankage Removal and Loading Costs	$142,150	$22,401	$40,100	$54,897	$40,100
B. PVC/Steel Pipe					
PVC Pipe Footage	10000	1000	4000	4000	4000
Average PVC Pipe Diameter (inches)	3	3	3	3	3
Shredded PVC Pipe Volume Reduction (ft^3/ft)	0.023	0.023	0.023	0.023	0.023
Volume of Shredded PVC Pipe (ft^3)	233	23	93	93	93
Steel Pipe Footage	2000	0	0	0	0
Average Steel Pipe Diameter (inches)	2	0	0	0	0
Volume (ft^3)	0	0	0	0	0
Labor & Equipment					
Number of Persons	4	4	4	4	4
Ft/Day	300	300	300	300	300
Number of Days	40.00	3	13.33	13.33	13.33
$/Day/Person	$302	$302	$302	$302	$302
$/ Day Equipment	$1,324	$1,324	$1,324	$1,324	$1,324
Subtotal PVC/Steel Pipe Labor & Equipment Costs	$101,219	$8,435	$33,740	$33,740	$33,740
Subtotal PVC/Steel Pipe Removal and Loading Costs	$101,219	$8,435	$33,740	$33,740	$33,740
C. Pumps					
Number of Pumps	50	10	14	13	14
Average Volume (ft^3/pump)	4.93	4.93	4.93	4.93	4.93
Volume of Pumps (ft^3)	246.5	49.3	69.02	64.09	69.02
Labor & Equipment					
Number of Persons	2	2	2	2	2
Pumps/Day	2	2	2	2	2
Number of Days	25	5	7	6.5	7
$/Day/Person	$302	$302	$302	$302	$302
$/ Day Equipment	$444	$444	$444	$444	$444
Subtotal Labor & Equipment Costs	$26,174	$5,235	$7,329	$6,805	$7,329
Subtotal Pump Removal and Loading Costs	$26,174	$5,235	$7,329	$6,805	$7,329
D. Dryer					
Dryer Volume (ft^3)	885	0	0	0	0
Labor & Equipment					
Number of Persons	4	0	0	0	0
Ft^3/Day	125	0	0	0	0
Number of Days	7.08	0	0	0	0
$/Day/Person	$302	$302	$302	$302	$302
$/Day Equipment (includes crane with operator)	$2,086	$2,086	$2,086	$2,086	$2,086
Total Labor Cost	$23,311	$0	$0	$0	$0
Total Dryer Dismantling and Loading Cost	$23,311	$0	$0	$0	$0

Cameco Resources
Highland Uranium Project
2012-13 Surety Estimate

Equipment Removal and Loading	Central Plant	Satellite No. 1	Satellite No. 2	Satellite No. 3	Se Plant
E. RO Units					
Number of RO Units (500 gpm)					
Current	0	0	2.5	0	0
Planned	0	0	0	0	0
Number of Degasser Units					
Current	0	0	0	0	0
Planned	0	0	0	0	1
RO/Degasser Average Volume (ft3/Unit)	250	250	250	250	250
Labor & Equipment					
Number of Persons	2	2	2	2	2
Number of Days	0	0	2	0	2
$/Day/Person	$301.60	$301.60	$301.60	$301.60	$301.60
$/ Day Equpment	$598.48	$598.48	$598.48	$598.48	$598.48
Subtotal RO Unit Removal and Loading Costs	$0	$0	$2,403	$0	$2,403
Subtotal Equipment Removal and Loading Costs per Facility	$292,854	$36,071	$83,572	$95,442	$83,572
Total Equipment Removal and Loading Costs	**$591,511**				
II. Transportation and Disposal Costs (NRC-Licensed Facility)					
A. Tankage					
Volume of Tank Construction Material (ft^3)	1028	162	290	397	290
Volume for Disposal Assuming 10% Void Space (ft^3)	1131	178	319	437	319
Transportation and Disposal Unit Cost ($/$ft^3$)	$7.74	$7.74	$7.74	$7.74	$7.74
Subtotal Tankage Transportation and Disposal Costs	$8,757	$1,378	$2,470	$3,384	$2,470
B. PVC / Steel Pipe					
Volume of Shredded PVC Pipe (ft^3)	233	23	93	93	93
Volume for Disposal Assuming 10% Void Space (ft^3)	256	25	102	102	102
Volume of Steel Pipe (ft^3)	0	0	0	0	0
Volume for Disposal Assuming 10% Void Space (ft^3)	0	0	0	0	0
Transportation and Disposal Unit Cost ($/$ft^3$)	$7.74	$7.74	$7.74	$7.74	$7.74
Subtotal PVC Pipe Transportation and Disposal Costs	$1,982	$194	$790	$790	$790
C. Pumps					
Volume of Pumps (ft^3)	246.5	49.3	69.02	64.09	69.02
Volume for Disposal Assuming 10% Void Space (ft^3)	271	54	76	70	76
Transportation and Disposal Unit Cost ($/$ft^3$)	$7.74	$7.74	$7.74	$7.74	$7.74
Subtotal Pump Transportation and Disposal Costs	$2,098	$418	$588	$542	$588
D. Dryer					
Dryer Volume (ft^3)	885	0	0	0	0
Volume for Disposal Assuming Dryer Remains Intact (ft^3)	885	0	0	0	0
Transportation and Disposal Unit Cost ($/$ft^3$)	$7.74	$7.74	$7.74	$7.74	$7.74
Total Dryer Transportation and Disposal Costs	$6,853	$0	$0	$0	$0
E. RO/Degasser Units					
Volume of RO/Degasser Units (ft^3)	0	0	625	0	250
Volume for Disposal Assuming 50% Volume Reduction (ft^3)	0	0	312.5	0	125
Transportation and Disposal Unit Costs	$7.74	$7.74	$7.74	$7.74	$7.74
Subtotal RO Unit Transportation and Disposal Costs	$0	$0	$2,420	$0	$968
Subtotal Equipment Transportation and Disposal Costs per Facility	$19,690	$1,990	$6,268	$4,716	$4,816
Total Equipment Transportation and Disposal Costs	**$37,480**				
III. Health and Safety Costs					
Radiation Safety Equipment Accounted for on GW REST					
Total Health and Safety Costs					
SUBTOTAL EQUIPMENT REMOVAL AND DISPOSAL COSTS PER FACILITY	$312,544	$38,061	$89,840	$100,158	$88,388
TOTAL EQUIPMENT REMOVAL AND DISPOSAL COSTS	**$628,991**				

