

POWER RESOURCES, INC. dba/Cameco Resources

HIGHLAND URANIUM PROJECT

WDEQ PERMIT #603

ANNUAL REPORT

June 1, 2010 through April 30, 2011

Submitted June 30, 2011



CAMECO RESOURCES Smith Ranch-Highland

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June 30, 2011

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

HAND DELIVERED

RE: Permit to Mine 603, Cameco Resources, Smith Ranch-Highland Uranium Project, 2010-2011 Annual Report

Dear Mr. Spackman:

Énclosed please find two (2) copies of Power Resources, Inc. d/b/a/ Cameco Resources (CR) 2010-2011 Annual Report for permit 603, Smith Ranch-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 2009-2010 Annual Report Review received March 11, 2011, several comments requested information be added to this 2010-2011 Annual Report. Cameco has incorporated the information as it relates to those comments into the report. Attached is a list of the review comments requesting information for the 2010-2011 Annual Report for Permit 603 Cameco to assist WDEQ-LQD in determining response through this review of the Annual Report.

If you have questions, please call Dawn Kolkman at (307) 358-6541 ext. 435.

Sincerely,

Tom Cannon) General (Manager Operations

LTC/dk

Attachment: Annual Report binders (2 copies)

cc:

D. Mandeville, USNRC (2 copies) File HUP 4.3.3.2 T. Foertsch, Casper Field Office, BLM (1 copy)

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Permit 603, Highland Uranium Project, Cameco Resources 2009-2010 Annual Report Review Comments

Introduction

WDEQ-LQD provided review and comment to the 2009-2010 Annual Report. Several comments request that the information be provided in the next Annual Report period. Cameco has incorporated the information into the Annual Report to provide response to those items. The following are responses address only those comments requesting information in the 2010-2011 (Comments 1, 3, 8, 9, 11, and 26)

Comments

1. The lengend on the maps contain numerous errors:

- a. The plates show a large number of linear features that are shown on the legend as paved roads. These features appear to be stream channels. Please correct the legend to show the proper symbol.
- b. Plat 1-7(HUP) and others show a heavy purple line, which is shown in the legend as proposed production. This feature does not appear to be proposed production. Please properly identify this line.
- c. The connecting road on the plates is shown as two gravel roads and a paved road. Please properly identify the connecting road.
- d. Page 19 of the text states than an extension is planned for Mine Unit J during this period. The extension area is not shown on the plates. Please show the extension area on Plate 1 and Plate 1-7(HU).

Please provide the map changes in the 2011 Annual Report. (SI)

Cameco Response: The changes listed above have been changed in the maps for the 2011 Annual Report.

3. Soil water sampling. The sampling technique is incorrect. A better technique would be to add distilled water, let stand for several days, pump out about a third of the water and then take the sample. Please correct the sampling technique in the 2011 Annual Report. (SI)

Cameco Response: Sampling for the 2011 Annual Report will not occur until after the end of the 2010-2011 report period. The lysimeters are permitted through the WDEQ-LQD, and Cameco will be discussing the need potentially replace the lysimeters at Irrigator 2. The sampling technique employed was originally established in the WQD permit; however yielded little result. Cameco contracted an outside consultant to assist with the sampling during the report did not appear effective. The consultants had prepared the sampling technique according to lysimeter manufacturer requirements.

8. Page 9. The new deep disposal well (SRHUP #9) is discussed on this page. However, the Morton 1-20 and Vollman are not discussed. Please include a discussion of the Morton 1-20 and Vollman deep

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disposal wells in this section of the report as well. The information may be included in the 2011 Annual Report. (SI)

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Cameco Response: The permits and reporting requirements for the deep disposal wells are through the WDEQ-WQD and additional information regarding the wells may be located in those permits. Cameco included a discussion of the three deep disposal wells, SRHUP #9, Morton 1-20 and Vollman in Section 3(h) of the Annual Report.

9. Page 15. Wellfield A Long Term Stability Monitoring. This section does not discuss the selenium values in Well MP-4. The geochemical model predicted substantial attenuation within the wellfield at Well MP-4 within the first 27 years. The attenuation prediction at the monitor well ring depends on attenuation of the selenium and uranium concentrations in Well MP-4. The text suggests there may be a higher level of oxidized water in the system than was used in the geochemical model. The Eh field study performed by Lewis Water Consultants and LQD in January 2003 did not indicate the presence of higher levels of oxidized water in the wellfield. Please review the text and make appropriate corrections in the 2011 Annual Report. (SI)

Cameco Response: The text in the 2010 Annual Report that suggested a higher level of oxidized water in the system was not based on updated Eh field readings(or other measures of oxidation-reduction potential) and therefore had no technical justification. This test has been corrected in the 2011 Annual Report.

11. Page 30. The text for item 10 states that the LQD Abandoned Drill Hole Program Supervisor will receive the abandoned drill hole reports. The LQD has not had an Abandoned Drill Hole Program Supervisor for many years. Please correct the text in the 2011 Annual Report. (SI)

Cameco Response: The Annual Report Form issued by WDEQ-LQD contains the quote using the Abandoned Drill Hole Program Supervisor. Cameco has merely used the form format provided. Cameco has removed that statement in this Annual Report; however, WDEQ-LQD should consider revising their document for correct document control.

26. Plates. Please add the header houses with associated number for the wellfields to the maps in the 2011 Annual Report. (PCR)

Cameco Response: The header houses have been added to the wellfields in the site maps provided for the 2011 Annual Report.

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

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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 Trench Design): 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

(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

June 1, 2010 through April 30, 2011.

3. Mining Activities

There are a total of eight maps provided for the review of this 2010-2011 Annual Report. Plate 1 is the site map and an additional seven expanded maps, Plates 1-1 through 1-8(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, seven maps, Plates 3-1 through 3-7, 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.

(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 to Satellite 3.

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

A meteorological station was installed near the potable water taken located behind the Central Processing Plant in the 633 permit area. The new meteorological station was operational in November 2010. Refer to Section 7c for data obtained from this installation.

(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.

There were no reportable spills in the permit area during the report period.

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 revegation 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 is evaluating plans to renovate the Highland Central Processing Facility into a resin transfer system including a dryer facility. A description of the 2011-2012 plans are provided in Section 5. 2011-2012 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 CPP and Satellites 2 and 3 are shown on Table 3-5.

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.

<u>Radium Ponds</u>

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, 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. Currently, the samples are in storage waiting counting for radium-226.

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 period June 1, 2010 through April 30, 2011, 2,456 Acre-feet (AF) (800,320,450 gal) of production fluids were pumped through Satellite No. 2, and 2,382 AF (776,319,195 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 74 AF (34,001,255 gal), which represents 3.0% of the total production fluid volume. In addition to the production bleed, restoration fluids associated with groundwater sweep and/or reverse osmosis (RO) activities in Mine Units C and D 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. From August 23, 2010 to August 31, 2010, RO brine was sent to Deep Disposal Well Morton I-20.

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 operates 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 2010.

Satellite No. 3

Satellite No. 3 currently processes production fluid from Mine Units J and K (Mine Unit K is permitted under Permit No. 633) and excursion control bleed from Mine Unit F. During the period June 1, 2010 through April 30, 2011, 4,694 AF (1,529,449,587 gal) of production fluids were pumped through Satellite No. 3 and 4,643 AF (1,512,807,920 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 51 AF (16,641,667 gal), which represents 1.1% 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 H, I and J were in production during the report period and are anticipated to be operational during the next report period. Mine Unit F, as discussed with WDEQ-LQD, is also expected to resume production during the next report period.

Deep Disposal Wells

One deep disposal well, SRHUP#9, was installed in the permit area, as reported in the 2009-2010 Annual Report. Two existing deep disposal wells, Morton I-20 and Vollman 33-27 were worked over during the report period. The location of the deep disposal wells are illustrated on Plate 1. The wells are regulated through the UIC program with WDEQ-WQD under Permit 09-054. Monitoring and reporting of the deep disposal wells is completed through quarterly and annual reports to the WDEQ-WQD.

Deep disposal well SRHUP#9 was installed within the Mine Unit E area. Authorization to inject was received from the WDEQ-WQD in correspondence dated November, 10, 2010 which includes the information regarding the construction and testing requirements for the well. SRHUP #9 is permitted to discharge into the Teckla, Teapot, and Parkman aquifers through perforation in the deep interval of 8,030-9460 feet. The Lewis Shale forms the upper confining layer above the Teapot Sandstone and Cody Shale forms the lower confining layer below the Parkman Sandstone. For operation of SRHUP # 6, the maximum instantaneous injection rate is permitted by the WDEQ-WQD at 3,600 bbl/day and limiting surface injection pressure of 1,225 psig.

Deep disposal well Morton I-20 is located east of Mine Unit H. Authorization to inject was received—from -WDEQ-WQD in_correspondence_dated_March_9, 2011 which includes the information regarding the construction and testing requirements for the well. Morton I-20is permitted to discharge into the Teckla, Teapot and Parkman aquifers through perforation in the deep interval of 8,030-9460 feet. The Lewis Shale forms the upper confining layer above the

Teapot Sandstone and the Cody Shale forms the lower confining layer below the Parkman Sandstone. For operation of Morton I-20, the maximum instantaneous injection rate is permitted by the WDEQ-WQD at 3,600 bbl/day and a limiting surface injection pressure of 951 psig.

Deep disposal well Vollman 33-27 is located Southeast of Satellite 3 and Mine Unit F. Authorization to inject was received from the WDEQ-WDQ in correspondence dated March 9, 2011 which includes the information regarding the construction and testing requirements for the well. Vollman 33-27 is permitted to discharge into the Teckla, Teapot and Parkman aquifers through perforation in the deep interval of 8,030-9460 feet. The Lewis Shale forms the upper confining layer above the Teapot Sandstone and the Cody Shale forms the lower confining layer below the Parkman Sandstone. For operation of Morton I-20, the maximum instantaneous injection rate is permitted by the WDEQ-WQD at 3,600 bbl/day and a limiting surface injection pressure of 951 psig.

4. Reclamation

(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.

Topsoiled.
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.

(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.

(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

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.

g) 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 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; Unat = <0.001 mg/L; and Ra = 8 pCi/L (~60-yrs). Water quality for wells M-3 and M-4 show that the values for Fe, Mn, Se, and Ra are within the predicted values. Unat 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. by Dr. Daniel Ersirine to assist Cameco in responding to comments.

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. Approval of the proposal is pending with WDEQ-LQD. This program was defined as necessary throughout the investigation of the bioremediation study data collection. In April, 2011, Cameco resumed limited RO treatment combined with concurrent groundwater monitoring.

Bioremediation Project in Mine Unit C

The Mine Unit C (MU C) bioremediation project was conducted from April to November of 2009 and used methanol and cheese whey 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 MU 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. Furthermore, the data should be analyzed as the experiment proceeds rather than in the aftermath of field activities.

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

During 1991, it was determined 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) are 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, Cameco completed installation of 35 replacement wells in the mine unit. RO treatment started at the up-gradient end of the mine unit and was expanded to the northeast as additional deep disposal well capacity became available. At the end of the report period, 66,301gallons or 1.29 PV had been treated.

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 towards 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 wellfield.

Waste Water Treatment

Purchase and engineering of an additional 750 gpm reverse osmosis (RO) treatment capacity was conducted during the report period. 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.

5. 2011-12 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 3/121. Therefore, no revised restoration schedule has been included with this Annual Report. Cameco submitted responses to TFN 5 1/119 in correspondence dated May 5, 2011 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 should be complete by August 2011. During the 3rd Quarter of 2011, Cameco plans to begin demolition activities at the Highland CPF and Office area in order to accommodate the new process circuit. These activities will remove and dispose of the existing processing equipment and create the necessary space for the new equipment. Procurement of equipment and other items necessary for construction will begin at this time as well. During the 2nd Quarter of 2012, Cameco plans to begin construction of the new Resin Transfer System. Permitting actions necessary to facilitate this change will be submitted for LQD approval under separate cover.

Mine Unit F

Production is planned to resume 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 two (2) new header houses in Mine Unit F.

Mine Units H, I/I-Extension, and J/J-Extension

During the next report period, production activities are anticipated to continue in Mine Units H, I and J. Additional delineation drilling is also planned for Mine Units I and J to define the extent of reserves in preparation for extensions of each wellfield. Based on the results of delineation drilling, other planned activities include monitor well installation, hydrologic testing and wellfield development in Mine Units I-Extension and J-Extension.

6. 2011-12 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. CR 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 period.

Mine Unit B

During the next report period, Cameco plans to submit 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 reverse osmosis (RO) treatment combined with chemical reductant (sodium sulfide) addition. It is anticipated that up to three additional pore volumes will be needed to attain the restoration target values (RTVs). Compliance monitoring of CMP wells will revert back to bi-monthly sampling. RO treatment capacity is expected to increase to approximately 700 gpm following the installation of

additional RO treatment capacity in Satellite No. 2 and the completion of approximately 55 to 60 replacement wells in Mine Unit C. Other activities planned for this wellfield include well installation and resolution of the CM-32 excursion investigation.

Mine Unit D/D-Extension

Cameco plans to continue traditional restoration methods using RO treatment combined with chemical reductant (sodium sulfide) addition. Compliance monitoring of DMP wells will continue on a bi-monthly sampling schedule. RO treatment capacity up to approximately 400 gpm is expected during the next report period. Other activities planned for this wellfield include additional DM-3 excursion modeling and removal of this well from excursion status.

Mine Unit E

At the end of the current report period, Cameco had completed 67 of the 177 replacement wells in Mine Unit E and plans to commence drilling and well completion of the remaining wells once construction activities are allowed to resume due to wildlife restrictions (raptor nests, sage grouse leks). Restoration activities planned during the next report period include wellfield bleed and completion of a bioremediation pilot (field) test in Mine Unit E as described under Section (b) Restoration Research below.

Satellite No. 1 Radium Settling Basins

During the next report period, Cameco plans to complete the radium-226 survey (counting) and use the resulting data to prepare remediation and decommissioning designs.

Wastewater Treatment and Disposal

During the next report period, installation of an additional 750 gpm (nameplate capacity) RO treatment system is planned for the Satellite No. 2/Selenium Treatment Plant waste water treatment system to accelerate restoration efforts in Mine Units C, D, D-Extension and E. In addition, an approximate 5.5 mile (29,400 foot) pipeline network will be installed to connect the Smith Ranch Central Processing Plant (Permit 633) waste water disposal network to the Satellite No. 2 area waste water disposal network. This pipeline will allow access to all deep disposal wells within the Smith Ranch (633) network to dispose of excess RO reject (brine) in the event additional disposal capacity is needed to supplement the Morton 1-20, Vollman 33-27 and/or SRHUP#9 wells.

(b) Restoration Research

Mine Unit E Bioremediation Pilot Test

Cameco plans to perform a bioremediation field test on an isolated, single five-spot pattern area during the 3rd quarter of 2011. The test is expected to last less than 90 days and consist of bioremediation treatment for redox sensitive species followed by RO to reduce total dissolved solids and other constituents. - Details of the bioremediation test, including organic substrates, monitoring requirements (including pre- and post-monitoring for water quality, sweep efficiency, etc.), flow rates, and pore volumes to be treated, will be submitted under a separate "confidentiality" request during the next report period.

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 a total of six cores from mine units that have already been produced. The cores will be twin 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, 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.

7. 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, 2011 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. The monitoring data collected during the report period show compliance with all NRC requirements. It should be noted that monitoring of the Main Office water well was suspended during the 4th Quarter 2002 due to deactivation of the water system as the CPF was placed on standby status.

(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 Environmenal Monitoring Report. The monitoring data collected during the report period show compliance with applicable NRC requirements.

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, 2011 NRC Semi-Annual Reports pertaining to Windmill, Solar Wells and Stock Ponds is located in Appendix D

(c) Precipitation data.

LQD issued a Letter of Conference and Conciliation (LCC) on October 7, 2010. One requirement of the LCC was to install a meteorological station on-site. The station was installed and data tracking starting in November, 2010. Pursuant to Chapter 2, Section 2(a)(i)C) and (D) meteorological data will be collected for precipitation and wind. The data has been prepared to show monthly averages and graphs of temperature, wind speed, daily and total rainfall have been created to illustrate the data.

The total rainfall from the period between November 2010 and April 2011 was 1.58 inches. This results in an average of .26 inches over a six month period. Average wind speeds for the area were 13.1 mph and were predominately out of the southwest. Tables and graphs of this information can be found in Table 10-3

(c) Subsidence monitoring.

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

(d) 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.

Topsoil from a newly created Bell Hole Tie-In was added to topsoil pile #30 which was created in 1996. The original volume of 480 cubic yards has been increased to 592 cubic yards with this addition. Stockpile #96 was created on October 1, 2010 from material from Mine Unit K-North access road. The stockpile has a volume of 600 cubic yards. Stockpile #97 was created on April 1, 2011 from material from Mine Unit K-North DAM topsoil pile. The stockpile has a volume of 343 cubic yards. Stockpile # 98 was created on May 1, 2010 from material from the Vollman 33-27 Deep Disposal Well Topsoil pile and has a volume of 301 cubic yards. These long-term topsoil piles have been added to Plates 1 and 1-4 (HUP).

Topsoil Pile #34 (410 cubic yards) and Topsoil Pile #35 (550 cubic yards were combined into one topsoil pile. The volume of remaining topsoil pile is 721 cubic yards or 19,446.6 cubic feet (combination of Topsoil Pile #34 and 35) due to an improved volume calculation method using a Trimble GPS unit.

(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 of 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 2010 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 2010. A review of the selenium data in Figure 7-1 shows that the mean selenium concentration at IR-1 between the previous year and 2010 increased from 12.48 mg/kg, to approximately 18.78 mg/kg. In comparison, the selenium concentration in the background sample collected during 2010 was approximately 2.1 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 2010. Also shown in Figure 7-2 are selenium concentrations in vegetation at Irrigator No. 2 background areas for the period 1996 through 2010. A review of the data in Figure 7-2 shows that the mean selenium concentration at IR-2 decreased to 1.4 mg/kg. In comparison, the selenium concentration in the background sample collected during 2010 was approximately 0.5 mg/kg. It should be noted that the 1998 through 2010 data from Irrigator No. 2 reflects the changes in laboratory analysis procedures discussed above.

During the report period Cameco contracted Golder to consult and complete characterization studies regarding selenium content at the irrigators. The scope of work to complete the study was developed to address WDEQ-LQD comments from the 2007-2008 Annual Report (#19 through #23). Sampling of the irrigators was completed in the fall of 2010. Golder presented their report of findings in a meeting with Cameco and WDEQ-LQD in April, 2011. The comments from 2007-2008 were incorporated into

TFN 5 3/251; however, WDEQ-LQD responded to Golder's findings in their review of the 2009-2010 Annual Report Comments. Cameco will respond to those comments in separate correspondence to maintain consistency with completion of the TFN 3 1/251. During the next report period Golder has been retained to carry out characterization studies for conditions related to PSR-2.

(h) Wildlife data.

Three aerial surveys were conducted to locate bald eagle winter roost sites and to confirm potential winter roost habitat in or within one mile of the combined Permit Area. Prior to aerial surveys, potential bald eagle winter roost habitat (i.e. arboreal habitat consisting of at least a few trees clustered in a grove) was delineated within one mile of the Permit Area using National Agriculture Imagery Program (NAIP) aerial photographs from 2009. This enabled potential bald eagle winter roosting sites to be effectively targeted. Bald eagle winter roost aerial surveys were conducted on January 23, February 10, and March 1, 2011. No bald eagles were observed during the three aerial surveys.

An aerial survey will be conducted early in the next report period to identify potential sage grouse leks. Additionally, Cameco will conduct ground surveys to confirm potential lek locations.

The results will be made available during the 2012 Annual Report. The following surveys are planned for 2011; black-tailed prairie dog presence/activity surveys and mapping, mountain plover habitat/presence survey, wetland/pond surveys and wildlife use on disturbed and reclaimed areas and results will be available in the 2012 Annual Report. Raptor surveys are in progress. A finalized updated map related to these surveys will be presented with the 2012 Annual Report.

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

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Monitoring Reports. 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 2010.

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 2010 is shown in Figure 7-3.

A review of the data in Figure 7-3 shows that mean radium conductivity, selenium and uranium concentrations have increased above background levels. 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 (3500µmhos/cm), and have decreased over the last two 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 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 2010 were approximately 2.2 mg/kg in the zero to six-inch depth and 2.3 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 2010, conductivity levels decreased from the previous year with mean conductivity levels below the recommended level of 3,500 µmhos/cm. Average selenium levels showed an increase in the zero to six-inch depth (from 0.484 mg/kg to approximately 0.18 mg/kg) and average concentrations decreased (from .369 mg/kg to .18 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 2009, mean uranium concentrations at the six to twelve inch depth decreased to approximately 3.5 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 remained

relatively unchanged in the zero to six-inch depth from 1.33 pCi/g in 2009, to 1.38 pCi/g in 2010. In the six to twelve inch depth it increased from 1.44 pCi/g in 2009, to 2.36 pCi/g in 2010.

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 contracting consultant advised, based on the manufacturers 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 up. Following this, the lysimeters should be sampled as per usual method. Subsequently the wells were sampled; however, not enough water presented 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 Satellite 2 irrigator. Analysis of soil properties is being evaluated to determine the best lysimeter for the area. At Satellite 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. Discussions with the WDEQ-WQD and WDEQ-LQD will be conducted in order to ultimately decide the best course of action in regards to collecting soil water samples at these irrigators.

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 are sampled quarterly when water is available. In addition, four new shallow monitoring wells were installed and sampled quarterly. The applicable data for the East and South Shallow Wells during the report period are included in Table 7-9 and 7-10 of this report.

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 ($3.0E-8 \mu$ Ci/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 approximately2.0 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 2010 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, 2010 through December 31, 2010, showed no significant impacts to surface water or vegetation.

In summary, the samples analyzed for dissolved selenium concentration in water were below the Class III (Livestock) and Class I (Domestic) limit of 0.05 mg/L and selenium concentrations of the vegetation samples were below the 5 mg/kg threshold for WDEQ/LQD compliance, (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(HUP)

8. 2010-11 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 2011-12 Surety Estimate Revision is included in Appendix C. The revision results in a surety estimate of \$79,594,406, which is an increase of \$22,567,806 from the current approved and secured amount of \$57,026,600. It also represents and increase of \$6,919,620 from the surety estimate revision provided May 2011 of \$72,674,786 in response to the 2009-10 Annual Report Review Comments. As shown in Appendix C, most of the increase in the surety estimate is a result of revised and updated unit costs associated with reclamation.

9. 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. Trunkline Spill 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.

(c) Permit stipulations; and

Not applicable

d) Other special conditions.

10. 2010-11 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 (April 1, 2010 through April 30, 2011) 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. Holes are scheduled for surface reclamation during the next report period. As surface reclamation is completed, Cameco intends to request inspection for bond release in separate letters on a quarterly basis to the WDEQ-LQD pursuant to Chapter 8 of the Non-Coal Rules & Regulations.

Refer to Table 10-2 Plugged and Abandonment Report with Bond Release Requests for Permit 603 and Abandoned Drill Hole Map 1 and Map 2 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 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. Attached to the Annual Report is an Index of Change to insert Table 10-2 Plugged and Abandonment Report to Appendix D5 Geology as a non-significant revision (NSR).

11. 2011-12 Proposed Delineation Drilling

Under TFN 5 6/174, Cameco will provide responses and a revised drilling proposal with listed hole locations where drilling on Permit 603 would be conducted through 2011.

12. 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.

Thomas Cannon

Print Name and Title-of Principal Executive Officer or Authorized Agent

Signature of/Principal Executive Officer or Authorized Agent

6.30.11 Date

Bibliography

L. F. James and Others (1990), Selenium Poisoning in Livestock, *Symposium on Selenium*, *Western U.S.*

•)
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:

Tom Cannon P.O. Box 1210 Glenrock, WY 82637 (307) 358-6541

2. Party to Receive Notice

Dawn Kolkman Safety, Health, Environment and Quality (SHEQ) Manager 762 Ross Road 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.

Paul Goranson, President, Cameco Resources, 2020 Carey Avenue, Suite 600, Cheyenne, Wyoming 82001. 1-307-316-7600 (Effective: 3/1/10)

Thomas P. Young, Vice President Operations, Cameco Resources, 2020 Carey Avenue, Suite 600, Cheyenne, Wyoming 82001. 1-307-316-7600 (Effective: 10/13/09)

Ted A. Robinette, Controller, Cameco Resources, 2020 Carey Avenue, Suite 600, Cheyenne, Wyoming 82001. 1-307-316-7600 (Effective: 1/3/08)

Greg Gabruch, Secretary, Cameco Corp., 2121 11th St. West, Saskatoon, Saskatchewan, Canada S7M 1J3 1-306-956-6200 (Effective: 9/19/06)

Rochelle D. Maslin, Assistant Secretary, Cameco Corp., 815-13th St. East, Saskatoon, Saskatchewan, Canada S7M 0M2, 306-956-6200 (Effective: 7/1/05)

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

Tables

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TABLE 3-1AFFECTED AREAS SUMMARY2010-2011 ANNUAL REPORT PERMIT 603

	Affected	Temporary	Permanent
Description/Years Affected	Acreage	Revegetated	Reclamation
		(Acres)	(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 Tonsoil Piles/Borrow	8	2	0
H-Wellfield: 1998-2001 (in production)	61	61	0
H-Wellfield Roads: 1998-2001	8	0	0 0
Waste Disposal Well No. 2 and Access Road	3	1	0
D-Extension Wellfield: 2001 (in production)	10	10	Ő
D-Extension Wellfield Roads: 2001	2	0	Ő
SR-HUP Connecting Road and Topsoil Piles/Borrow Areas:	7	$\hat{\tilde{2}}$	0
Mine Unit-I Monitor Well Installation: 2005	, <1	0	Ő
Mine Unit-I 2006	20	20	0
Mine Unit-I Roads: 2006	20	0	0
Mine Unit I Pipeline Corridor 2006	2	2	0
Mine Unit I Delineation Drilling Monitor Wells 2007	10	10	0
Mine Unit-J Defineation Diffing, Monitor Wens 2007	0.8	0	0
Mine Unit-J Access Road and Staging Area 2007	37.2	37.2	0
Mine Unit-J weimeid Area 2007	07.2 0	0	0
Mine Unit F-Drill Ponds 2008	07	0 7	0
Mine Unit H-Drill Ponds 2008	07	• 1	U
Selenium Treatment Facility 2009	0.7	U	U
SKHUP#9 Deep Disposal well Pad and Access Road 2010	2.74	0	U
Mine E Laydown Area 2010	0.46	U	0
Mine Unit K-North 2011	6		



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	TABL	E 3-2		
	TOPSOIL STOCK	PILE SUMMA	RY	
	2010-2011 ANNUAL R	FPORT PERM	IT 603	
		EIUNITER	Amount Hood	
Stocknile No	Vear/Date Stockniled	Volume (vd3)	(vd3)	Remaining
8	10/1/1993	100	0	100
0	7/1/1987	3 000	0	3 000
	7/1/1987	6,000	0	6 000
2	8/1/1987	45,000	0	45,000
	9/1/1987	50,000	0	50,000
5	11/1/1988	700	<u> </u>	700
6	11/1/1988	450	0	450
7	4/1/1991	100	0	100
9	11/1/1995	0	0	0
10	11/1/1995	1,100	0	1.100
11	11/1/1995	910	0	910
12	11/1/1995	1.970	0	1.970
13	Oct/Nov96	270	0	270
14	Oct/Nov96	350	0	350
15	Oct/Nov96	600	0	600
16	Oct/Nov96	50	0	50
17	Oct/Nov96	720	0	720
18	Oct/Nov96	0	0	0
19	Oct/Nov96	230	0	230
20	Oct/Nov96	200	0	200
20	Oct/Nov96	260	0	260
21	Oct/Nov96	30	0	30
22	Oct/Nov96	20	0	20
23	Oct/Nov96	130	0	130
25	Oct/Nov96	520	0	520
26	Oct/Nov96	450	0	450
27	Oct/Nov96	560	0.	560
28	Oct/Nov96	670	0	670
29	Oct/Nov96	320	0	320
30	Oct/Nov96	592	0	592
31	Oct/Nov96	520	0	520
32	Oct/Nov96	900	0	900
33	Oct/Nov96	370	0	370
34	Oct/Nov96	410	0	410
35	Oct/Nov96	550	0	550
36	Oct/Nov96	0	0	0
37	Oct/Nov96	210	0	210
38	Oct/Nov96	560	0	560
30	Oct/Nov96	220	0	220
40	Oct/Nov96	290	0	290
40	Oct/Nov96	110	0	110
42	Oct/Nov96	200	0	200
43	Oct/Nov96	340	0	340
44	Oct/Nov96	240	0	240
45	Oct/Nov96	200	0	200
46	Oct/Nov96	220	0	220
47	Oct/Nov96	420	0	420
48	6/1/1997	320	0	320
48A	6/1/1998	400	0	400
		L		

	<u> </u>	TABL	E 3-2			
		TOPSOIL STOCK	PILE SUMMA	RY		
		2010-2011 ANNUAL R	EPORT PERM	IT 603		
			Estimated	Amount Used		
	Stocknile No.	Vear/Date Stockniled	Volume (vd3)	(vd3)	Remaining	
	<u>40</u>	Oct/Nov 96	1 160	0	1 160	
	<u> </u>	Oct/Nov 96	920	0	920	
	50	Oct/Nov 96	350	0	350	
	57	3/1/1998	700	0	700	
	53	4/1/1998	240	0	240	
	54	4/1/1998	300	0	300	
	55	11/1/1998	100	0	100	
	56	11/1/1998	400	0	400	
	57	11/1/1998	100	0	100	
	58	11/1/1998	150	0	150	
	59	11/1/1998	170	0	170	
	60	11/1/1998	280	0	280	
	61	11/1/1998	200	0	200	
	62	11/1/1998	580	0	580	
	63	11/1/1998	520	0	520	
	64	11/1/1998	350	0	350	
	65	11/1/1998	350	0	350	
	66	11/1/1998	710	0	710	
	67	11/1/1998	780	0	780	
	68	11/1/1998	780	0	780	
	69	11/1/1998	1.000	0	1,000	
	70	11/1/1999	60	0	60	
´	71	1/1/2000	50	0	50	
	72	4/1/2000	50	0	50	
	73	5/1/2000	50	0	50	
	74	11/1/2000	200	0	200	
<u> </u>	75	11/1/2000	75	0	75	
	76	11/1/2000	80	0	80	
	77	4/1/2001	60	0	60	
	78	4/1/2001	50	0	50	
	79	4/1/2001	40	0	40	
	80	6/1/2001	50	0	50	
	81	6/1/2001	130	0	130	
	82	6/1/2001	350	0	350	
	83	4/1/2001	50	. 0 .	50	
	84	4/1/2001	30	0	30	
	85	4/1/2001	250	0	250	
	86	9/1/2002	325	0	325	•
	87	5/1/2005	50	0	50	
	88	4/1/2006	80	0	80	
	89	4/1/2006	80	0	80	
	90	2/1/2006	50	0	50	
	91	2/1/2006	50	0	50	
	92	11/1/2009	6,755	0	6,755	
			720	0	720	
	93	11/1/2009	1 /20	ו ע ו	120	
	93	11/1/2009	204	0	204	
,	<u>93</u> <u>94</u> <u>95</u>	<u>11/1/2009</u> <u>1/1/2010</u> 2/1/2010	204	0	204	
	93 94 95 96	11/1/2009 1/1/2010 2/1/2010 10/1/2010	204 267 600		204 267 600	

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TABLE 3-2 TOPSOIL STOCKPILE SUMMARY 2010-2011 ANNUAL REPORT PERMIT 603 Estimated Amount Used Remaining Stockpile No. Year/Date Stockpiled Volume (yd3) (yd3) 5/1/2010 98 TOTAL 301 301 0 143,322 0 143,322

TABLE 3-3URANIUM PRODUCTION BY YEAR2010-2011 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	15 960 774
at HUP) as of May 31, 2006	13,009,774
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	1,491,944
*Total combined pounds uranium produced	
(eluted) as of May 31, 2010	8,272,304

*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 3-4WELLFIELD RELEASE SUMMARY2010-2011 ANNUAL REPORT PERMIT 603

DATE	LOCATION	VOLUME (gal)	SURFACE AREA (FT ²)	CAUSE
No Releases for Reporting Period	NA	NA	NA	NA



TABLE 3-5FACILITY WATER BALANCE REPORT2010-2011 ANNUAL REPORT PERMIT 603

Location	Recovery Volume (gallons)	Injection Volume (gallons)	Over Recovery Volume (gallons)	Average Production Rate (gpm)
Satellite #2	873,398,717	847,183,448	26,215,269	1,659
Satellite #3	1,689,270,443	1,670,616,962	18,653,481	3,465