Cameco Resources
Highland Uranium Project
2012-13 Surety Estimate

Building Demolition and Disposal (Highland Uranium Project Buildings)	Central Plant	Dryer Building	Satellite No. 1	Satellite No. 2	Satellite No. 3	Sat. No. 3 Fab Shop	Yellowcake Warehouse	South Warehouse	Suspended Walkway
I. Decontamination Costs									
A. Wall Decontamination									
Area to be Decontaminated (ft^2)	131,000	20,000	0	0	0	0	0	0	0
HCl Acid Wash, including labor ($/$ft^2$)	$0.97	$0.97	$0.97	$0.97	$0.97	$0.97	$0.97	$0.97	$0.97
Subtotal Wall Decontamination Costs	$126,760	$19,353	$0	$0	$0	$0	$0	$0	$0
B. Concrete Floor Decontamination									
Area to be Decontaminated (ft^2)	17,820	0	6,000	9,600	9,600	0	0	0	0
HCl Acid Wash, including labor ($/$ft^2$)	$0.70	$0.70	$0.70	$0.70	$0.70	$0.70	$0.70	$0.70	$0.70
Subtotal Concrete Floor Decontamination Costs	$12,459	$0	$4,195	$6,712	$6,712	$0	$0	$0	$0
C. Deep Well Injection Costs									
Total Kgals for Injection (1 gal used per ft2)	148.82	20	6	9.6	9.6	0	0	0	0
Deep Well Injection Unit Cost ($/Kgals)	$2.07	$2.07	$2.07	$2.07	$2.07	$2.07	$2.07	$2.07	$2.07
Subtotal Deep Well Injection Costs	$308	$41	$12	$20	$20	$0	$0	$0	$0
Subtotal Decontamination Costs per Building	$139,527	$19,394	$4,207	$6,732	$6,732	$0	$0	$0	$0
Total Decontamination Costs	**$191,623**								
II. Demolition Costs									
A. Building									
Height of Building (ft)	24	24	24	25	25	25	14	19	0
Volume of Building (ft^3)	794,000	30,720	192,000	320,000	320,000	37,560	91,000	333,000	5,600
Demolition Unit Cost per WDEQ Guideline No.12,App.K ($/$ft^3$)	$0.26	$0.26	$0.26	$0.26	$0.26	$0.26	$0.26	$0.26	$0.26
Subtotal Building Demolition Costs	$207,949	$8,046	$50,285	$83,808	$83,808	$9,837	$23,833	$87,213	$1,467
B. Concrete Floor									
Area of Concrete Floor (ft^2)	23,760	500	8,000	12800	12800	0	6500	18000	0
Demolition Unit Cost per WDEQ Guideline No.12,App.K ($/ft2)	$5.27	$5.27	$5.27	$5.27	$5.27	$5.27	$5.27	$5.27	$5.27
Subtotal Concrete Floor Demolition Costs	$125,146	$2,634	$42,137	$67,419	$67,419	$0	$34,236	$94,808	$0
C. Concrete Footing									
Length of Concrete Footing (ft)	617	89	358	453	453	0	322	537	0
Demolition Unit Cost per WDEQ Guideline No.12,App.K ($/ft)	$19.25	$19.25	$19.25	$19.25	$19.25	$19.25	$19.25	$19.25	$19.25
Subtotal Concrete Footing Demolition Costs	$11,872	$1,722	$6,889	$8,714	$8,714	$0	$6,209	$10,333	$0
Subtotal Demolition Costs per Building	$344,967	$12,402	$99,311	$159,941	$159,941	$9,837	$64,278	$192,354	$1,467
Total Demolition Costs	**$1,469,967**								