TABLE 3-6LONG TERM MONITORING PLAN DATA (MINE UNIT A)2010-2011 ANNUAL REPORT PERMIT 603

WELL							[[
ID	DATE	Cl	TDS	ALK	pН	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		Q875-34									
MP-4	4/13/2006	19	472	305	6.99	0.34	0.56	0.191	13.2	1340	i
I-21	4/13/2006	18	574	430.	7 <i>.</i> 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

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TABLE 3-6 LONG TERM MONITORING PLAN DATA (MINE UNIT A) 2010-2011 ANNUAL REPORT PERMIT 603

WELL								ï			
ID	DATE	Cl	TDS	ALK	pH	Fe	Mn	Se	U nat	Ra 226	Water Level
2009						5. a 🕅					
MP-4 5/18/2009 18 502 299		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		19 A 7						5. e 4 () - 1			
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]	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	11/16/2010	18	515	314	7.78	0.72	0.6	0.204	15.7	3340	5053.33
I-21	11/16/2010	16	607	458	7.77	0.05	0.49	ND	0.663	511	5056.6
LTM-4	11/16/2010	20	518	352	7.42	ND	0.1	ND	0.0191	27	5058.36
M-3	11/16/2010	3	327	187	7.76	ND	0.03	ND	0.0149	8.1	5054.4
M-4	11/16/2010	4	333	190	7.8	ND	0.03	ND	0.014	5.5	5050.42

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) 2010-2011 ANNUAL REPORT PERMIT 603

Year	HCO ₃	\mathbf{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	·	43		1296		3.9	
	(Alkalinity)	· ·						
May-09	283		38		792	0.351	3	
	(Alkalinity)				-			
May-10	387 (Alkalinity)		46		920	0.083	6.92	
Jun-11	285 (Alkalinity)		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	ŇA	0.01	5	5
Class of Use (Livestock)	NA	3000	2000	5000	NA	0.05	5	5

Table 4-1 INTERIM RECLAMATION ACTIVITIES 2010-2011 ANNUAL REPORT PERMIT 603

	MINE UNIT/LOCATION	TYPE OF DISTURBANCE (ROAD, WELLFIELD, SPILL AREA, ETC.)	RECLAMATION TYPE (INTERIM OR PERMANENT)	AREA SQ FT	MINE ACRES	TOPSOIL APPLICATION (YES/NO)	TOPSOIL APPLICATION DEPTH (INCHES = ")	TYPE OF SEED	SEEDING DATES	SEEDING PROCEDURE	RATE OF SEED	TYPE & RATE OF FERTILIZER	TYPE & RATE OF MULCH APPLIED	ACRES RECLAIMED IN 2010-11 BY MINE UNIT
ORTH 603 PERMIT	1) CREATED STOCKPILE NO. 96 - MINE UNIT K-NORTH; COMPLETED RESEEDING WITH HYDRO-SEEDER ON 10/06/2010.	WELLFIELD	INTERIM	4,818.30	0.11	NO	N/A	20108 SEED MIX: Western Wheatgrass, Rosana 2.47 Siender Wheatgrass 1.71 Linn Perennial Rye 1.23 Indian Ricegrass 1.23 Blue Grama 2.47 Little Bluestern 1.08 Gardner Satkbrush 31 Total 10.5 PL5 # /AC \$48.00/AC (14 +/- BUKL BS PER ACRE, BAGS = 45 LBS, USE 1 BAG EVERY 3 ACRES). 10.5 Pls#/ac @ \$49 per acre.	OCTOBER, 4TH QUARTER	2.b) THE SOIL AMENDMENT PROCESS SUMMARY FOR CULVERTS, DRAINAGE AREAS, AND SIMILAR AREAS NOT ACCESIBLE BY A TRACTOR INCLUDE:© CONTOUR AREA WITH RAKE/SHOVEL TO ORIGINAL STATE: © SPREAD APPROPRIATE FERTILIZER IN CONTOURED AREA. © SEED AREA WITH HYDRO-SEEDING UNIT OR PORTABLE SEEDING UNIT (CAMECO APPROVED SEED MIX & 1 ANNUAL COPO – OATS). © SPRAY OR RAKE SEED INTO DISTURBED AREA. © INSTALL "EROSION BLANKETS," "WATTLES", OR "SEDIMENT STOP" OVER SEEDED AREA.SEED MIX & 1 ANNUAL COPO – OATS). ID S PIALY & 1 ANNUAL ROPO – OATS). ID S PIALY & 1 ANNUAL COPO – OATS).	10.5 Pis#/ac	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	
MINE UNIT K - N	CREATED DAM STOCKPILE NO. 97 - MINE UNIT K-NORTH; COMPLETED RESEEDING WITH HYDRO-SEEDER ON 10/06/2010.	WELLFIELD	INTERIM	2,694.80	0.06	NO	N/A	20108 SED MIX: Western Wheatgrass, Rosana 2.47 Slender Wheatgrass 1.71 Linn Perennial Ryc 1.23 Indian Ricegrass 1.23 Blue Grama 2.47 Little Bluestern 1.08 Gardner Salkbrush 3.1 Total 10.5 PL5 # / AC \$48.00/AC (14 +/- BUKL KBS PER ACRE, BAGS = 45 LBS, USE 1 BAG EVERY 3 ACRES). 10.5 Pls#/ac @ \$49 per acre.	OCTOBER, 4TH QUARTER	2.b) THE SOIL AMENDMENT PROCESS SUMMARY FOR CULVERTS, DRAINAGE AREAS, AND SIMILAR AREAS NOT ACCESIBLE BY A TRACTOR INCLUDE:0 CONTOUR AREA WITH RAKE/SHOVEL TO ORIGINAL STATE. 0 SPREAD APPROPRIATE FERTILIZER IN CONTOURED AREA. 0 SEED AREA WITH HYDRO-SEEDING UNIT OR PORTABLE SEEDING UNIT (CAMECO APPROVED SEED MIX & 1 ANNUAL CROP – OATS). 0 SPRAY OR RAKE SEED INTO DISTURBED AREA. 0 INSTALL "EROSION BLANKETS," "WATTLES", OR "SEDIMENT STOP" OVER SEEDED AREA.SEED MIX & 1 ANNUAL CROP (OATS). 10.5 PIS#/ac @ \$49 per acre, BONDED FIBER MATRIX = \$1,100.22 COST PER ACRE	10,5 Pis#/ac	Fertilizer (18-46-0 Fertilizer) 20085 PER ACRE (1 x 50 Lb. bag per 10:00 ft, 4 x bags per acre = 200 Lbs)	FERTILIZER = \$91.88 COST PER ACRE; BONDED FIBER MATEIX = \$1,100.22 COST PER ACRE	
										MINE UNIT K-NORTH REC	LAMATION TOTAL			0.17
ERMIT	SRHUP#9 DDW PAD LOCATION	WELLFIELD	INTERIM	189.500.74	4.35	YES	6"	2010C SEED MIX: 5.6 PLS Western Wheatgrass, Rosanna 0.1 PLS Camby Bluegrass 0.3 PLS Sheeps Fescue, Covar 1.4 PLS Sand Bluestern 1.1 PLS Parinte Sandreed 0.02 PLS Gardner Saltbush 1.8 PLS Sideoats Grama; TOTAL = 10.32 PJst/ac @ Slo Ger arcs.	OCTOBER, 4th QUARTER 2010	1.a) THE SOIL AMENDMENT PROCESS SUMMARY FOR TRACTOR ACCESSIBLE AREAS INCLUDE::: 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 2010C 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. 10.32 Plaface & Sto Ger arc.	10.32 Pist#/ar	Fertilizer (18-46-0 Fertilizer) 200LBS PER ACRE (1 x 50 Lb. bag per 10,000 ft, 4 x bags per acre = 200 Lb3)	200LBS FERTUZER (4 BAGS) & 6 ROUND BALES = 5301 88 COST PER ACRE	
40.9 DI 603 P	SRHUP#9 DDW PIPELINE & FIBER ROUTE	WELLFIELD	INTERIM	130,531.78	3.00	NO	N/A	2010C SEED MIX: S.6 PLS Western Wheatgrass, Rosanna 0.1 PLS Canby Bluegrass 0.3 PLS Sheeps Fescue, Covar 1.4 PLS Sand Bluestern 1.1 PLS Prairie Sandreed 0.02 PLS Gardner Satbush 1.8 PLS Sideats Garma; TOTAL = 10.32 Pls#/ac @ \$106 per acre.	NOVEMBER, 4th QUARTER 2010	1.a) THE SOIL AMENDMENT PROCESS SUMMARY FOR TRACTOR ACCESSIBLE AREAS INCLUDE::: 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 2010C 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 CRIME STRAW MULCH INTO SEEDED AREA WITH WISHEK STRAWPRESS UNIT. 10.32 PIS#/ac @ \$106 per acre.	10.32 Pis#/ac	Fertilizer (18-46-0 Fertilizer) 2001B5 FER ACRE (1 x 50 Lb. bag per 10,000 ft, 4 x bags per acre = 200 Lbs)	2001.BS FERTILIZER (4 BAGS) 8.6 ROUND BALES = \$391.88 COST PER ACRE	
SRHUP	12) RESEED STOCKPILE NO. 94 SOURCE: DDW #9 ROAD AND PAD; COMPLETED RESEEDING WITH HYDRO-SEEDER ON 10-20-2010.	FACILITY	INTERIM	6,659.85	0.15	NO	N/A	20108 SEED MDX: Western Wheatgrass, Rosana 2.47 Slender Wheatgrass 1.7Î Linn Perennia Rys 1.23 Indian Ricegrass 1.23 Blue Grama 2.47 Little Bluestern 1.08 Gardner Saltbrush 31 Total 10.5 PLS #/ AC \$48.00/AC (14 +/- BULK BS PER ACRE, BAGS = 45 BS, USE 1 BAG EVERY 3 ACRES). 10.5 PIs#/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 APROPRIATE FERTILIZER IN CONTOURED AREA. o SEED AREA WITH HYDRO-SEEDING UNIT OR PORTABLE SEEDING UNIT (CAMECO APROVED 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 = \$1,100.2 COST PER ACRE SRIVUP NO.5 DOW REC	10.5 Pis#/ac LAMATION TOTAL:	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	7.50
- 603 PERMIT	15) RESEED STOCKPILE NO. 92 - SELENIUM PLANT INSTALLATION	FACILITY	INTERIM	10,441.85	0.24	NO	N/A	2011A SEED MDX: Pis#/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 = 11Pis#/ac, Bluk 1SLbs per acre bag 1 @ \$105 PER ACRE.	05/05/2011, 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 APROPRIATE 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 PIs#/ac @ \$105 per acre.	11 Pis#/ac	Fertilizer (18-46-0 Fertilizer) 200LBS PER ACRE (1 x S0 Lb. bag per 10,000 ft, 4 x bags per acre = 200 Lbs)	FERTILIZER ONLY = \$91.88 COST PER ACRE	
MINE UNIT C	14) RESEED STOCKPILE NO. 93 - ENLARGED PILE #18 FOR SELENIUM PLANT INSTALLATION	FACILITY	INTERIM	7,076.69	0.16	Ю	N/A	2011A SEED MIX: Pisit/ac: Canby Bluegrass- 2, linn Perennial Rye - 3, Prairie June Grass- 2, Blue Grama - 1, Sideoats Grama - 1, Little Bluestem - 1, Gardner Salthoush - 1. Total = 11Pisit/ac, Bulk 1SLbs 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:0 CONTOUR AREA WITH RAKE/SHOVEL TO ORIGINAL STATE. 0 SPREAD APROPRIATE FERTILIZER IN CONTOURED AREA. 0 SEED AREA WITH PORTABLE SEEDING UNIT (CAMECO APPROVED SEED MIX & 1 ANNUAL CROP - OATS). 0 RAKE SEED INTO DISTURBED AREA. 0 INSTALL "ROSION 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 PIsH/ac @ \$105 per acre.	11 Pk#/ac	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	
D	Restoration Mine Unit D, HH D-5	WELLFIELD	INTERIM	41,983,25	0.96	NO	N/A	2011A SEED MDX: Pis#/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 = 11Pis#/ac, Bulk 15Lbs per acre bag 1 @ \$105 PER ACRE.	APRIL, 2ND QUARTER 2011	La) THE SOIL AMENDMENT PROCESS SUMMARY FOR TRACTOR ACCESSIBLE AREAS INCLUDE:: OONTOUR 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 PL##/ac @ \$105 per acre.	11 Pis#/ac	Fertilizer (18-46-0 Fertilizer) 200LBS PER ACRE (1 × 50 Lb. bag per 10,000 ft, 4 × bags per acre = 200 Lbs)	200LBS FERTUZER (4 BAGS) & 6 ROUND BALES = \$931.88 COST PER ACRE	

603 Annual Data 6.29.11.xlsx

					and the second	2010-2011 A	NNUAL REPORT P	ERMIT 603						
	MINE UNIT/LOCATION	TYPE OF DISTURBANCE (ROAD, WELLFIELD, SPILL AREA, ETC.)	RECLAMATION TYPE (INTERIM OR PERMANENT)	AREA SQ FT	MINE ACRES	TOPSOIL APPLICATION (YES/NO)	TOPSOIL APPLICATION DEPTH (INCHES = ")	TYPE OF SEED	SEEDING DATES	SEEDING PROCEDURE	RATE OF SEEL APPLICATION	TYPE & RATE OF FERTILIZER	TYPE & RATE OF MULCH APPLIED	ACRES RECLAIMED IN 2010-11 BY MINE UNIT
- 603 PERMIT	Restoration Mine Unit D, HH D-4	WELLFIELD	INTERIM	25,145.76	0.58	NO	N/A	2011A SEED MIX: Pis#/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 = 11Pis#/ac, Bulk 15Lbs per acre bag 1 @ \$105 PER ACRE.	APRIL, 2ND QUARTER 2011	1.a) THE SOIL AMENDMENT PROCESS SUMMARY FOR TRACTOR ACCESSIBLE AREAS INCLUDE:0 CONTOUR AREA TO ORIGINAL STATE. 0 DISC DISTURBED AREA 0 SPREAD APPROPRIATE FERTILIZER IN DISCED AREA - (18-46-0 Fertilizer) 200LBS PER ACRE 0 DRILL-SEED CAMECO APPROVED 2011A SEED MIX & 1 ANNUAL CROP (OATS). (10-14 PLS LBS PER ACRE = 17-20 GROSS LBS). 0 BROADCAST STRAW OVER SEEDED AREA WITH HAYBUSTER UNIT. 0 CRIMP STRAW MULCH INTO SEEDED AREA WITH WISHEK STRAWPRESS UNIT. 11 PL#J/ac @ \$105 per acre.	11 Pis#/ac	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 = \$391.88 COST PER ACRE	
MINE UNIT D	Restoration Mine Unit D, HH D-2	WELLFIELD	INTERIM	7,502.82	0.17	NO	N/A	2011A SEED MIX: PIs#/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 = 11PIs#/ac, Bulk S12bs per acre bag 1 @ \$105 PER ACRE.	APRIL, 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 DRIL-SEED CAMECO APPROVED 2011A SEED MIX & 1 ANNUAL CROP (0ATS). (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 Pis#/ac	Fertilizer (18-46-0 Fertilizer) 2001B5 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 = \$391.88 COST PER ACRE	
	Restoration Mine Unit D, HH D-1	WELLFIELD	INTERIM	108,200.51	2.48	NO	N/A	2011A SEED MIX: Pis#/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 = 11Pis#/ac, Bluk SLDs per acre bag 1 @ \$105 PER ACRE.	APRIL, 2ND QUARTER 2011	1.a) THE SOIL AMENDMENT PROCESS SUMMARY FOR TRACTOR ACCESSIBLE AREAS INCLUDE:0 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 PL#/ac @ \$105 per acre.	11 Pis#/ac	Fertilizer (18-46-0 Fertilizer) 2001B5 PER ACRE (1 x 50 Lb. bag per 10,000 ff, 4 x bags per acre = 200 Lbs)	200LBS FERTUZER (4 BAGS) & 6 ROUND BALES = \$391.88 COST PER ACRE	
RMIT (RESTORATION MINE UNIT E HH E-18 TO 14, HH E-12 & E-13 AREA RECLAMATION	WELLFIELD	INTERIM	730,444.63	16.77	NO	N/A	2011A SEED MIX: PIs#/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, Bluk SLDs per acre bag 1 @ \$105 PER ACRE.	APRIL 2ND QUARTER 2011	MINE UNIT D REC 1.a) THE SOIL AMENDMENT PROCESS SUMMARY FOR TRACTOR ACCESSIBLE AREAS INCLUDE:0 CONTOUR AREA TO ORIGINAL STATE. 0 DISC DISTURBED AREA 0 SPREAD APPROPRIATE FERTILIZER IN DISCED AREA - (18-46-0 Fertilizer) 200LBS PER ACRE 0 DRILL-SEED CAMECO APPROVED 2011A SEED MIX & 1 ANNUAL CROP (OATS). (10-14 PLS LBS PER ACRE = 17-20 GROSS LBS). 0 BROADCAST STRAW OVER SEEDED AREA WITH HAYBUSTER UNIT. 0 CRIMP STRAW MULCH INTO SEEDED AREA WITH WISHEK STRAWPRESS UNIT. 11 PL#/ac @ \$105 per acre.	LAMATION TOTAL	Fertilizer (18-46-0 Fertilizer) 2001BS PER ACRE (1 x 50 Lb. bag per 10:00 ff, 4 x bags per acre = 200 Lbs)	200LBS FERTLIZER (4 BAGS) & 6 ROUND BALES = \$391.88 COST PER ACRE	4:20
VE UNIT E - 603 PEI	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: Pistf/ac: Canby Bluegrass - 2, Linn Perennial Rye - 3, Prairie June Grass - 2, Blue Grama - 1, Sideoats Grama - 1, Little Bluestem - 1, Gardner Salthoush - 1. Total = 11Pistf/ac, Bulk 15Lbs per acre bag 1 @ \$105 PER ACRE.	MAY, 2ND QUARTER	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 ORGINAL 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 "ROSION 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 Pis#/ac	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	
MIN	STOCKPILE NO.30; ADDED BELL HOLE TIE-IN SEDIMENT IN FALL OF 2010	WELLFIELD	INTERIM	7,322.10	0.17	NO	N/A	2011A SEED MIX: PIs#/ac: Canby Bluegrass - 2, Linn Perennial Rye - 3, Prairie June Grass - 2, Blue Grama - 1, Sideoats Grama - 1, Little Bluestern - 1, Gardner Saltbrush - 1. Total = 11PIs#/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:0 CONTOUR AREA WITH RAKE/SHOVEL TO ORIGINAL STATE. 0 SPREAD APPROPRIATE FERTILIZER IN CONTOURED AREA. 0 SEED AREA WITH PORTABLE SEEDING UNIT (CAMECO APPROVED SEED MIX & 1 ANNUAL CROP - DATS). 0 RAKE SEED INTO DISTURBED AREA. 0 INSTALL "EROSION BLANKETS," "WATTLES", OR "SEDIMENT STOP" OVER SEEDED AREA.SEED MIX & 1 ANNUAL CROP (DATS). (10-14 PLS LBS PER ACRE = 17-20 GROSS LBS). 11 Pis#/ac @ \$105 per acre. MINE LINIT E REC	11 Pis#/ac	Fertilizer (18-46-0 Fertilizer) 2001B5 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	16.97
DDW - 603 PERMIT	VOLLMAN 33-27 DDW INFRASTRUCTURE ROUTE	WELLFIELD	INTERIM	116,628.43	2.68	NO	N/A	2010C SEED MIX: 5.6 PLS Western Wheatgrass, Rosanna 0.1 PLS Canby Bluegrass 0.3 PLS Sheeps Fescue, Covar 1.4 PLS Sand Bluestern 1.1 PLS Prairie Sandreed 0.02 PLS Gardner Saltbush 1.8 PLS Sideost Grama; TOTAL = 10.32 PLSH/ac @ \$106 per acre.	NOVEMBER, 4th QUARTER 2010	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 RUIL-SEED CAMECO APPROVED 2010C 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 CRIME STRAW MULCH INTO SEEDED AREA WITH WISHEK STRAWPRESS UNIT. 10.32 PL#/ac @ \$106 per acre.	10.32 Pis#/ac	Fertilizer (18-46-0 Fertilizer) 2001BS PER ACRE (1 x 50 Lb. bag per 10:00 ft, 4 x bags per acre = 200 Lbs)	200LBS FERTUZER (4 BAGS) & 6 ROUND BALES = \$391.88 COST PER ACRE	
VOLLIG 33-27	VOLLMAN 33-27 DDW PAD LOCATION	WELLFIELD	INTERIM	98,982.75	2.27	YES	<u>6"</u>	2010C SEED MIX: 5.6 PLS Western Wheatgrass, Rosanna 0.1 PLS Canby Bluegrass 0.3 PLS Sheep Fescue, Covar 1.4 PLS Sand Bluestem 1.1 PLS Prairie Sandreed 0.02 PLS Gardner Saltbush 1.8 PLS Sideoats Grama; TOTAL = 10.32 Pls#/ac @ \$106 per acre.	NOVEMBER, 4th QUARTER 2010	1.a) THE SOIL AMENDMENT PROCESS SUMMARY FOR TRACTOR ACCESSIBLE AREAS INCLUDE:00 CONTOUR AREA TO ORIGINAL STATE. 0 DISC DISTURBED AREA 0 SPREAD APPROPRIATE FERTILIZER IN DISCED AREA - (18-46-0 Fertilizer) 200LBS PER ACRE 0 ORILI-SEED CAMECO APPROVED 2010C SEED MIX & 1 ANNUAL CROP (0ATS). (10-14 PLS LBS PER ACRE = 17-20 GROSS LBS). 0 BROADCAST STRAW OVER SEEDED AREA WITH HAYBUSTER UNIT. 0 CRIMP STRAW MULCH INTO SEEDED AREA WITH WISHEK STRAWPRESS UNIT. 10.32 PL#/ac @ \$106 per acre. VOLLMAN 33-27 DDW REC	10.32 Pis#/ac LAMATION TOTAL:	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 = \$391.88 COST PER ACRE	4.99

Table 4-1 INTERIM RECLAMATION ACTIVITIES

Table 4-1 INTERIM RECLAMATION ACTIVITIES 2010-2011 ANNUAL REPORT PERMIT 603

	MINE UNIT/LOCATION	TYPE OF DISTURBANCE (ROAD, WELLFIELD, SPILL AREA, ETC.)	RECLAMATION TYPE (INTERIM OR PERMANENT)	AREA SQ FT	MINE ACRES	TOPSOIL APPLICATION (YES/NO)	TOPSOIL APPLICATION DEPTH (INCHES = ")	TYPE OF SEED	SEEDING DATES	SEEDING PROCEDURE	RATE OF SEED APPLICATION	TYPE & RATE OF FERTILIZER	TYPE & RATE OF MULCH APPLIED	ACRES RECLAIMED IN 2010-11 BY MINE UNIT
V////_										603 PERIMIT RECLAMA	TION TOTAL:			34.23

TABLE 7-1

SATELLITE NO. 1 LAND APPLICATION FACILITY (IRRIGATOR #1) ANNUAL VEGETATION DATA 2010-2011 ANNUAL REPORT PERMIT 603

SAMPLE SITE		Quarter 1 (NW)	Quarter 2 (NE)	Quarter 3 (SE)	Quarter 4 (SW)	Background
SAMPLE DATE		20-Aug-10	20-Aug-10	20-Aug-10	20-Aug-10	20-Aug-10
TRACE METALS (mg/kg): SW6020 Dry Ash Extracted	Lower Limit of Detection		•		•	
Arsenic	0.05	0.7	ND	ND	ND	0.6
Barium	0.05	55.60	36.90	38.90	34.70	78.90
Boron	5	14	10	11	13	10
Selenium	0.05	18.90	20.50	20.50	15.20	2.10
RADIOMETRIC (µCi/kg): E903.0	· · · · · · · · · · · · · · · · · · ·		· · · · · ·	<u></u>	· · ·	
U-Nat	·	6.8E-03	2.2E-03	7.7E-03	4.2E-03	9.0E-04
U-Nat RL		1.0E-04	1.0E-04	1.0E-04	1.0E-04	1.0E-04
Ra226		2.5E-04	3.4E-04	1.8E-04	2.0E-04	1.3E-04
Ra226 ERR. EST. +/-		1.0E-05	1.2E-05	6.4E-06	7.1E-06	5.5E-06
Ra226 MDC		2.2E-06	1.9E-06	8.5E-07	1.3E-06	9.0E-07
I		T.	ABLE 7-2			
		SATE LAND APPLICATIOI ANNUAL V 2010-2011 ANNU,	ELLITE NO. 2 N FACILITY (IRRIGA EGETATION DATA AL REPORT PERMI	TOR #2) T 603		
SAMPLE SITE		Quarter 1 (NW)	Quarter 2 (NE)	Quarter 3 (SE)	Quarter 4 (SW)	Background
SAMPLE DATE		26-Aug-10	26-Aug-10	26-Aug-10	26-Aug-10	26-Aug-10
TRACE METALS (mg/kg): SW6020 Dry Ash Extracted	Lower Limit of Detection		. ·			
Arsenic	0.05	ND	ND	ND	ND	ND
Barium	0.05	18.60	13.70	8.20	10.04	30.00
Boron	5	14	12	9 .	13	5
Selenium	0.05	1.4	1.80	1.00	1.40	0.50
RADIOMETRIC (µCi/kg): E903.0	· · · ·	· · · · · · · · · · · · · · · · · · ·				
U-Nat		1.4E-02	1.6E-02	5.8E-03	- 1.1E-02	5.0E-04
U-Nat RL		3.0E-04	3.0E-04	3.0E-04	3.0E-04	3.0E-04
Ra226		6.3E-05	7.3E-05	4.7E-05	4.4E-05	1.6E-04

4.9E-06 1.6E-06 6.9E-06

2.7E-06

5.1E-06

2.3E-06

5.2E-06

2.5E-06 °

8.2E-06

1.8E-06

⁾ Ra226 ERR. EST. +/-

Ra226 MDC

TABLE 7-4

SATELLITE NO. 2 LAND APPLICATION FACILITY (IRRIGATOR NO. 2) - IRRIGATION FLUID DATA 2010-2011 ANNUAL REPORT PERMIT 603

IRRIGATION CYCLE		<u>Jul-10</u>	<u>Aug-10</u>	<u>Sep-10</u>	<u>Oct-10</u>	<u>Nov-10</u>	<u>Dec-10</u>	<u>Jan-11</u>	<u>Feb-11</u>	<u> Mar-11</u>	<u>Apr-11</u>
VOLUME (AF)		36.27	21.00				.'				
		14-Jul-11	12-Aug-11		•						•
	REP. LIVIT	007	200								
Ca	1.0	287	292								
Mg	1.0	99	104								
Na	1.0	76	79								
К	1.0	25.0	24.0							,	
HCO3	1.0	212	202					IRRIGA	tor Did	•	
SO4	1.0	710	758			. *					
CI	1.0	355	371					N	от		
NON-METALS								OPE	RATE		
TDS @ 180° C (mg/L)	10.0	1970	1910	* .	•						
pH (standard units)	0.010	7.9	8.09			·					
SAR	0.01	0.01	1								
TRACE METALS (mg/L)											
As	0.001	ND	0.001								
Ba	0.1	ND	ND .								
В	0.10	0.20	0.20								
Se	0.001	0.015	0.009								
RADIOMETRIC						i.				•	
U-nat (uCi/mL)	2.03E-10	2.20E-07	1.67E-07					,			
Ra-226 (uCi/mL)	2.00E-10	5.70E-10	5.80E-09			,					
Ra Err. Est. +/-		1.80E-10	4.70E-10								
				•							

TABLE 7-5 SATELLITE NO. 1 LAND APPLICATION FACILITY (Irrigator No. 1) FLUID VOLUMES APPLIED 2010-2011 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	TOTAL	1167
Oct 1-Oct 27, 1994	2.6		•
Nov 1-Nov 30, 1994	2.9	· · ·	
Sep 6-Sep 27, 1995	8.7		
Oct 2-Oct 20, 1995	11.7		

TABLE 7-6SATELLITE NO. 2 LAND APPLICATION FACILITY (Irrigator No. 2)FLUID VOLUMES APPLIED2009-2010 ANNUAL REPORT PERMIT 603

Irrigation Cycle Sep 1-Sep 23, 1995	Fluid Volumes Applied (AF) 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
ΤΩΤΑΙ	1655.8

Irrigation won't begin for 2011 until May

TABLE 7-7 LAND APPLICATION FACILITY (IRRIGATOR 1) ANNUAL SOIL DATA 2010-2011 ANNUAL REPORT PERMIT 603

		CONDUCTIVITY	CALCIUM	MAGNESIUM	SODIUM	SAR	pН	Sat %	ARSENIC	BARIUM	SELENIUM	POTASSIUM	BORON	RADIUM 226	TOTAL ERROR	Uranium	URANIUM - NATURAL
	SAMPLE	SAT. PASTE	SOLUBLE	SOLUBLE	SOLUBLE		SAT. PASTE		ABDTPA	ABDTPA	ABDTPA	SOLUBLE	ABDTPA		ESTIMATE <u>+</u>		TOTAL
SAMPLE ID	DATE	(mmhos/cm)	(meq/L)	(meq/L)	(meq/L)		(std. Units)		(mg/kg-dry)	(mg/kg-dry)	(mg/kg-dry)	(mg/kg-dry)	(mg/kg-dry)	(μCi/g-dry)	(pCi/g-dry)	mg/kg	(µCi/g-dry)
S.E. Location 1 0-6"	8/20/10	0.62	2.62	1.29	1,22	0.9	6.5	42.7	0.10	2.6	0.26	7.82	3.7	1.10E-06	0.2	24.6	1.67E-05
S.E. Location 1 6-12"	8/20/10	0.64	1.69	0.85	2.74	2.4	6.4	35.8	0.07	2.7	0.11	5.57	2.1	8.00E-07	0.1	8.9	6.03E-06
S.E. Location 2 0-6"	8/20/10	0.70	3,93	1.70	0.85	D.5	6,7	66.4	0.14	2.1	0.96	12.5	5.8	1.50E-06	0.2	19.4	1.31E-05
S.E. Location 2 6-12*	8/20/10	0.45	1.99	0.76	1.32	1.1	7.4	50.9	0.05	2,6	0.15	4.37	2.6	1.20E-06	0.2	3.4	2.30E-06
S.E. Location 3 0-6"	8/20/10	0.42	1,29	0.67	1.48	1.5	6.6	84.6	0.15	1.6	0.41	11.0	2.6	1.50E-08	0.2	19.0	1.29E-05
S.E. Location 3 6-12"	8/20/10	0.31	0.59	0.36	1.65	2.4	6,7	80.1	0.11	2.2	0.37	5.02	2.3	1.40E-06	0.2	3.8	2.57E-06
S.W. Location 4 0-6"	8/20/10	0.43	1.65	0.84	1.29	1.2	6.6	85.2	0.14	2.4	0.62	8.67	2.3	1.70E-06	0.2	25.1	1.70E-05
S.W. Location 4 6-12"	8/20/10	0.52	1.67	0.90	2.48	2.2	7.1	84.2	0.11	3.3	0.32	4.14	3.7	1.60E-06	0.2	3.4	2.30E-06
S.W. Location 5 0-6"	8/20/10	0.65	2.26	1.13	1.53	1.2	5.7	43.0	0.11	2.0	0.34	10.1	2.3	1.10E-06	0.2	11.8	7.99E-06
S.W. Location 5 6-12"	8/20/10	0.38	0.83	0.48	2.07	2.6	6.1	70.5	0.10	2.2	0.10	5.16	3.4	1.70E-06	0.2	2.9	1.96E-06
S.W. Location 6 0-6"	8/20/10	0.37	1.17	0.60	1.51	1.6	6.0	67.2	0.08	1.5	0.33	6.39	2.3	1.50E-06	0.2	16.7	1.13E-05
S.W. Location 6 6-12"	8/20/10	0.28	0.86	0,48	1.97	2.4	6.8	69.0	0.09	2.2	0.27	3.06	2.3	1.60E-06	0.2	5.1	3.45E-06
S.W. Location 7 0-6"	8/20/10	0.53	2.04	0,97	2.13	1.7	6.4	65.9	0.12	2.3	0.40	7.32	2.3	1.50E-06	0.2	19.0	1.29E-05
S.W. Location 7 6-12"	8/20/10	1.21	5.79	2.68	4.85	2.4	7.4	75.6	0.06	3.1	0.17	4.28	2.2	1.60E-06	0.2	4.3	2.91E-06
N.W. Location 8 0-6"	8/20/10	0.24	0.46	0.24	0.95	1,6	6.4	64.0	0.11	2.0	0.27	3.59	2.2	1.50E-06	0.2	20.0	1.35E-05
N.W. Location 8 6-12"	8/20/10	0.99	3.54	1.84	4.40	2.7	7.3	82.6	0.08	2.9	0.15	5.46	2.5	1.40E-06	0.2	2.8	1.90E-06
N.W. Location 9 0-6"	8/20/10	0.28	0.67	0.36	1.38	1.9	7.0	75.8	0.13	3.0	0.45	5.31	2.8	1.60E-06	0.2	8.7	5.89E-06
N.W. Location 9 6-12"	8/20/10	0.53	1.45	0.78	2.83	2.7	7.5	79.3	0.08	4.7	0.32	4.27	2.9	1.60E-06	0.2	2.2	1.49E-06
N.W. Location 10 0-6"	8/20/10	0.21	0.76	0,40	1.58	2.1	5.8	64.4	0.14	2.5	0.32	5.66	2.6	1.70E-06	0.2	21.3	1.44E-05
N.W. Location 10 6-12*	8/20/10	0.89	2.90	1.64	4.15	2.8	7.4	82.9	0.05	3.0	0.19	6.79	2.4	2.00E-06	0.2	4.0	2.71E-06
N.E. Location 11 0-6"	8/20/10	0.39	1.69	0.83	0,96	0.9	6,2	47.8	0.10	2.5	0.37	6.62	2.2	1.30E-06	0.2	29.8	2.02E-05
N.E. Location 11 6-12"	8/20/10	0.71	3.17	1.13	3,06	2.1	7.4	62.3	0.03	3.3	0.12	5.86	2.4	1.60E-06	0.2	2.2	1.49E-06
N.E Location 12 0-6"	8/20/10	0.40	1.48	0.77	1.37	1.3	6.5	79.1	0.13	2.7	0.36	11.8	2.6	1.50E-06	0.2	21.9	1.48E-05
N.E. Location 12 6-12"	8/20/10	0.29	0.82	0.47	1.88	2.3	6.5	75.2	0.11	3.4	0.21	4.99	2.2	1.40E-06	0.2	4.1	2.78E-06
N.E. Location 13 0-6"	8/20/10	0.48	1.81	0.90	2.09	1.8	7.4	68.8	0.07	2.8	0.07	4.48	2.1	1.50E-06	0.2	4.4	2.98E-05
N.E. Location 13 6-12"	8/20/10	0.58	1.59	0.93	3.26	2.9	7.8	74.1	0.04	3.1	0.19	1.88	3.8	1.80E-06	0.2	2.6	1.76E-06
N.E. Location 14 0-6"	8/20/10	0.23	0.80	0.49	1.43	1.8	6.7	59.4	0.11	3.4	0.18	3.24	2.6	1.60E-06	0.2	5.1	3.45E-06
N.E. Location 14 6-12"	8/20/10	0.68	1.91	1.35	3.36	2.6	7.3	69.7	0.10	3.2	0.10	2.05	2.9	1.40E-06	0.2	2.9	1.96E-06
Average 0-6*	8/20/10	0.43	1.62	0.80	1.41	1.4	6.5	65.3	0.12	2.4	0.38	7.46	2.7	1.47E-06		17.6	1.19E-05
Average 6-12"	8/20/10	0.60	2.06	1.05	2.86	2.4	7.1	70.9	80,0	3.0	0.20	4.49	2.7	1.51E-06		· 3.8	2.54E-06
Background 0-6"	8/20/10	0.30	0.30	0.87	0.32	0.3	6.8	54.6	80.0	10.9	0.05	2.19	1.5	1.80E-06	0.2	2.2	1.49E-06
Background 6-12*	8/20/10	0.57	0.57	1.47	1.42	1.0	7.2	61.7	0.05	12.5	0.03	3.27	1.8	1.30E-06	0.2	2.3	1.56E-06