Cameco Resources
Highland Uranium Project
2012-13 Surety Estimate

Building Demolition and Disposal (Highland Uranium Project Buildings)	Central Plant	Dryer Building	Satellite No. 1	Satellite No. 2	Satellite No. 3	Sat. No. 3 Fab Shop	Yellowcake Warehouse	South Warehouse	Suspended Walkway
III. Disposal Costs									
A. Building									
Volume of Building (cy)	29407	1138	7111	11852	11852	1391	3370	12333	207
Off-Site County Landfill									
Percentage (%)	100	100	100	100	100	100	100	100	100
Volume for Disposal (cubic yards)	29407	1138	7111	11852	11852	1391	3370	12333	207
Disposal Unit Cost ($/cy)	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92
Subtotal County Facility Off-Site Disposal Costs	$233,051	$9,017	$56,355	$93,925	$93,925	$11,024	$26,710	$97,740	$1,644
B. Concrete Floor									
Area of Concrete Floor (ft^2)	23760	500	8000	12800	12800	1500	6500	18000	1186
Average Thickness of Concrete Floor (ft)	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Volume of Concrete Floor (ft^3)	17820	375	6000	9600	9600	1125	4875	13500	889.5
Volume of Concrete Floor (cy)	660	14	222	356	356	42	181	500	33
1. Off-Site County Landfill									
Percentage (%)	75	75	75	100	100	100	100	100	100
Volume for Disposal (cy)	495	10	167	356	356	42	181	500	33
Disposal Unit Cost per WDEQ Guideline No.12,App.K ($/cy)	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92
Subtotal County Facility Off-Site Disposal Costs	$3,923	$83	$1,321	$2,818	$2,818	$330	$1,431	$3,962	$261
2. NRC-Licensed Facility									
Percentage (%)	25	25	25	0	0	0	0	0	0
Volume for Disposal (ft^3)	4455	94	1500	0	0	0	0	0	0
Transportation and Disposal Unit Cost ($/$ft^3$)	$11.14	$11.14	$11.14	$11.14	$11.14	$11.14	$11.14	$11.14	$11.14
Subtotal NRC-Licensed Facility Disposal Costs	$49,637	$1,045	$16,713	$0	$0	$0	$0	$0	$0
Subtotal Concrete Floor Disposal Costs	$53,560	$1,128	$18,034	$2,818	$2,818	$330	$1,431	$3,962	$261
C. Concrete Footing									
Length of Concrete Footing (ft)	617	89	358	453	453	0	322	537	124
Average Depth of Concrete Footing (ft)	4	4	4	4	4	4	4	4	4
Average Width of Concrete Footing (ft)	1	1	1	1	1	1	1	1	1
Volume of Concrete Footing (ft^3)	2466	358	1431	1810	1810	0	1290	2147	496
Volume of Concrete Footing (cy)	91	13	53	67	67	0	48	80	18
Disposal Unit Cost per WDEQ Guideline No.12,App.K ($/cy)	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92
Subtotal Concrete Footing Disposal Costs (county landfill)	$724	$105	$420	$531	$531	$0	$379	$630	$146
Subtotal Disposal Costs per Building	$287,335	$10,250	$74,809	$97,274	$97,274	$11,354	$28,520	$102,332	$2,051
Total Disposal Costs	**$906,557**								
IV. Health and Safety Costs Accounted for on GW REST									
SUBTOTAL BUILDING DEMOLITION AND DISPOSAL COSTS	$771,829	$42,046	$178,327	$263,947	$263,947	$21,191	$92,798	$294,686	$3,518
TOTAL BUILDING DEMOLITION AND DISPOSAL COSTS	**$2,568,147**								
Building Utility Costs									
Number of years of operation required for restoration/reclamation	0	0	0	19	0	0	0	0	0
SUBTOTAL BUILDING ELECTRICAL COSTS (UC-Electrical Power)	$0.00	$0.00	$0.00	$478,074.18	$0.00	$0.00	$0.00	$0.00	$0.00
TOTAL BUILDING ELECTRICITY COSTS	**$1,416,949**								
SUBTOTAL PROPANE AND NATURAL GAS COSTS (UC-Heating Cost)				$47,459.02					
TOTAL PROPANE AND NATURAL GAS COSTS	$227,566								
TOTAL UTILITY COSTS	**$1,644,514.86**								

Cameco Resources
Highland Uranium Project
2012-13 Surety Estimate

Building Demolition and Disposal (Highland Uranium Project Buildings)	Changehouse and Lab	Maintenance Main Bldg	Office	Office Trailers	Process/ Fire Water	Potable Water Bldg	Potable Water Tank Slab	Central Plant Tank Slabs	Selenium Plant	Exxon R&D RO Bldg.	Exxon R&D Process Bldg.	SRHUP 9 DDW	VOLLMAN 33-27 DDW	MORTON 1-20 DDW
I. Decontamination Costs														
A. *Wall Decontamination*														
Area to be Decontaminated (ft^2)	0	0	0	0	0	0	0	0	4,000	0	0	0	0	0
HCl Acid Wash, including labor ($/$ft^2$)	$0.97	$0.97	$0.97	$0.97	$0.97	$0.97	$0.97	$0.97	$0.97	$0.97	$0.97	$0.97	$0.97	$0.97
Subtotal Wall Decontamination Costs	$0	$0	$0	$0	$0	$0	$0	$0	$3,871	$0	$0	$0	$0	$0
B. Concrete Floor Decontamination														
Area to be Decontaminated (ft^2)	0	0	0	0	0	0	0	0	9,600	1260	1260	1260	1260	1260
HCl Acid Wash, including labor ($/$ft^2$)	$0.70	$0.70	$0.70	$0.70	$0.70	$0.70	$0.70	$0.70	$0.70	$0.70	$0.70	$0.70	$0.70	$0.70
Subtotal Concrete Floor Decontamination Costs	$0	$0	$0	$0	$0	$0	$0	$0	$6,712	$881	$881	$881	$881	$881
C. Deep Well Injection Costs														
Total Kgals for Injection (1 gal used per ft2)	0	0	0	0	0	0	0	0	13.6	1.26	1.26	1.26	1.26	1.26
Deep Well Injection Unit Cost ($/Kgals)	$2.07	$2.07	$2.07	$2.07	$2.07	$2.07	$2.07	$2.07	$2.07	$2.07	$2.07	$2.07	$2.07	$2.07
Subtotal Deep Well Injection Costs	$0	$0	$0	$0	$0	$0	$0	$0	$28	$3	$3	$3	$3	$3
Subtotal Decontamination Costs per Building	$0	$0	$0	$0	$0	$0	$0	$0	$10,611	$884	$884	$884	$884	$884
Total Decontamination Costs														
II. Demolition Costs														
A. Building														
Height of Building (ft)	14	13	12	0	21	35	0	0	25	12	12	12	12	12
Volume of Building (ft^3)	*73000*	*27,000*	*72,000*	*20,000*	*16,500*	*6,300*	*0*	*0*	*320,000*	*15120*	*15120*	*15120*	*15120*	*15120*
Demolition Unit Cost per WDEQ Guideline No.12,App.K ($/$ft^3$)	$0.26	$0.26	$0.26	$0.26	$0.26	$0.26	$0.26	$0.26	$0.26	$0.26	$0.26	$0.26	$0.26	$0.26
Subtotal Building Demolition Costs	$19,119	$7,071	$18,857	$5,238	$4,321	$1,650	$0	$0	$83,808	$3,960	$3,960	$3,960	$3,960	$3,960
B. Concrete Floor														
Area of Concrete Floor (ft^2)	5400	2100	6000	0	800	180	1256	7854	12800	1260	1260	1260	1260	1260
Demolition Unit Cost per WDEQ Guideline No.12,App.K ($/ft2)	$5.27	$5.27	$5.27	$5.27	$5.27	$5.27	$5.27	$5.27	$5.27	$5.27	$5.27	$5.27	$5.27	$5.27
Subtotal Concrete Floor Demolition Costs	$28,442	$11,061	$31,603	$0	$4,214	$948	$6,615	$41,368	$67,419	$6,637	$6,637	$6,637	$6,637	$6,637
C. Concrete Footing														
Length of Concrete Footing (ft)	294	183	310	0	113	54	0	0	453	142	142	142	142	142
Demolition Unit Cost per WDEQ Guideline No.12,App.K ($/ft)	$19.25	$19.25	$19.25	$19.25	$19.25	$19.25	$19.25	$19.25	$19.25	$19.25	$19.25	$19.25	$19.25	$19.25
Subtotal Concrete Footing Demolition Costs	$5,660	$3,529	$5,966	$0	$2,178	$1,033	$0	$0	$8,714	$2,734	$2,734	$2,734	$2,734	$2,734
Subtotal Demolition Costs per Building	$53,221	$21,661	$56,426	$5,238	$10,713	$3,631	$6,615	$41,368	$159,941	$13,331	$13,331	$13,331	$13,331	$13,331
Total Demolition Costs														