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TABLE 7-8 LAND APPLICATION FACILITY (IRRIGATOR 2) ANNUAL SOIL DATA 2010-2011 ANNUAL REPORT PERMIT 603

		CONDUCTIVITY	CALCIUM	MAGNESIUM	SODIUM	SAR	pН	Sat %	ARSENIC	BARIUM	SELENIUM	POTASSIUM	BORON	RADIUM 226	TOTAL ERROR	Uranium	URANIUM - NATURAL
	SAMPLE	SAT. PASTE	SOLUBLE	SOLUBLE	SOLUBLE		SAT. PASTE		ABDTPA	ABDTPA	ABDTPA	SOLUBLE	ABDTPA		ESTIMATE <u>+</u>	mg/kg	TOTAL
SAMPLE ID	DATE	(mmhos/cm)	(meq/L)	(meq/L)	(meq/L)		(std. Units)		(mg/kg-dry)	(mg/kg-dry)	(mg/kg-dry)	(mg/kg-dry)	(mg/kg-dry)	(µCi/g-dry)	(µCi/g-dry)		(μCi/g-dry)
Location 1 0-6"	8/26/10	3.39	27.7	13.7	4.6	1.0	6.3	67.4	0.08	1.1	0.28	12.2	1.4	1.50E-06	2.00E-07	5.1	3.45E-06
Location 1 6-12"	8/26/10	3,72	26.9	14.8	8.0	1.8	6.4	81.3	0.07	0.6	0.20	7.62	1.3	1.70E-06	2.00E-07	3.0	2.03E-06
Location 2 0-6"	8/26/10	0,96	4.60	2.67	2.31	1.2	6.5	81.6	0.07	1.9	0.11	6.37	1.4	2.00E-06	2.00E-07	3.1	2.10E-06
Location 2 6-12"	8/26/10	1,98	11.9	6.96	4.64	`1.5	6.9	82.4	0.06	1.2	0.10	5.65	1.6	2.00E-06	2.00E-07	1.8	1.22E-06
Location 3 0-6"	8/26/10	1,96	13.0	5.80	3.21	1.0	7.5	76.7	0.03	2.2	0.11	7.13	1.5	1.50E-06	2.00E-07	6.4	4.33E-06
Location 3 6-12"	8/26/10	2.98	23.7	9.99	6.52	1.6	7.6	77.6	0.02	1,3	0.15	6.17	1.3	1.70E-06	2.00E-07	3.0	2.03E-06
Location 4 0-6"	8/26/10	1.66	10.0	5.02	2.73	1.0	6.9	60.5	0.05	1.4	0.22	9.73	1.0	1.30E-06	2.00E-07	9.0	6.09E-06
Location 4 6-12"	8/26/10	1,81	11.6	5.43	2.85	1.0	7.0	69,8	0.08	1.8	0.62	15.5	1.3	1.60E-06	2.00E-07	14.7	9.95E-06
Location 5 0-6"	8/26/10	2.12	13.5	6,62	3.84	1.2	7.3	47.4	0.04	2.8	0.26	10.8	1.0	1.30E-06	2.00E-07	5.0	3.39E-06
Location 5 6-12"	8/26/10	2.03	12.3	6.44	3.24	1.1	7.2	43.7	0.03	2.2	0.20	7.06	0.8	1.10E-06	2.00E-07	3.0	2.03E-06
Location 6:0-6*	8/26/10	0.97	5.48	2.50	2.24	1.1	7.2	71.7	0.04	2.2	0,08	4.07	1.2	1.60E-06	2.00E-07	2.8	1.90E-06
Location 6 6-12"	8/26/10	1.57	10.6	4.06	3.73	1.4	7.3	70.8	0.03	1.6	0.07	4.08	1.1	1.00E-06	2.00E-07	1.9	1.29E-06
Location 7 0-6"	8/26/10	2.94	22.3	11.5	4.75	1.2	6.2	76.6	0.07	1.0	0.18	17.5	1.3	1.50E-06	2.00E-07	4.8	3.25E-06
Location 7 6-12"	8/26/10	3.56	26.0	15.8	7.0	1.5	6.3	81.6	0.05	0.6	0.17	11.0	1.4	1.80E-06	2.00E-07	2.6	1.76E-06
Location 8 0-6"	8/26/10	2.23	15.2	7.65	3.87	1.1	8.5	70.5	0.07	1.3	0.12	10.3	1.3	2.10E-06	2.00E-07	5.6	3.79E-06
Location 8 6-12"	8/26/10	2.69	20.5	11.9	4.30.	1.1	7.2	75.5	0.04	1.3	0.09	5.71	1.9	1.70E-06	2.00E-07	1.8	1.22E-06
Location 9 0-6"	8/26/10	1.52	9.14	5.08	3.33	1.2	ð.5	68.4	0.07	1.2	.0.14	5.87	1.7	1.90E-06	2.00E-07	7.7	5.21E-06
Location 9 6-12"	8/26/10	3.10	22.7	14.0	6.38	1.5	6.8	76.1	0.06	0.9	0.11	5.91	2.7	1.90E-06	2.00E-07	2.9	1.96E-06
Location 10 0-6"	8/26/10	3.69	26.9	16.2	6.7	1.5	6.9	67.1	0.05	0.4	0.21	7.02	1.6	1.60E-06	2.00E-07	7.8	5.28E-06
Location 10 6-12"	8/26/10	4.12	27.0	16.1	11.5	2.5	7.3	67.8	0.02 ·	0.9	0.28	6.70	1.7	1.30E-06	2.00E-07	5.9	3.99E-06
Location 11 0-6"	8/26/10	1.97	11.4	6.23	3.19	1.1	6.9	79.6	0.08	1.4	0.32	17.7	2.0	6.00E-07	2.00E-07	8.5	5.75E-06
Location 11 6-12"	8/26/10	1.93	11.6	6.76	4.53	1.5	7.0	79.2	0.06	1.2	0.23	6.26	1.7	1.40E-06	2.00E-07	3.2	2.17E-06
Location 12 0-6*	8/26/10	2.78	17.9	8.63	3.65	1.0	6.8	41.7	0.05	1.8	0.18	10.9	. 1.6	8.00E-07	2.00E-07	9.1	6.16E-06
Location 12 6-12"	8/26/10	0.93	4.24	2.23	2.09	1.2	6,8	53.4	0.06	2.0	0.06	2.45	1.2	9.00E-07	2.00E-07	1.3	8.80E-07
Location 13 0-6"	8/26/10	1.24	6.43	3.56	2.18	1.0	6.4	50.0	0.08	1.5	0.14	6.21	1.4	1.00E-06	2.00E-07	2.3	1,56E-06
Location 13 6-12"	8/26/10	0.65	2.80	1.71	1.93	1.3	6.6	58.3	0.08	1.5	0.11	2.79	1.3	1.10E-06	2.00E-07	1.6	1.08E-06
Location 14 0-6"	8/26/10	3.51	28.3	13.3	5.0	1.1	7.1	67.5	0.06	1.0	0.20	7.67	1.7	1.20E-06	2.00E-07	7.3	4.94E-06
Location 14 6-12"	8/26/10	3.49	27.2	13.6	6.0	1.3	7.1	55.6	0.03	0.8	0.15	3.49	1.4	8.00E-07	2.00E-07	2.6	1.76E-06
Location 15 0-6"	8/26/10	3.09	14.8	7.5	2.8	0.8	6.7	65.7	0.08	1.5	0.15	7.58	1.5	1.20E-06	2.00E-07	4.2	2.84E-06
Location 15 6-12"	8/26/10	3.06	25.0	12.7	4.8	1.1	6.8	68.7	0.07	1.0	0.13	6.71	1.2	1.50E-06	2.00E-07	2.7	1.83E-06
Location 16 0-6"	8/26/10	3.07	27.7	9.2	3.8	0.9	7.8	60.0	0.05	1.9	0.15	9.08	1.6	9.00E-07	2.00E-07	4.2	2.84E-06
Location 16 6-12"	8/26/10	2.98	27.1	11.3	4.38	1.0	7.8	58.1	0.03	1.7	0.14	5.14	1.6	1.00E-06	2.00E-07	3.8	2.57E-06
Average 0-6"	8/26/10	2.32	15.9	7.84	3.6	1,1	6.8	65.8	0.06	1.5	0.18	9.38	1.5	1.38E-06		5.8	3.93E-06
Average 6-12"	: 8/26/10	2.54	18.2	9.61	5.1	1.4	7.0	68.7	0.05	1.3	0.18	6.39	1.5	1.41E-06		3.5	2.36E-06
Background 0-6"	8/26/10	0.34	3.09	0.64	0.12	<0.1	7.7	37.6	0.03	1.2	0.01	1,11	1.2	6.00E-07	1.0E-07	2.0	1.358-06
Background 6-12"	8/26/10	0.44	3.86	1.08	0.24	0.2	7.6	43.0	0.03	1.0 ·	0.01	1.09	1.2	1.00E-06	2.0E-07	2.5	1.69E-06

TABLE 7-9

SATELLITE NO. 2 PURGE STORAGE RESERVOIR SHALLOW MONITORING WELLS QUARTERLY WATER LEVEL DATA SEMI-ANNUAL WATER QUALITY DATA 2010-2011 ANNUAL REPORT PERMIT 603

SAMPLE SITE		: !	Shallow Well No. 1 (South)	I	Shallow Well No. 2 (East)			
SAMPLE DATE		22-Sep-10	18-Nov-10	17-Mar-11	22-Sep-10	18-Nov-10	17-Mar-11	
WATER LEVEL (DTW)		14.8	13.2	13.9	10.2	11.3	11.2	
MAJOR IONS (mg/L)	Rep. Limit			·				
HCO ₃	1.0				401	331	294	
SO₄	1.0				2420	2390	2430	
CI	1.0	Ν	IOT ENOUG	4	442	409	409	
NON-METALS			WATER					
Cond (µmho/cm)	1.0				5210	5090	5090	
pH (standard units)	0.01		TO SAMPLE		7.47	7.5	7.3	
TRACE METALS (mg/L)								
Ва	0.001				ND .	ND	ND	
Se	0.0025				0.039	0.036	0.029	
RADIOMETRIC								
U-nat (uCi/mL)	6.77E-10				5.36E-08	4.43E-08	3.69E-08	
Ra-226 (uCi/mL)	2.00E-10				7.80E-10	8.40E-10	1.10E-09	
Ra-226 Err. Est. +/- (uCi/mL)	. ·			.· .	1.80E-10	1.80E-10	1.7E-10	

TABLE 7-10

SATELLITE NO. 2 PURGE STORAGE RESERVOIR NEW SHALLOW MONITORING WELLS QUARTERLY WATER QUALITY DATA 2010-2011 ANNUAL REPORT PERMIT 603

SAMPLE SITE		MW-1S WEST			MS-2S NORTH			MW-3S SOUTH			MW-4S EAST	
SAMPLE DATE	28-Sep-10	18-Nov-10	16-Mar-11	28-Sep-10	18-Nov-10	17-Mar-11	28-Sep-10	18-Nov-10	17-Mar-11	28-Sep-10	18-Nov-10	17-Mar-11
WATER LEVEL (DTW)	28.4	29.8	20.3	22.4	23.7	22	22.6	22.7	23.2	33.4	34	23.7
MAJOR IONS (mg/L)							•	· .				
HCO3	428	368	366	381	368	363	408	396	402	553	504	497
SO4	1920	1930	1920	231	240	248	972	1020	1040	1680	1620	1730
CI	279	307	317	69	72	73	521	497	473	115	126	138
NON-METALS									1			
Cond (µmho/cm)	4340	4390	4430	1160	1180	1170	3410	3410	3370	3610	3410	3660
pH (standard units)	7.76	7.48	7.23	7.87	7.61	7.52	7.85	7.60	7.51	7.80	7.59	7.24
TRACE METALS (mg/L)												
Ва	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Se	2	2.08	2.3	0.003	0.005	0.003	0.226	0.198	0.178	0.9	0.681	0.84
RADIOMETRIC				· ·						1		
U-nat (uCi/mL)	4.40E-08	3.80E-08	3.40E-08	8.10E-10	1.20E-09	1.00E-09	5.70E-07	5.80E-07	5.60E-07	1.50E-07	1.90E-07	1.60E-07
Ra-226 (uCi/mL)	1.50E-09	2.90E-10	5.20E-10	7.00E-10	3.10E-10	2.00E-10	7.60E-10	2.70E-10	3.90E-10	3.50E-09	2.10E-09	2.10E-09
Ra-226 Err. Est. +/- (uCi/mL)	2.30E-10	1.20E-10	1.50E-10	1.80E-10	1.30E-10	1.90E-10	1.70E-10	1.20E-10	1.40E-10	3.50E-10	2.70E-10	1.80E-10