Cameco Resources
Highland Uranium Project
2012-13 Surety Estimate

Building Demolition and Disposal (Highland Uranium Project Buildings)	Changehouse and Lab	Maintenance Bldg	Main Office	Office Trailers	Process/ Fire Water	Potable Water Bldg	Potable Water Tank Slab	Central Plant Tank Slabs	Selenium Plant	Exxon R&D RO Bldg.	Exxon R&D Process Bldg.	SRHUP 9 DDW	VOLLMAN 33-27 DDW	MORTON 1-20 DDW
III. Disposal Costs														
A. Building														
Volume of Building (cy)	2704	1000	2667	741	611	233	0	0	11852	560	560	560	560	560
Off-Site County Landfill														
Percentage (%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Volume for Disposal (cubic yards)	2704	1000	2667	741	611	233	0	0	11852	560	560	560	560	560
Disposal Unit Cost ($/cy)	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92
Subtotal County Facility Off-Site Disposal Costs	$21,427	$7,925	$21,133	$5,870	$4,843	$1,849	$0	$0	$93,925	$4,438	$4,438	$4,438	$4,438	$4,438
B. Concrete Floor														
Area of Concrete Floor (ft^2)	3000	2100	6000	0	800	180	1256	7854	12800	1260	1260	1260	1260	1260
Average Thickness of Concrete Floor (ft)	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Volume of Concrete Floor (ft^3)	2250	1575	4500	0	600	135	942	5890.5	9600	945	945	945	945	945
Volume of Concrete Floor (cy)	83	58	167	0	22	5	35	218	356	35	35	35	35	35
1. Off-Site County Landfill														
Percentage (%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Volume for Disposal (cy)	83	58	167	0	633	5	35	218	356	35	35	35	35	35
Disposal Unit Cost per WDEQ Guideline No.12,App.K ($/cy)	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92
Subtotal County Facility Off-Site Disposal Costs	$660	$462	$1,321	$0	$5,019	$40	$276	$1,729	$2,818	$277	$277	$277	$277	$277
2. NRC-Licensed Facility														
Percentage (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Volume for Disposal (ft^3)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transportation and Disposal Unit Cost ($/$ft^3$)	$11.14	$11.14	$11.14	$11.14	$11.14	$11.14	$11.14	$11.14	$11.14	$11.14	$11.14	$11.14	$11.14	$11.14
Subtotal NRC-Licensed Facility Disposal Costs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Concrete Floor Disposal Costs	$660	$462	$1,321	$0	$5,019	$40	$276	$1,729	$2,818	$277	$277	$277	$277	$277
C. Concrete Footing														
Length of Concrete Footing (ft)	294	183	310	0	113	54	0	0	453	142	142	142	142	142
Average Depth of Concrete Footing (ft)	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Average Width of Concrete Footing (ft)	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Volume of Concrete Footing (ft^3)	1176	733	1239	0	453	215	0	0	1810	568	568	568	568	568
Volume of Concrete Footing (cy)	44	27	46	0	17	8	0	0	67	21	21	21	21	21
Disposal Unit Cost per WDEQ Guideline No.12,App.K ($/cy)	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92	$7.92
Subtotal Concrete Footing Disposal Costs (county landfill)	$345	$215	$364	$0	$133	$63	$0	$0	$531	$167	$167	$167	$167	$167
Subtotal Disposal Costs per Building	$22,432	$8,602	$22,818	$5,870	$9,995	$1,952	$276	$1,729	$97,274	$4,882	$4,882	$4,882	$4,882	$4,882
Total Disposal Costs														
IV. Health and Safety Costs Accounted for on GW REST														
SUBTOTAL BUILDING DEMOLITION AND DISPOSAL COSTS	$75,653	$30,263	$79,244	$11,108	$20,708	$5,583	$6,891	$43,097	$267,826	$19,097	$19,097	$19,097	$19,097	$19,097
TOTAL BUILDING DEMOLITION AND DISPOSAL COSTS														
Building Utility Costs														
Number of years of operation required for restoration/reclamation	0	0	0	0	0	0	0	0	19	0	0	19	19	19
SUBTOTAL BUILDING ELECTRICAL COSTS (UC-Electrical Power)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$713,549.75	$0.00	$0.00	$75,115.98	$75,092.93	$75,115.98
TOTAL BUILDING ELECTRICITY COSTS														
SUBTOTAL PROPANE AND NATURAL GAS COSTS (UC-Heating Cost)									$180,107					
TOTAL PROPANE AND NATURAL GAS COSTS														
TOTAL UTILITY COSTS														

Cameco Resources
Highland Uranium Project
2012-13 Surety Estimate

Miscellaneous Reclamation

I. CPP/Office Area Reclamation

Concrete Pad= 0.3 acres
Total Area = 10 acres

A. Asphalt	
Area of Asphalt (acres)	7.4
Demolition Unit Cost per WDEQ Guideline No.12, App.I ($/acre)	$1607.40
Average Thickness (ft)	0.50
Hauling Unit Cost per WDEQ Guideline No. 12, App C (500 ft, 9% grade)	$1.867
Volume of Asphalt (cy)	5,743
Disposal Average Cost per WDEQ Guideline No.12, App.K ($/cy)	$1.87
Subtotal Concrete Pad Demolition and Disposal Costs	$27,348
B. Ripping Overburden with Dozer	
Overburden Surface Area (acres)	10.0
Ripping Unit Cost per WDEQ Guideline No.12, App.II ($/acre)	$1,195.44
Subtotal Ripping Overburden Costs	$11,636
C. Topsoil Application	
Area of surface disturbance (ft²)	190000
Average thickness of topsoil (ft)	0.5
Average haul distance (ft)	1000
Surface grade (%)	9%
Volume of Topsoil (cy)	3,438
Movement of Topsoil Unit Cost per WDEQ Guideline No.12, App.C ($/cy)	$1.16
Subtotal Topsoil Application Costs	$3,990
D. Discing/Seeding	
Surface Area (acres)	13
Discing/Seeding Unit Cost ($/acre)	$600
Subtotal Discing/Seeding Costs	$7,803
Total CPP/Office/Yard Area Reclamation	$51,702

II. Access Road Reclamation (includes culverts)

	CPP/Office Area	Sat No. 1	Sat No. 3	Connection Road	Sat No. 2 to Rancher Rd
A. Assumptions					
Surface grade	9%	9%	9%	9%	9%
Length of Road (ft)	13200	15840	5280	10560	2640
Width of Road (ft)	25	30	30	30	10
Area of road (acres)	7.6	10.9	3.6	7.3	0.6
B. Ripping and Hauling Asphalt					
Assumptions					
Average Haul Distance (feet)	1300	0	0	0	0.0
Average Thickness of Asphalt (ft)	0.5	0.5	0.5	0.5	0.5
Ripping Unit Cost Per WDEQ Guideline No. 12, App I ($/acre)	$1607.40	$1607.40	$1607.40	$1607.40	$1607.40
Volume of Asphalt (cy)	6111	8800	2933	5867	489
Hauling Unit Cost per WDEQ Guideline No. 12, App C ($/cy)	$3.40	$3.40	$3.40	$3.40	$3.40
Subtotal Ripping and Hauling Asphalt	$27,361.89	$30,401.13	$13,132.71	$24,267.61	$2,318.99
C. Gravel Road Base Removal					
Average haul distance (ft)	0	1000	1000	1000	0
Gravel Road Base Width (ft)	0	14	14	14	0
Gravel Road Base Area (acres)	0.00	5.09	1.70	3.39	0.00
Average Road Base Depth (ft)	0	0.5	0.5	0.5	0
Volume of Road Base (cy)	0	4107	1369	2738	0
Removal Unit Cost per WDEQ Guideline No.12, App.C ($/cy)	$1.27	$1.27	$1.27	$1.27	$1.27
Subtotal Gravel Road Base Removal Costs	$0	$5,332	$1,744	$3,482	$0
D. Ripping Overburden with Dozer					
Overburden Surface Area (acres)	0.0	10.9	3.6	7.3	0.0
Ripping Unit Cost per WDEQ Guideline No.12, App.II ($/acre)	$1,195.44	$1,195.44	$1,195.44	$1,195.44	$1,195.44
Subtotal Ripping Overburden Costs	$0	$13,041	$4,347	$8,694	$733
E. Topsoil Application					
Average haul distance (ft)	1500	3000	1500	1500	1500
Topsoil Surface Area (ft²)	330000	475200	158400	316800	26400
Depth of Topsoil (ft)	0.5	0.5	0.5	0.5	0.5
Volume of Topsoil (cy)	6111	8800	2933	5867	489
Movement of Topsoil Unit Cost per WDEQ Guideline No.12, App.C ($/cy)	$1.27	$1.27	$1.27	$1.27	$1.27
Subtotal Topsoil Application Costs	$7,736	$11,211	$3,737	$7,474	$622
F. Discing/Seeding					
Surface Area (acres)	7.6	10.9	3.6	7.3	0.6
Discing/Seeding Unit Cost ($/acre)	$600	$600	$600	$600	$600
Subtotal Discing/Seeding Costs	$4,594	$6,415	$2,185	$4,418	$367
Multiplier for Projected Additions	0	0	0	0	0
Subtotal Reclamation Costs per Access Road	$39,742	$77,308	$25,107	$48,333	$3,904
Total Access Road Reclamation Costs	$194,441				