SELENIUM PLANT RADIUM TREATMENT SYSTEM DISCHARGE MONTHLY RADIUM GRAB SAMPLES 2010-2011

SAMPLE DATE	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11
	•									
	•									
Ra-226 (uCi/ml.)	2 40F-10	5 60E-10	3.40E-10	1.30E-08	5.70E-10	8.60E-09	1.60E-09	1.10E-08	5.50E-09	7.20E-09
Ra Err. Est.+/-	1,70E-10	1.80E-10	1.60E-10	8.20E-10	1.80E-10	4.90E-10	2.30E-10	6.90E-10	5.70E-10	5.00E-10

TABLE 10-1: PERMIT #603 DELINEATION DRI'

LES (APRIL1, 2010 THROUGH APRIL 30, 2011)

66000000 delineation holes

Prepared By

Ken Garoutte

Operator Name

Cameco Resources

Smith Ranch-Highland Operation

P.O. Box 1210, Glenrock, WY 82637

All holes capped and sealed

	Delineation					1. A.	Total Drilled	Drill Completion	
Mine Unit	Number	Section	Township	Range	Northing	Easting	Depth	Date	Surface Ownership
D	3673-23-139	23	. 36	73	880240	386266	700	4/21/2010	Numrich, et al
E	3673-22-19	22	36	73	879578	385211	640	9/29/2010	Vollman Ranches
E	3673-22-20	22	36	73	878676	384648	600	11/4/2010	Vollman Ranches
F	3673-21-1	21	36	73	878157	376633	740	3/21/2011	Voliman Ranches
F	3673-21-10	21	36	73	878791	377436	720	3/23/2011	Vollman Ranches
F	3673-21-11	21	36	73	878962	377268	720	3/23/2011	Duck Creek Ranch
F	3673-21-12	21	36	73	879035	377266	760	3/24/2011	Duck Creek Ranch
F	3673-21-13	21	36	73	879036	377366	760	3/25/2011	Duck Creek Ranch
F	3673-21-14	21	36	73	878635	378158	720	3/24/2011	Vollman Ranches
F	3673-21-15	21	36	73	878636	378271	720	3/23/2011	Vollman Ranches
F	3673-21-16	21	36	73	878742	378156	730	3/25/2011	Vollman Ranches
F	3673-21-17	21	36	73	878743	378268	720	3/25/2011	Vollman Ranches
F	3673-21-18	21	36	73	879034	377756	740	3/24/2011	Duck Creek Ranch
F	3673-21-19	21	36	73	879036	377866	740	3/25/2011	Duck Creek Ranch
F	3673-21-2	21	36	73	878309	376881	760	3/22/2011	Vollman Ranches
F	3673-21-20	21	36	73	879036	377964	740	3/25/2011	Duck Creek Ranch
F	3673-21-21	21	36	73	879041	378158	720	3/23/2011	Duck Creek Ranch
F	3673-21-23	21	36	73	879139	378063	720	3/25/2011	Duck Creek Ranch
F	3673-21-24	21	36	73	879237	378066	740	3/25/2011	Duck Creek Ranch
F	3673-21-25	21	36	73	879240	378170	740	3/28/2011	Duck Creek Ranch
F	3673-21-26	21	36	73	879402	378269	740	3/28/2011	Duck Creek Ranch
F	3673-21-28	21	36	73	878889	377247	720	3/28/2011	Duck Creek Ranch
F	3673-21-29	21	36	73	878867	377069	740	3/29/2011	Duck Creek Ranch
F	3673-21-3	21	36	73	878360	376590	760	3/21/2011	Vollman Ranches
7	3673-21-30	21	36	73	878764	377060	740	3/29/2011	Vollman Ranches
F	3673-21-4	21	36	73	. 878470	377019	760	3/21/2011	Vollman Ranches
F	3673-21-5	21	36	73	* 878598	376689	760	3/22/2011	Vollman Ranches
F	3673-21-6	21	36	73	878573	377127	742	3/22/2011	Vollman Ranches
F	3673-21-7	21	36	73	878648	377094	720	3/22/2011	Vollman Ranches
F	3673-21-8	21	36	73	878711	377364	740	3/23/2011	Voliman Ranches
F	3673-21-9	. 21	36	73	878795	377032	740	3/23/2011	Vollman Ranches
· F	3673-28-24	28	36	73	876090	375592	800	4/5/2011	Vollman Ranches
F	3673-28-25	28	36	73	876055	375792	800	3/29/2011	Vollman Ranches

TABLE 10-1: PERMIT #603 DELINEATION DRI! DLES (APRIL1, 2010 THROUGH APRIL 30, 2011) 66000000 delineation holes



	Delineation						Total Drilled	Drill Completion	
Mine Unit	Number	Section	Township	Range	Northing	Easting	Depth	Date	Surface Ownership
F	3673-28-26	28	36	- 73	876024	375984	800	3/29/2011	Vollman Ranches
F	3673-28-27	28	36	73	875976	376033	800	4/4/2011	Vollman Ranches
F	3673-28-28	28	36	73	876024	376088	720	3/31/2011	Vollman Ranches
F	3673-28-29	28	36	73	876104	376201	800	3/30/2011	Vollman Ranches
F	3673-28-31	28	36	73	875763	376805	820	3/31/2011	 Vollman Ranches
F	3673-28-32	28	36	73	875804	377013	820	4/1/2011	Vollman Ranches
F	3673-28-33	28	36	73	875807	377088	820	4/4/2011	Vollman Ranches
F	3673-28-34	28	36	73	875705	377134	820	4/4/2011	Vollman Ranches
1	3673-24-5000	24	36	73	877335	391616	720	3/17/2011	Fowler Ranch Partnership
1	3673-24-5001	24	36	73	877427	391691	720	3/23/2011	Fowler Ranch Partnership
1	3673-24-5002	24	36	73	877423	391793	720	3/24/2011	Fowler Ranch Partnership
1	3673-24-5003	24	36	73	877341	391803	720	3/25/2011	Fowler Ranch Partnership
I	3673-24-5004	24	36	73	877255	391708	720	3/17/2011	Fowler Ranch Partnership
1	3673-24-5006	24	36	73	877131	391921	720	3/18/2011	Fowler Ranch Partnership
1	3673-24-5009	24	36	73	876943	392164	720	3/21/2011	Fowler Ranch Partnership
I	3673-24-5010	24	. 36	73	876832	392376	720	3/21/2011	Fowler Ranch Partnership
I	3673-24-5011	24	. 36	73	876846	392482	720	3/23/2011	Fowler Ranch Partnership
1	3673-24-5012	24	36	73	876723	392559	720	3/22/2011	Fowler Ranch Partnership
· 1	3673-24-5015	24	36	73	878040	391673	730	3/31/2011	Fowler Ranch Partnership
1	3673-24-5016	24	36	73	878133	391765	• 730	3/31/2011	Fowler Ranch Partnership
1	3673-24-5017	24	36	73	878141	391654	730	3/28/2011	Fowler Ranch Partnership
1	3673-24-5018	24	36	73	878236	391636	730	3/25/2011	Fowler Ranch Partnership
1	3673-24-5019	24	36	73	877872	391133	730	3/28/2011	Fowler Ranch Partnership
1	3673-24-5020	24	36	73	878234	391966	730	3/30/2011	Fowler Ranch Partnership
I I	3673-24-5021	24	36	73	878248	392127	730	4/1/2011	Fowler Ranch Partnership
I I	3673-24-5022	24	. 36	73	878428	391175	730	4/4/2011	Fowler Ranch Partnership
I	3673-24-5023	24	36	73	878443	: 391257	730	4/1/2011	Fowler Ranch Partnership
l	3673-24-5024	24	36	73	878538	391368	730	3/31/2011	Fowler Ranch Partnership
1	3673-24-5025	- 24	36	73	877358	391049	730	4/5/2011	Fowler Ranch Partnership
i	3673-24-5028	24	36	73	877779	391443	730	4/5/2011	Fowler Ranch Partnership
1	3673-24-5029	24	36	73	877872	391133	730	4/7/2011	Fowler Ranch Partnership
1	3673-24-5031	24	36	73	878043	391368	730	4/4/2011	Fowler Ranch Partnership
1	3673-24-5032	24	36	73	878153	392510	730	3/31/2011	Fowler Ranch Partnership

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2 10-2: 2010-2011 ANNUAL REPORT: PLUGGED AND A! COMMENT REPORT WITH BOND RELEASE REQUEST, '

MIT

#603

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

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			an a							Abandonmnt	LQD Abandonment	Vegetation Bond	LOD Vegetation	
Mine	Delineation		20.2				Total	Drill		Bond Release	Bond Release	Release Request	Bond Release	
Unit	Number	Sect	Twnshp	Range	Northing	Easting	Depth	Date	Seed Date	Request Date	Date	Date	Date	Surface Ownership
KN	3673-19-1000	19	36	73	880516	365807	840	11/20/2009	10/26/2010	6/30/2011			ļ	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	· · · · · · · · · · · · · · · · · · ·	L		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	L			Vollman Ranches Inc.
KN	3673-19-1009	19	36	73	880108	365545	860	11/23/2009	10/26/2010	6/30/2011		L		Vollman Ranches Inc.
KN	3673-19-1010	19	36	73	879813	364704	880	11/20/2009	10/27/2010	6/30/2011		L		Vollman Ranches Inc.
KN	3673-19-1011	19	36	73	879979	365774	860	11/24/2009	10/26/2010	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			I	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.
	3673-19-1029			1									1	
	(19-129, 2010	10		70	004000	005550	000	0/04/0040	40/07/0040	012012044	}]		
		19	30	73	881022	300002	880	2/24/2010	10/2//2010	6/30/2011	·	<u> </u>		Vollman Ranches Inc.
	3673-19-938	19	30	13	880281	365702	860	11/2/2009	10/26/2010	6/30/2011	<u> </u>	- <u> </u>	¥	Vollman Ranches Inc.
	2672 40 040	19	36	- 73	880375	3656/3	860	11/2/2009	10/26/2010	6/30/2011	<u> </u>	<u> </u>		Voliman Ranches Inc.
	2672 40 044	1 19	36	73	880389	365512	100	10/28/2009	10/26/2010	6/30/2011			<u> </u>	Vollman Ranches Inc.
	30/3-19-941	19	36	73	880346	365445	860	10/27/2009	10/26/2010	6/30/2011	<u> </u>	·	<u> </u>	Vollman Ranches Inc.
	130/3-19-942	19	36	73	880056	365559	1000	11/3/2009	10/26/2010	6/30/2011	<u> </u>	1	L	Vollman Ranches Inc.

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								a an		Abandonmnt	LQD Abandonment	Vegetation Bond	LQD Vegetation	
Mine	Delineation			<u>, .</u>		F 41	Total	Drill	Seed Date	Bond Release Request Date	Bond Release	Release Request	Bond Release	Surface Ownership
OTHE	Number	Sect	Iwnsnp	Range	Northing	Easting	Depti	Date						
KN	3673-19-943	19	36	73	880044	365363	880	10/23/2009	10/27/2010	6/30/2011				Voliman Ranches Inc.
KN	3673-19-944	19	36	73	880110	365354	880	10/26/2009	10/27/2010	6/30/2011				Voliman Ranches Inc.
KN	3673-19-945	19	36		880139	365256	880	10/27/2009	10/27/2010	6/30/2011				Voliman Ranches Inc.
KN	3673-19-946	19	36	/3	880118	365141	1000	10/23/2009	10/27/2010	6/30/2011			ļ	Voliman Ranches Inc.
KN	36/3-19-94/	19	36	73	880226	365137	840	11/3/2009	10/26/2010	6/30/2011				Voliman Ranches Inc.
	3673-19-948	19		73	000201	304938	000	11/4/2009	10/27/2010	6/20/2011	ļ		<u> </u>	Voliman Ranches Inc.
	3673-19-949	19	30	73	880267	304010	860	11/0/2009	10/27/2010	6/30/2011			· · · · ·	Vollman Ranches Inc.
	3673-19-950	19	20	73	000243	304711	000	11/9/2009	10/27/2010	6/30/2011		·		Voliman Ranches Inc.
	3673-19-951	19	30	73	880050	304004	900	0/0/2009	10/27/2010	6/20/2011	·		<u> </u>	Voliman Ranches Inc.
	3073-19-952	19	30	72	000009	264674	000	11/12/2009	10/27/2010	6/30/2011	<u> </u>		<u> </u>	Voliman Ranches Inc.
	3673-19-953	19	30	73	079903	304071	000	11/12/2009	10/27/2010	6/20/2011				Voliman Nanches Inc.
KN	36/3-19-954	19	36	/3	879711	364682	880	10/6/2009	10/27/2010	0/30/2011	<u> </u>			Voliman Ranches Inc.
KN	36/3-19-955	19	36	/3	879657	364760	920	10/2/2009	10/27/2010	6/30/2011				Voliman Ranches Inc.
	3673-19-956	19	36	73	879550	364676	920	9/30/2009	10/27/2010	6/30/2011				Voliman Ranches Inc.
	3673-19-957	19	30	73	0/9015	304043	000	10///2009	10/27/2010	6/30/2011			{	Vollman Ranches Inc.
KN	36/3-19-958	19	30	73	880503	365502	860	12/18/2009	10/20/2010	6/30/2011	<u>}</u>	<u>}</u>	<u> </u>	Voliman Ranches Inc.
KN	36/3-19-959	19	30	73	879820	364905	880	10/22/2009	10/27/2010	6/30/2011		<u> </u>	ł	Vollman Ranches Inc.
	3673-19-960	19	36	73	880222	364630	880	12/2/2009	10/2//2010	6/30/2011	}	·	}	Voliman Ranches Inc.
KN	3673-19-961	19	36	73	880056	365776	860	12/16/2009	10/26/2010	6/30/2011	<u> </u>	·		Voliman Ranches Inc.
KN	3673-19-962	19	36	/3	880110	365718	008	12/15/2009	10/26/2010	6/30/2011	 	· · ·		Vollman Ranches Inc.
	3673-19-963	19	30	73	880095	304002	000	11/11/2009	10/27/2010	6/30/2011		<u> </u>	<u></u>	Voliman Ranches Inc.
	2673 10 965	10	30	73	880125	364906	980	11/10/2009	10/27/2010	6/30/2011		<u> </u>		Vollman Ranches Inc.
KN	3673-19-966	10	36	73	880132	365796	860	12/17/2009	10/26/2010	6/30/2011				Vollman Ranches Inc.
KN	3673-19-967	10	36	73	870077	365840	000	12/17/2003	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			ł	Vollman Ranches Inc.
KN	3673-19-969	19	36	73	880584	365831	840	12/18/2009	10/26/2010	6/30/2011	<u> </u>			Vollman Ranches Inc.
KN	3673-19-970	19	36	73	879588	365134	880	9/29/2009	10/26/2010	6/30/2011	1	[<u> </u>	Vollman Ranches Inc.
KN	3673-19-971	19	36	73	879596	365223	880	9/28/2009	10/26/2010	6/30/2011	1			Vollman Ranches Inc.
KN	3673-19-972	19	36	73	879596	365305	880	10/8/2009	10/26/2010	6/30/2011	<u> </u>			Vollman Ranches Inc.
KN	3673-19-973	19	36	73	879618	365382	900	10/16/2009	10/26/2010	6/30/2011	1	<u> </u>		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				Voliman 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		<u> </u>	1	Vollman Ranches Inc.
KN	3673-19-981	19	36	73	880385	365936	860	12/16/2009	10/26/2010	6/30/2011			L	Vollman Ranches Inc.
KN	3673-19-982	19	36	73	879123	364904	900	9/25/2009	10/26/2010	6/30/2011	<u> </u>			Vollman Ranches Inc.