III. Trunk Lines

	SAT2 to SAT1 / Marlow 1-25 WW	SAT3 to SAT2 PSR	R-WF Rest. Return	Vollman WW Pipeline	RRHUP ? WW Pipeline	SAT3 to SAT2	HUP to RR DDW Pipeline
Length of Trench (ft)	14000	13000	2300	13000	4000	10030	9700
A. Removal and Loading							
Main Pipeline Removal Unit Cost ($/ft of trench)	$2.34	$2.34	$2.34	$2.34	$2.34	$2.34	$2.34
Subtotal Trunkline Removal and Loading Costs	$34,340	$40,720	$4,972	$29,300	$9,040	$24,747	$21,922
B. Transport and Disposal Costs (NRC-Licensed Facility)							
1. 3" HDPE Trunkline							
Piping Length (ft)	14000	0	2300	0	4000	0	0
Chipped Volume Reduction (ft³/ft)	0.023	0.023	0.023	0.023	0.023	0.023	0.023
Chipped Volume (ft³)	330	0	53	0	93	0	0
2. 4" HDPE Trunkline							
Piping Length (ft)	0	13000	0	13000	0	0	0
Chipped Volume Reduction (ft³/ft)	0.038	0.038	0.038	0.038	0.038	0.038	0.038
Chipped Volume (ft³)	0	500	0	500	0	0	0
3. 6" HDPE Trunkline							
Piping Length (ft)	0	0	0	0	0	10030	9700
Chipped Volume Reduction (ft³/ft)	0.083	0.083	0.083	0.083	0.083	0.083	0.083
Chipped Volume (ft³)	0	0	0	0	0	832	805
3. 8" HDPE Trunkline							
Piping Length (ft)	0	0	0	0	0	0	0
Chipped Volume Reduction (ft³/ft)	0.141	0.141	0.141	0.141	0.141	0.141	0.141
Chipped Volume (ft³)	0	0	0	0	0	0	0
3. 10" HDPE Trunkline							
Piping Length (ft)	0	0	0	0	0	0	0
Chipped Volume Reduction (ft³/ft)	0.220	0.220	0.220	0.220	0.220	0.220	0.220
Chipped Volume (ft³)	0	0	0	0	0	0	0
4. 12" HDPE Trunkline							
Piping Length (ft)	0	0	0	0	0	0	0
Chipped Volume Reduction (ft³/ft)	0.300	0.300	0.300	0.300	0.300	0.300	0.300
Chipped Volume (ft³)	0	0	0	0	0	0	0
5. 14" HDPE Trunkline							
Piping Length (ft)	0	0	0	0	0	0	0
Chipped Volume Reduction (ft³/ft)	0.372	0.372	0.372	0.372	0.372	0.372	0.372
Chipped Volume (ft³)	0	0	0	0	0	0	0
5. 16" HDPE Trunkline							
Piping Length (ft)	0	0	0	0	0	0	0
Chipped Volume Reduction (ft³/ft)	0.486	0.486	0.486	0.486	0.486	0.486	0.486
Chipped Volume (ft³)	0	0	0	0	0	0	0
4. 18" HDPE Trunkline							
Piping Length (ft)	0	0	0	0	0	0	0
Chipped Volume Reduction (ft³/ft)	0.616	0.616	0.616	0.616	0.616	0.616	0.616
Chipped Volume (ft³)	0	0	0	0	0	0	0
Total Pipeline Disposal Volume	330	500	53	500	93	832	805
Volume for Disposal Assuming 50% Void Space (ft³)	619	931	56	930	183	1664	800
Transportation and Disposal Unit Cost (NRC-Licensed Facility) ($/ft³)	$7.74	$7.74	$7.74	$7.74	$7.74	$7.74	$7.74
Subtotal Transport and Disposal Costs	$4,702	$7,209	$434	$4,159	$790	$7,774	$6,201
C. Discing/Seeding							
Width of Pipeline Trench (ft)	10	10	6	3	3	1	0
Area of Pipeline Trench (acres)	5.5	4.1	0.4	3.4	0.7	3.8	1.8
Discing/Seeding Unit Cost ($/acre)	$600	$600	$600	$600	$600	$600	$600
Subtotal Discing/Seeding Costs	$3,341	$2,463	$241	$1,440	$443	$1,319	$1,080
Subtotal Reclamation Costs per Pipeline	$42,383	$50,401	$5,651	$35,087	$10,273	$33,740	$29,093
Total Pipeline Reclamation Costs	$173,847						

IV. Settling Basin/Storage Ponds Reclamation

	E. Radium Pond	W. Radium Pond
A. Soil Sampling and Monitoring		
Number of Soil Samples	10	10
$/Sample	$337	$337
Subtotal Soil Sampling and Monitoring Costs	$3,370	$3,370
B. Subsoil Removal and Disposal (Liner removed in 2003)		
Thickness of subsoil (ft)	1	1
Thickness of contaminated subsoil (ft)	0.5	0.5
Width of Pond (ft)	85	85
Length of Pond (ft)	140	140
Surface area of pond (ft²)	11900	11900
1. Removal and Loading		
Volume of Subsoil (cy)	220	220
Subsoil Removal and Loading Unit Cost ($/cy)	$4.75	$4.75
Subtotal Subsoil Removal and Loading Costs	$1,045	$1,045
2. Transportation and Disposal		
Volume of Subsoil for Disposal (ft³)	220	220
Transportation and Disposal Unit Cost ($/ft³)	$11.14	$11.14
Subtotal Subsoil Transportation and Disposal Costs	$2,451	$2,451
Subtotal Subsoil Removal and Disposal Costs	$3,500	$3,500
C. Grade and Contour		

Cameco Resources
Highland Uranium Project
2012 13 Surety Estimate

Miscellaneous Reclamation		
Volume of [illegible] Materials (cy)	6400	6400
Average Grade (%)	6	6
Distance (ft)	50	50
Material Moving Cost per WDEQ Guideline No. 12, App B ($/cy)	0.127	0.127
Subtotal Grade and Contour Costs	[illegible]	[illegible]
B. Topsoil Application		
Area of surface disturbance (ft²)	[illegible]	[illegible]
Average thickness of topsoil (ft)	0.5	0.5
Average haul distance (ft)	1000	1000
Surface grade (%)	0	1
Volume of Topsoil (cy)	1,333	1,333
Movement of Topsoil Unit Cost per WDEQ Guideline No 12, App C ($/cy)	$1.27	$1.27
Subtotal Topsoil Application Costs	$3,330	$3,330
D Discing/Seeding		
Area of surface disturbance (acres)	3.3	3.3
Discing/Seeding Unit Cost ($/acre)	[illegible]	[illegible]
Subtotal Discing/Seeding Costs	$1,370	$1,370
Subtotal Reclamation Costs	$11,[illegible]	$11,[illegible]
Total Settling Basin/Ponds Reclamation Costs	$23,[illegible]	
V. Purge Storage Reservoir Reclamation	PSR 1	PSR 2
A. Soil Sampling and Monitoring		
Number of Soil Samples	10	10
$/Sample	$337	$337
Subtotal Soil Sampling and Monitoring Costs	$3,370	$3,370
B. Leachate Collection System Removal Costs	$[illegible]	$0
C. Topsoil/Subsoil Application		
Assumptions		
Average haul distance (ft)	[illegible]	150
Surface grade (%)	0	0
Volume of Topsoil/Subsoil (cy)	[illegible]	[illegible]
Movement of Topsoil Unit Cost per WDEQ Guideline No 12, App C ($/cy)	$1.27	$1.27
Subtotal Topsoil/Subsoil Application Costs per Reservoir	$[illegible]	$[illegible]
D Discing/Seeding		
Surface Area (acres)	6	33
Discing/Seeding Unit Cost ($/acre)	[illegible]	[illegible]
Subtotal Discing/Seeding Costs	$[illegible]	$19,[illegible]
Subtotal Reclamation Costs per Reservoir	$117,750	$117,[illegible]
Total Purge Storage Reservoir Reclamation Costs	$234,[illegible]	
VI.A Irrigation Maintenance and Monitoring Costs	Irrigator No.1	Irrigator No.2
A. Irrigation Maintenance and Repair		
Irrigation Operation Months/Year	0	4
Cost per Month	$[illegible]	$2,[illegible]
Total Number of Years	0	10
Subtotal Maintenance and Repair Costs	$0	$[illegible]
B Irrigation Monitoring and Sampling		
# of Irrigation Fluid Samples/Year	0	4
Cost/sample (Energy Labs - Casper Wyoming)	$337	$337
# of Vegetation Samples/Year	3	3
Cost/sample (Energy Labs - Casper Wyoming)	$337	$337
# of Soil Samples/Year	30	34
Cost/sample (Energy Labs - Casper Wyoming)	$337	$337
# of Soil Water Samples/Year	0	1
Cost/sample (Energy Labs - Casper Wyoming)	$337	$337
Total Number of Years	3	3
Subtotal Sampling Costs	$[illegible]	$[illegible]
Subtotal Maintenance and Monitoring Costs per Irrigator	$[illegible]	$[illegible]
Total Irrigation Maintenance and Monitoring Costs	$[illegible]	
VI.B Irrigation Area Reclamation	Irrigator No. 1A	Irrigator No. 2
A. Irrigation Equipment Removal Costs	$2,000	$2,000
B Plowing		
Assumptions		
Plowing Unit Cost ($/acre)	$100	$100
Irrigation Area (acres)	35	106
Number of Cultivations	3	2
Subtotal Plowing Costs	$11,000	$21,200
C. Discing/Seeding		
Discing/Seeding Unit Cost ($/acre)	[illegible]	[illegible]
Subtotal Discing/Seeding Costs	$[illegible]	$[illegible]
Subtotal Reclamation Costs per Irrigation Area	$[illegible]	$[illegible]
Total Irrigation Area Reclamation Costs	$[illegible]	
VII. Revegetation of Exxon Reclaimed Lands		
Assumptions		
10% Reseeding potential areas of erosion ($/acre)	[illegible]	
Surface Area (acres)	117	
Total Exxon Reclaimed Lands Revegetation Costs	$[illegible]	
VIII Potential Mitigation Plan For Irrigator No. 1A (Requested by WDEQ-LQD)		
Assumptions		
Harvesting grass for 3 years will further reduce Se levels in vegetation.		
Harvest grass for 3 years @ $2000/year	$[illegible]	
Analyze Se in grass for 3 years @$[illegible]/sample X 4 samples X 3 yrs	$[illegible]	
Analyze Se in soil for 3 years @$174/sample X 20 samples X 3 yrs.	$[illegible]	
Add 1 ft. of Se free soils to 30 acre irrigation area @ cost of $[illegible]	$[illegible]	
If desired, plow, disk and reseed area with alfalfa @ cost of $[illegible]	$[illegible]	
Total Potential Mitigation Plan Costs	$[illegible]	
IX. Potential Mitigation Plan For Irrigator No.2 (Requested by WDEQ-LQD)		
Assumptions		
Harvesting grass for 3 years will further reduce Se levels in vegetation.		
Harvest grass for 3 years @ $[illegible]/year	$[illegible]	
Analyze Se in grass for 3 years @$[illegible]/sample X 4 samples X 3 yrs.	$[illegible]	
Analyze Se in soil for 3 years @$174/sample X [illegible] samples X 3 yrs.	$[illegible]	
Add 1 ft. of Se free soils to 110 acre irrigation area @ cost of $[illegible]	$[illegible]	
If desired, plow, disk and reseed area with alfalfa @ cost of $[illegible]	$[illegible]	
Total Potential Mitigation Plan Costs	$[illegible]	
X. Potential Mitigation Plan for Shallow Well Casing Leak Investigation		
Assumptions		
Investigation and potential mitigation plan as of Sep 2011	$[illegible]	
Well Abandonment		
Total Depth 12000 ft $2.30	$[illegible]	
Total Preliminary Cost for Investigation	$[illegible]	
XI. Miscellaneous		
A. Fence Removal		
Total Length of Fence (ft)	[illegible]	
Fence Removal Cost	$[illegible]	
Subtotal Fence Removal	$[illegible]	
B Drill Water Tank Removal (offer to rancher, dispose of bottoms)		
Material (cy)	[illegible]	
Hours Cat 924G Loader	$[illegible]	
Hours truck	$[illegible]	
Hours labor (operator)	$[illegible]	
Disposal costs	$[illegible]	
Subtotal Drill Water Tank Removal	$[illegible]	
C. PBSJ Monitor Wells		
Quantity	[illegible]	
Depth	[illegible]	
Total Depth	[illegible]	
Cased Hole Abandonment cost	$2.30	
Subtotal PBSJ Monitor Wells Abandonment	$[illegible]	
Total Miscellaneous Structures Reclamation Costs	$[illegible]	
XII. Infrastructure, Easement Maintenance, Replacement and Repairs @$[illegible]/yr for [illegible] years	$[illegible]	
XIII Purge Storage Reservoirs, [illegible] acres		
1 Removal and Loading		
Volume, [illegible] ft² x [illegible]" deep, (yd³)	[illegible]	
Removal and loading cost per yd³	$[illegible]	
Subtotal Purge Storage Reservoirs materials removal and loading	$[illegible]	
2. Transportation and Disposal, 11e.(2) facility		
Volume of soil for Disposal(yd³)	[illegible]	
Transportation and Disposal Unit Cost ($/yd³)	$[illegible]	
Subtotal Subsoil Transportation and Disposal Costs	$[illegible]	
Total Purge Storage Reservoirs Reclamation	$[illegible]	
TOTAL MISCELLANEOUS RECLAMATION COSTS	$[illegible]	