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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	Vegetation Bond Release Request Date	LQD Vegetation Bond Release Date	Surface Ownership
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.
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	4			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				Voliman Ranches Inc.
KN	3673-19-998	19	36	73	880523	365543	860	11/12/2009	10/26/2010	6/30/2011		·		Voliman Ranches Inc.
KN	3673-19-999	19	36	73	880336	364938	860	11/11/2009	10/27/2010	6/30/2011				Voliman 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

SEED MIX APPLIED	Ibs 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

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

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Table 10-3 Meterological Data November 2010 - April 2011

Date	Temp Avg. (F)	Rain Fall Total (in)
10-Nov	26.7	0.01
10-Dec	27.9	0.16
11-Jan	24.3	0.02
11-Feb	20.4	0.06
11-Mar	35.4	0.11
11-Apr	39	1.22
Total F	Rainfall Rpt. Period	1.58

Date	Wind Speed Avg. (mph)	Wind Angle Avg.	Wind Direction Avg.
10-Nov	11.28	214.47	Southwest
10-Dec	12.4	243.39	Southwest
11-Jan	13.45	254.22	West
11-Feb	14.23	224.46	Southwest
11-Mar	13.09	220.59	Southwest
11-Apr	14.24	230.22	Southwest

TABLE 10-1: PERMIT #603 DELINEATION DRILL

S (APRIL1, 2010 THROUGH APRIL 30, 2011)

66 delineation holes

Prepared By

Ken Garoutte Cameco Resources

Operator Name

ameco Resources

Smith Ranch-Highland Operation

P.O. Box 1210, Glenrock, WY 82637

All holes capped and sealed

	Delineation						Total Drilled	Drill Completion	
Mine Unit	Number	Section	Township	Range	Northing	Easting	Depth	Date	Surface Ownership
D	3673-23-139	23	36	73	880240	386266	700	4/21/2010	Numrich, et al
E	3673-22-19	22	36	73	879578	385211	640	9/29/2010	Vollman Ranches
E	3673-22-20	22	36	73	878676	384648	600	11/4/2010	Vollman Ranches
F	3673-21-1	21	36	73	878157	376633	740	3/21/2011	Vollman Ranches
F	3673-21-10	21	36	73	878791	377436	720	3/23/2011	Vollman Ranches
F	3673-21-11	21	36	73	878962	377268	720	3/23/2011	Duck Creek Ranch
F	3673-21-12	21	36	73	879035	377266	760	3/24/2011	Duck Creek Ranch
F	3673-21-13	21	36	73	879036	377366	760	3/25/2011	Duck Creek Ranch
F	3673-21-14	21	36	73	878635	378158	720	3/24/2011	Vollman Ranches
F	3673-21-15	21	36	73	878636	378271	720	3/23/2011	Vollman Ranches
F	3673-21-16	21	36	73	878742	378156	730	3/25/2011	Vollman Ranches
F	3673-21-17	21	36	73	878743	378268	. 720	3/25/2011	Vollman Ranches
F	3673-21-18	21	36	73	879034	377756	740	3/24/2011	Duck Creek Ranch
F	3673-21-19	21	36	73	879036	377866	740	3/25/2011	Duck Creek Ranch
F	3673-21-2	21	36	73	878309	376881	760	3/22/2011	Vollman Ranches
F	3673-21-20	21	36	73	879036	377964	740	3/25/2011	Duck Creek Ranch
F	3673-21-21	21	36	73	879041	378158	720	3/23/2011	Duck Creek Ranch
F	3673-21-23	21	36	73	879139	378063	720	3/25/2011	Duck Creek Ranch
F	3673-21-24	21	36	73	879237	378066	740	3/25/2011	Duck Creek Ranch
F	3673-21-25	21	36	73	879240	378170	740	3/28/2011	Duck Creek Ranch
F	3673-21-26	21	36	. 73	879402	378269	740	3/28/2011	Duck Creek Ranch
F	3673-21-28	21	36	73	878889	377247	720	3/28/2011	Duck Creek Ranch
F	3673-21-29	21	. 36	73	878867	377069	740	3/29/2011	Duck Creek Ranch
F	3673-21-3	21	36	73	878360	376590	760	3/21/2011	Vollman Ranches
F	3673-21-30	21	36	73	878764	377060	740	3/29/2011	Vollman Ranches
F	3673-21-4	21	36	73	878470	377019	760	3/21/2011	Vollman Ranches
F	3673-21-5	21	36	73	878598	376689	760	3/22/2011	Voliman Ranches
F	3673-21-6	21	36	73	878573	377127	742	3/22/2011	Vollman Ranches
F	3673-21-7	21	36	73	878648	377094	720	3/22/2011	Vollman Ranches
F	3673-21-8	21	36	73	878711	377364	740	3/23/2011	Vollman Ranches
F	3673-21-9	21	36	. 73	878795	377032	740	3/23/2011	Vollman Ranches
F	3673-28-24	28	36	73	876090	375592	800	4/5/2011	Vollman Ranches
F	3673-28-25	. 28	36	73	876055	375792	800	3/29/2011	Vollman Ranches

TABLE 10-1: PERMIT #603 DELINEATION DRILL 66 delineation holes

	Delineation						Total Drilled	Drill Completion	
Mine Unit	Number	Section	Township	Range	Northing	Easting	Depth	Date	Surface Ownership
F	3673-28-26	28	. 36	73	876024	375984	800	3/29/2011	Vollman Ranches
F	3673-28-27	28	36	73	875976	376033	800	4/4/2011	Vollman Ranches
F	3673-28-28	28	36	73	876024	376088	720	3/31/2011	Vollman Ranches
F	3673-28-29	28	36	73	876104	376201	800	3/30/2011	Vollman Ranches
F	3673-28-31	28	36	73	875763	376805	820	3/31/2011	Vollman Ranches
F	3673-28-32	28	36	73	875804	377013	820	4/1/2011	Vollman Ranches
F	3673-28-33	28	36	73	875807	377088	820	4/4/2011	Vollman Ranches
F	3673-28-34	28	36	73	875705	377134	820	4/4/2011	Vollman Ranches
1	3673-24-5000	24	36	. 73	877335	391616	720	3/17/2011	Fowler Ranch Partnership
I	3673-24-5001	24	36	. 73	877427	391691	720	3/23/2011	Fowler Ranch Partnership
I	3673-24-5002	24	36	73	877423	391793	720	3/24/2011	Fowler Ranch Partnership
I	3673-24-5003	24	36	73	877341	391803	720	3/25/2011	Fowler Ranch Partnership
I	3673-24-5004	24	36	73	877255	391708	720	3/17/2011	Fowler Ranch Partnership
I	3673-24-5006	24	36	73	877131	391921	720	3/18/2011	Fowler Ranch Partnership
Ι	3673-24-5009	24-5009 24	36	73	876943	392164	720	3/21/2011	Fowler Ranch Partnership
I I	3673-24-5010	24	36	73	876832	392376	720	3/21/2011	Fowler Ranch Partnership
1	3673-24-5011	24	36	73	876846	392482	720	3/23/2011	Fowler Ranch Partnership
I	3673-24-5012	24	36	73	876723	392559	720	3/22/2011	Fowler Ranch Partnership
1	3673-24-5015	24	. 36	73	878040	391673	730	3/31/2011	Fowler Ranch Partnership
I ·	3673-24-5016	24	36	73	878133	391765	730	3/31/2011	Fowler Ranch Partnership
I ·	3673-24-5017	24	. 36	73	878141	391654	730	3/28/2011	Fowler Ranch Partnership
1	3673-24-5018	24	36	73	878236	391636	730	3/25/2011	Fowler Ranch Partnership
I	3673-24-5019	24	36	73	877872	391133	730	3/28/2011	Fowler Ranch Partnership
I	3673-24-5020	24	36	73	878234	391966	730	3/30/2011	Fowler Ranch Partnership
1	3673-24-5021	24	36	73	878248	392127	730	4/1/2011	Fowler Ranch Partnership
1	3673-24-5022	24	36	73	878428	391175	730	4/4/2011	Fowler Ranch Partnership
I	3673-24-5023	24	36	73	878443	391257	730	4/1/2011	Fowler Ranch Partnership
<u> </u>	3673-24-5024	24	36	73	878538	391368	730	3/31/2011	Fowler Ranch Partnership
1	3673-24-5025	24	36	73	877358	391049	730	4/5/2011	Fowler Ranch Partnership
1	3673-24-5028	24	36	73	877779	391443	730	4/5/2011	Fowler Ranch Partnership
I	3673-24-5029	24	36	73	877872	391133	730	4/7/2011	Fowler Ranch Partnership
1	3673-24-5031	24	36	73	878043	391368	730	4/4/2011	Fowler Ranch Partnership
I	3673-24-5032	24	36	73	878153	392510	730	3/31/2011	Fowler Ranch Partnership

TABLE

2010-2011 ANNUAL REPORT: PLUGGED AND ABANI CENT REPORT WITH BOND RELEASE REQUEST, PERM.

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88 delineation holes

P.O. Box 1210, Glenrock, WY 82637

Prepared By Ken Garoutte

Operator Name Cameco Resources

Smith Ranch-Highland Operation

All coordinates are in Converse County

LOD Abandonmnt Abandonment Vegetation Bong LQD Vegetation Mine Delineation Total Drill Bond Release Bond Release Release Request Bond Release Unit Number Depth Date Seed Date Request Date Date Date Date Surface Ownership Sect Twnshol Range Northina Easting 6/30/2011 Vollman Ranches Inc KN 3673-19-1000 19 36 73 880516 365807 840 11/20/2009 10/26/2010 KN 3673-19-1001 19 36 73 880584 365739 860 12/1/2009 10/26/2010 6/30/2011 Vollman Ranches Inc 36 73 6/30/2011 KN 3673-19-1002 88039 365852 860 11/16/2009 10/26/2010 Vollman Ranches Inc 19 73 KN 3673-19-1003 19 36 880523 365543 860 11/19/2009 10/26/2010 6/30/2011 Vollman Ranches Inc 36 73 10/26/2010 6/30/2011 Vollman Ranches Inc KN 3673-19-1004 19 880056 365730 860 11/20/2009 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 36 73 880559 365621 840 11/25/2009 10/26/2010 6/30/2011 Vollman Ranches Inc 19 KN 3673-19-1007 19 36 73 880310 365315 840 11/30/2009 10/26/2010 6/30/2011 Vollman Ranches Inc 73 6/30/2011 Vollman Ranches Inc KN 3673-19-1008 19 36 88018 365664 860 11/23/2009 10/26/2010 KN 3673-19-1009 19 36 73 880108 365545 860 11/23/2009 10/26/2010 6/30/2011 Vollman Ranches Inc 36 73 879813 880 11/20/2009 10/27/2010 6/30/2011 Vollman Ranches Inc. KN 3673-19-1010 19 364704 73 KN 3673-19-1011 19 36 879979 365774 860 11/24/2009 10/26/2010 6/30/2011 Vollman Ranches Inc. 73 36 879901 860 11/24/2009 10/26/2010 6/30/2011 Vollman Ranches Inc. KN 3673-19-1012 19 365794 73 KN 3673-19-1013 19 36 880385 365861 860 11/24/2009 10/26/2010 6/30/2011 Vollman Ranches Inc 19 36 73 880297 364625 880 1/25/2010 10/27/2010 6/30/2011 Vollman Ranches Inc KN 3673-19-1015 73 Vollman Ranches Inc 19 36 880281 365947 1/5/2010 10/26/2010 6/30/2011 KN 3673-19-1016 840 3673-19-1017 19 36 73 880237 365875 840 12/18/2009 10/26/2010 6/30/2011 Vollman Ranches Inc KN 36 73 10/26/2010 6/30/2011 Vollman Ranches Inc KN 3673-19-1018 19 880288 365807 840 1/4/2010 KN 3673-19-1019 19 36 73 880063 36585 840 1/14/2010 10/26/2010 6/30/2011 Vollman Ranches Inc Vollman Ranches Inc KN 3673-19-1020 19 36 73 880154 365867 840 1/11/2010 10/26/2010 6/30/2011 73 36 10/26/2010 6/30/2011 Vollman Ranches Inc KN 3673-19-1021 19 880199 365795 840 1/5/2010 36 Vollman Ranches Inc KN 3673-19-1022 19 73 880483 365970 840 1/13/2010 10/26/2010 6/30/2011 73 KN 3673-19-1023 19 36 880201 36594 840 1/12/2010 10/26/2010 6/30/2011 Vollman Ranches Inc 36 73 Vollman Ranches Inc KN 3673-19-1024 19 880154 365867 840 1/11/2010 10/26/2010 6/30/2011 3673-19-1025 19 36 73 840 6/30/2011 Vollman Ranches Inc KN 880154 365867 1/11/2010 10/26/2010 KN 3673-19-1026 36 73 1/13/2010 10/26/2010 6/30/2011 Vollman Ranches Inc 19 880114 365941 1000 36 73 KN 3673-19-1027 19 880378 364688 880 1/28/2010 10/27/2010 6/30/2011 Vollman Ranches Inc 3673-19-1029 19-129, 2010 Vollman Ranches Inc KN Annual Report) 19 36 73 881022 365552 880 2/24/2010 10/27/2010 6/30/2011 36 73 KN 3673-19-938 19 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 3673-19-940 19 36 73 KN 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 3673-19-942 19 36 73 365559 1000 KN 880056 11/3/2009 10/26/2010 6/30/2011 Vollman Ranches Inc

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2. 2010-2011 ANNUAL REPORT: PLUGGED AND ABANL STREPORT WITH BOND RELEASE REQUEST, PERM. TABLE

88 delineation holes

	D. U.S.									Abandonmnt	LQD Abandonment	Vegetation Bond	LQD Vegetation	
Unit	Number	Sect	Twnshp	Range	Northing	Easting	Depth	Date	Seed Date	Bond Release Request Date	Bond Release Date	Release Request	Bond Release Date	Surface Ownership
KN	3673-19-943	19	36	73	880044	365363	880	10/23/2009	10/27/2010	6/30/2011	ALCONOLUTIONS PROVIDED BY AND		and an development of the	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.
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	L			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	İ			Vollman Ranches Inc.
KN	3673-19-958	19	36	. 73	880503	365502	860	12/18/2009	10/26/2010	6/30/2011	L	<u> </u>		Vollman Ranches Inc.
KN	3673-19-959	19	36	73	879820	364905	880	10/22/2009	10/27/2010	6/30/2011		L		Vollman Ranches Inc.
KN	3673-19-960	19	36	73	880222	364630	880	12/2/2009	10/27/2010	6/30/2011			l	Vollman Ranches Inc.
KN	3673-19-961	19	36	73	880056	365776	860	12/16/2009	10/26/2010	6/30/2011	<u> </u>			Vollman Ranches Inc.
KN	3673-19-962	19	36	73	880110	365718	860	12/15/2009	10/26/2010	6/30/2011	<u> </u>		ļ	Vollman Ranches Inc.
KN	3673-19-963	19	36	73	880041	364862	880	11/11/2009	10/27/2010	6/30/2011			l. <u></u>	Vollman Ranches Inc.
KN	3673-19-964	19	36	73	880085	364908	880	11/10/2009	10/27/2010	6/30/2011	ļ			Vollman Ranches Inc.
KN	3673-19-965	19	36	73	880125	364964	• 880	11/3/2009	10/27/2010	6/30/2011	- <u>-</u>		L	Vollman Ranches Inc.
KN	3673-19-966	19	36	73	880132	365796	860	12/17/2009	10/26/2010	6/30/2011	··	<u> </u>	ļ	Vollman Ranches Inc.
KN	3673-19-967	19	36	73	879977	365849	860	12/17/2009	10/26/2010	6/30/2011	L			Vollman Ranches Inc.
KN	3673-19-968	19	36	73	879628	365061	880	10/21/2009	10/26/2010	6/30/2011			ļ	Vollman Ranches Inc.
KN	3673-19-969	19	36	73	880584	365831	840	12/18/2009	10/26/2010	6/30/2011	· .		<u> </u>	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.
	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		{	<u> </u>	Vollman Ranches Inc.
KN	3673-19-975	19	36	73	819671	365650	880	10/19/2009	10/26/2010	6/30/2011	<u> </u>	<u> </u>		Vollman Ranches Inc.
KN	3673-19-976	19	36	73	879605	365616	1000	10/20/2009	10/26/2010	6/30/2011	l		{	Vollman Ranches Inc.
KN	3673-19-977	19	36	73	879261	364774	900	9/30/2009	10/26/2010	6/30/2011		<u> </u>		Vollman Ranches Inc.
	3673-19-978	19	36	73	879207	364899	890	9/28/2009	10/26/2010	6/30/2011	ł	ł	<u> </u>	Vollman Ranches Inc.
	3673-19-979	19	36	73	879261	364965	900	9/29/2009	10/26/2010	6/30/2011		<u> </u>	 	Voliman Ranches Inc.
	3673-19-980	19	36	- 73	880453	365901	860	12/17/2009	10/26/2010	6/30/2011		 	<u> </u>	Vollman Ranches Inc.
	3673-19-981	19	36	73	880385	365936	860	12/16/2009	10/26/2010	6/30/2011	ļ	ļ	 	Vollman Ranches Inc.
KN	3673-19-982	19	36	73	879123	364904	900	9/25/2009	10/26/2010	6/30/2011	1	1	Į	Voliman Ranches Inc.
TABLE

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

2010-2011 ANNUAL REPORT: PLUGGED AND ABANL



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88 delineation holes

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	Vegetation Bond Release Request Date	LQD Vegetation Bond Release Date	Surface Ownership
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.
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

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

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Figures





Figure 7-2 Mean Selenium Concentrations (mg/kg) in Vegetation Samples from Irrigator No. 2 During 1996-2010



* 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 1990-2010



Figure 7-4 Mean Conductivity, Selenium, Uranium, and Radium-226 Concentrations in Soil Samples from Irrigator No. 2 During 1993 and 1995-2010



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Appendix A

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Appendix B

2010 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 2010.