NOTE: Vehicle operation costs are captured in WF RBC

Cameco Resources
Highland Uranium Project
2012-13 Surety Estimate

WELLFIELD ROAD RECLAMATION

Assumptions

1. Gravel road base removed (WDEQ Guideline No. 12, App. C, Level Ground, 500 ft haul)
2. Gravel road base: average depth = 0.25 ft, average width = 10 ft
3. Roads scarified prior to topsoil application (WDEQ Guideline No. 12, Appendix P)
4. Grading of scarified roads prior to topsoil application (WDEQ Guideline No. 12, Appendix G)
5. Topsoil applied (WDEQ Guideline No. 12, App. C, Level Ground, 500 ft haul)
6. Stripped topsoil: average depth = 0.67 ft, average width = 25 ft
7. Discing/seeding cost of acre is based on actual contractor costs as listed in the master costs

Gravel Road Base Removal Costs per 1000 ft of Road

$$\frac{1000\ \text{ft}}{} \times \frac{0.25\ \text{ft}}{} \times \frac{10\ \text{ft}}{} \times \frac{1\ \text{cy}}{27\ \text{ft}^3} \times \frac{\$1.27}{\text{cy}} = \$\ 118$$

Scarification Costs per 1000 ft of Road

$$\frac{1000\ \text{ft}}{} \times \frac{25\ \text{ft}}{} \times \frac{1\ \text{acre}}{43560\ \text{ft}^2} \times \frac{\$67.68}{\text{acre}} = \$\ 39$$

Grading Costs per 1000 ft of Road

$$\frac{1000\ \text{ft}}{} \times \frac{25\ \text{ft}}{} \times \frac{1\ \text{acre}}{43560\ \text{ft}^2} \times \frac{\$73.79}{\text{acre}} = \$\ 42$$

Topsoil Application Costs per 1000 ft of Road

$$\frac{1000\ \text{ft}}{} \times \frac{0.67\ \text{ft}}{} \times \frac{25\ \text{ft}}{} \times \frac{1\ \text{cy}}{27\ \text{ft}^3} \times \frac{\$1.27}{\text{cy}} = \$\ 790$$

Discing/Seeding Costs per 1000 ft of Road

$$\frac{1000\ \text{ft}}{} \times \frac{25\ \text{ft}}{} \times \frac{1\ \text{acre}}{43560\ \text{ft}^2} \times \frac{\$606}{\text{acre}} = \$\ 348$$

TOTAL WELLFIELD ROAD RECLAMATION COSTS PER 1000 FT OF ROAD **= $ 1,337**