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, 2009 through December 26, 2010 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. <u>Water Monitoring</u>

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 .048 mg/L. The mean selenium concentration at the South Pumpback Sump remained stable at 0.002 mg/L. These mean concentrations shown are below Class III (Livestock) and Class I (Domestic) standards of 0.05 mg/L.



Table 1

Date	East Pumpback Sump	South Pumpback Sump
2/16/10	0.063	0.003
5/19/10	0.062	<0.001
8/10/10	0.033	0.003
11/2/10	0.033	0.003
Mean	0.048	0.002

Dissolved Selenium Concentrations (mg/L) in Water

D. <u>Vegetation Monitoring</u>

In accordance with the Lease and Monitoring Agreement, vegetation samples were obtained during the "growing season" portion of 2010. Samples were obtained on June 11, 2010. 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 sclenium analysis. Results of the laboratory analysis are included in Table 2. A review of the results shows that the sclenium concentrations at Site #2, as well as Site #1-Background decreased from the previous year, and Site #3 increased. Site #2 is well below the background concentrations, and Site #3 exceeded the background concentration.

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

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

	Site #1			
Date	(Background)	<u>Site #2</u>	<u>Site #3</u>	
06/11/09	2.4	0.8	4.6	

E. <u>Conclusions</u>

The monitoring requirements specified in the Lease and Monitoring Agreement were conducted during 2010. 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 2010.

Figure 2 shows a graph of the selenium concentration in the vegetation from 1996 through 2010. 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 #1). 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



Figure 2: Annual Monitoring Report Selenium Concentrations in Vegetation at Section 22 Drainage



Appendix C

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Highland Uranium Project Reclamation Cost Estimate, June 30, 2011

I.	Groundwater Restoration (GW REST Sheet)				\$27	,557,801
II.	Well Abandonment and Wellfield Reclamation (WA, WF	REC, WF-SAT-SURF	Sheets)		\$20	,589,272
III.	Equipment and Building Costs (EQUIP, BLDGS Sheets)				\$3	,711,654
IV.	Miscellaneous Site Reclamation (MISC REC Sheet)				\$11	,816,797
	Subtotal Reclamation Cost				\$63	,675,525
		Contingency	25%		\$1	5,918,881
				TOTAL	\$79	9,594,406
- <u></u>		······································				
Permit	603 Items in Yellow h	ave been changed since the pr	evious submission		1	
			÷		1	

TOTALS

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· · · ·		<u> </u>							round Water B	estoration				····		, , ,	
		· · · · · · · · · · · · · · · · · · ·	r · · · · · · · · · · · · · · · · · · ·					.	Tounu Water K	Mine Unit-C Haul	· · · · · · · · · · · · · · · · · ·		·	<u> </u>			r
						Mine Unit-A	Mine Unit-B	Mine Unit-C	Mine Unit-C22	Drifts	Mine Unit-D	Mine Unit-D Ext	Mine Unit-E	Mine Unit-F	Mine Unit-H	Mine Unit-I	Mine Unit-J
																ļ	
I.	Grou	and Water Sweep Co	sta							l					;		
	E	stimated PV's					0	0	0	0	22046	17206	91659	243080	04815	7216.10	86005
		otal Kgals for GWS				0	0	0		100	28046	1/290	61038	243560	24813	251040	100
	B	ficed to Deep Disposa	Well (%)			100		100 61 15		£1.15	\$115	\$1.15	£1.15	\$115	\$115	\$1.15	\$1.15
	Con La	roundwater Sweep U	ut Cost (5/Kgal)	ald		31.15			51.15	50	\$32,150	\$19.827	\$93 608	\$279.683	\$108.690	\$265.537	\$99.726
Total C	Subu	d Water Sween Cos	weep cosis per wear	iciu		5899 221										1	
10.11	T											- · · ·				· · ·	
11.	Reve	rse Osmasis Casts										1		1	· · · · · · · · · · · · · · · · · · ·	1	
	E	stimated PV's				0	0	0	0	0	4.5	4.5	4.5	4.5	1.5	4.5	45
	T	otal Kgals for RO				0	0	0	0	0	126,207	77.832	367,461	1.097,910	426,668	1,042,380	391,478
	B	leed to Deep Disposa	Well (%)			15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
	R	Reverse Osmosis Unit	Cost (\$/Kgal)			\$0.40	\$0.40	\$0.40	\$0.40	\$0.40	\$0.40	\$0.40	\$0.40	\$0.40	\$0.40	\$0.40	\$0.40
	B	brine volume for dispo	sal			0	0	\ <u>0</u>	0	0	18,931	11,675	55,119	164,687	64,000	156,357	58,722
	£	DW Disposal Cost(\$	/Kgal)			\$0.66	\$0.66	\$0.66	\$0.66	\$0.66	\$0.66	\$0.66	\$0.66	\$0.66	\$0.66	\$0.66	\$0.66
		Disopsal Cost per well	field			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$12,536.80	\$7,731.46	\$36,501.82	\$109.061.14	\$42,383.11	\$103,545.06	3.18,887.51
	Subt	otal Reverse Osmos	s Costs per Weilfield	L		SO	50	SO	50	50	\$63,020	538,864	5183,486	5548,225	\$213,050	5520,497	\$195,479
Total F	lever	se Osmosis Costs	L			\$1,762,621											
<u> </u>	Keve	erse Osmosis with Cl	emical Reductant Co							L		25		35	15	15	25
	E	sumated PV s				0		106 991	50 073	i	98 161	60.536	285 803	853 930	331 853	810 740	304 483
 		Just to Daw Diaman	1 337-11 (9/)			1504	1.59/	200.003	1596	1544	15%	15%	15%	15%	15%	1546	15%
<u> </u>		steed to Deep Disposa	chemical reductant Unit	Cost (S/K cal)		13% \$0.44	\$0.44	I \$0.44	\$0.44	\$0.44	\$0.44	1 \$0.44	\$0.44	1 \$0.44	S0 44	\$0.44	1 \$0.44
		ceverse Osmosis with	and and a reductant office	Cost (S/Kgai)		30 44		11 012	8 861	0.11	14 724	9.080	42 870	128.090	19 778	121.611	45 672
<u> </u>		NULL Trime and Court	//1)			\$0.66	\$0.66	\$0.66	\$0.66	\$0.66	\$0.66	\$0.66	\$0.66	\$0.66	\$0.66	\$0.66	\$0.66
		Disposal Cost per well	(Kgai)			\$0.00	\$0.00	\$20 550 77	\$5,868,03	\$0.00	\$9 750 85	\$6.013.36	\$28 390 31	\$84 825 33	\$32.964.64	\$80 535 04	\$30 245 84
	Subt	otal Pererie Osmoe	ic Chemical Reductant	& Dieporal		\$0.00	\$0.00	\$112.013	\$31.984	50	\$53.147	\$32,776	\$154.742	\$462.343	\$179.675	\$438,959	\$164.856
Total I	lever	se Osmosis Chemics	Reductant Costs	Car Disposal		\$1,630,496		3112,013						0100,010	1	1	
	řΤ		1				·						1			!	
IV.	Bior	emediation					- <u></u>		·		<u> </u>					1	
-	E	Estimated PV's				0	. 0	0	c	0	0	0	(0 0	0	(0
	Т	Fotal Kgals for Treatm	ent			0	0	0	0	0	0	0	0	0	0	Q	0
	E	Bleed to Deep Disposa	1 Well (%)			15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
	E	Bioremediation Unit C	ost (\$/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
	Subt	total Bioremediation	Costs per Wellfield			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	50.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total	liore	mediation Costs				\$0.00					1	ļ				· · · · ·	
L			L				·	L			· · · -	·	<u> </u>	·	l	<u> </u>	
<u>v.</u>	Seler	nium Plant Operatio	<u>n</u>					·			l						
	1-12	Years				7						<u> </u>	<u> </u>				
	3	Vycar		<u> </u>		\$114,000.00	·			· ···		<u> </u>					
(····	Sub	iotal Scientum Plant	Operation Costs	f	(\$798,000.00						f	<u> </u>	·/	<u> </u>	{	
VT-	MIT	Costs		<u> </u>								<u> </u>					
<u> </u>	1			·							<u> </u>	<u> </u>	1			1	+
		MIT Costs per Well		t		\$770.92	\$220.92	\$770 81	\$229.83	\$779 ×1	\$729.83	\$729.83	\$229.83	\$229.83	\$229 83	\$229.83	\$779.83
f	1-1	Restoration period nh	s stabilization (months)	[12 00	12.00	42 00	12 00	12.00	34 00	30.00	113.00	120.00	120.00	101.00	102.00
	t li	Number of MIT's ren'd	for Prod & Ini Wells	t		12.00	.2.60	315	0	0	86	21	672	3.124	930	1.192	993
	t-f					<u> </u>	0		°	t		1	1	V,121	<u>,,,,</u>		
—	Sub	total MIT Mine Unit				\$0.00	\$15,123.03	\$72,397.50	\$0.00	\$0.00	\$19,666.84	\$4,826.50	\$154,528.44	\$717,999.33	\$213,745.00	\$273,915.37	\$228,178.53
	5	-year MIT Costs for	Disposal Wells	\$5,907.53								1	1	1	1	1	1
	1	Number of DDWs		3				l									
	1	Number of MITs per I	DW	3				T									

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			•						G	Fround Water R	estoration							
		Т									Mine Unit-C Haul							
				.	1		' Mine Unit-A	Mine Unit-B	Mine Unit-C	Mine Unit-C22	Drifts	Mine Unit-D	Mine Unit-D Ext	Mine Unit-E	Mine Unit-F	Mine Unit-H	Mine Unit-I	Mine Unit-J
	Subt	tota	A MIT DDW Costs				\$53,167.77			· · ·								
Total I	IIT C	Cos	sta				\$1,753,548.32										· _ · ·	
		1	1 1 1												1)	
VIL	Mon	išto	ring and Sampling Costs														1	
		T																
		N	Modified Guidline 8 =		\$337.00	analysis									1			
		6	parameter contract laboratory as	nalysis =	\$100.00	analysis		~~~~				_					1	
		1	fotal monitor wells				9	69	104	0	0	38	15	72	109	86	78	82
	1	T																
		C	iroundwater sweep duration (mo	nths)			0.00	0.00	0.00	0.00	0.00	4.00	4.00	29.00	48.00	36.00	29.00	30.00
		F	Reverse Osmosis duration (month	us)			0.00	0.00	30.00	0.00	0.00	18.00	14.00	72.00	60.00	72.00	60,00	60.00
		S	stabilization duration (months)				12	12	12	12	12	12	12	12	12	12	12	12
		1														ļ	<u> </u>	
	A. N	Moi	nitor Well Sampling									·	·			ļ	1	
	1	I. V	Well Sampling prior to restoration	n start														
		+	# of Wells				9	69	104	0	0	38	15	72	109	86	78	82
			\$/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
	2	2. 0	iroundwater Sweep Sampling (q	uarterly)												·		
L	+	+	# of Wells				9	69	104	0	0	38	15	72	109	86	78	82
L	\vdash		Total # samples				0	0	0	0	0	51	20	690	1/44	1032	/54	820
		-	\$/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
	3	3. F	RO Sampling (quarterly)								<u> </u>						· · · · · · · · · · · · · · · · · · ·	
	$\left\{ -\right\}$	+	# of Wells				9	69	104	0	0	38	15	/2	109	86	78	82
L	$ \vdash $	+	lotal # samples				0	0	1040	1	0	228	/0	1/28	2180	2064	1560	1640
		<u> </u>	S/sample				\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	3100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00
└───	- 14	4 <u>.</u> 2	Stabilization Sampling (Guideline	e 8, quarterly)					ļ						(0		
	++	+	# of Wells				6		44	6	2		16		85		3.0	33
(<u> </u>	++	4	lotal # samples				24	224	176	24	8	/6	64	112	356	276	132	132
L			s/sample				\$557.00	\$337.00	\$357.00	\$337.00	\$337.00	\$337.00	\$557.00	3337.00	\$337.00	3337.00	\$357.00	\$337.00
		5.12	Stabilization Sampling (6 parame	ter bi-monthl	ly)													
	1-1-	+	# of Wells				6	56	44	6	1 12	19	16	28	89	69	33	33
	++	+	Total # samples				36	336	264	30	12	114 F 100.00	96	108	534	414	198	198
			strample			· · ·	\$100.00	\$100,00	\$100,00	\$100.00	\$100.00	\$100.00	3100 00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00
	- 19	<u>5. </u> 1	Monitor wen sampling										16	73	100		70	
·	[+	S/cample			<u> </u>	£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 # sumples (2.2/mo for an	tire period)			\$100.00	3100.00	3100.00	3100.00	\$100.00	5100.00	225	1068	\$100.00	\$100.00	3100,00	3100.00
<u> </u>	11-	7 0	Other Laboratory ('osts	na e period)			J4	414	2164					+008	. 0340	5100	3739	4162
<u> </u>	tť	Ŧ	Radon etc. =		\$1.000.00	month				1		<u>+</u>					<u>├</u>	
	++	t	Total for Other Laboratory Co	ists:	41,400.00		\$12,000,00	\$12,000.00	\$42,000,00	\$12,000,00	\$12,000,00	\$34,000.00	\$30,000.00	\$113,000,00	\$120 000 00	\$120,000,00	\$101.000.00	\$102.000.00
	+	t			·				\$12,000.00						1120,030.00			
<u> </u>	Sub	tot	al Monitoring and Sampling C	osts per Min	e Unit		\$32,121.00	\$185,741.00	\$485,160.00	\$23,688.00	\$15,896.00	\$176,318.00	\$97,723.00	\$841,008.00	\$1,376,505.00	\$1,108,994.00	\$816.870.00	\$858,118.00
Total	Monit	tor	ing and Sampling Costs				\$6,018,142.00				1	1	1		1		1 1	1
	TT	T											1		1			1

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	Cruzed Water Destantion														····			
									G	round Water Re	estoration							
											Mine Unit-C Haul						,	
				1	l		Mine Unit-A	Mine Unit-B	Mine Unit-C	Mine Unit-C22	Drifts	Mine Unit-D	Mine Unit-D Ext	Mine Unit-E	Mine Unit-F	Mine Unit-H	Mine Unit-1	Mine Unit-J
VIII.	Superv	visory .	Labor Cos	t (for all Reclamation)														
																	1	
															<u> </u>		1	
	Enviror	umenta	l Manager/	RSO Support	\$11.593.74	month												
	Restora	ation M	anager Sup	port	\$8,219.99	month										l	i	
	HP Tec	huicia	support		\$4.828.38	month												
		Ĺ.															· · · ·	
	Active	restora	tion period	(months)	}		0.00	0.00		0.00	0.00	22.00	18.00	101.00	108.00	108.00	89.00	90.00
	Stabiliz	zation j	criod (mor	ths)			. 12	12	12	12	12	12	12	12	12	12	12	12
	Total R	Restora	ion Period		11	vears						·					1	
	Ma	nager	upport dur	ing restoration	\$2,615,412.10		1							<u>_</u>			1	
	HP	Techn	ician suppo	rt during restoration	\$637,346.69										1	L		
	Lab	bor Sup	port 5 each	1	\$2.571,140.00	L												1
	RO) ops/m	aint. Labor	, 2 each	\$1,028,456.00												1	
			1			[1	
Total S	upervis	sory L	abor Costs				\$6,852,354.78											1
			T															
TOTA	L REST	TORA	TION CO.	ST PER WELLFIELD			\$32,121.00	\$200,864.03	\$669,570.20	\$55,671.91	\$15,896.00	\$344,301.92	\$194,016.81	\$1,427,372.57	\$3,384,756.12	\$1,824,153.96	\$2,315,778.92	\$1,546,356.60
							\$12,010,860.05											
TOTA	L GRO	UND	WATER R	RESTORATION COST	s		\$21,467,930.92					,			1		1	1
		1	T		1												1	
IX.	Cost of	f Refu	rbishing M	line Unit to facilitate re	storation					•		. ,	-					
	Nu	mber o	f Wells, ca				0	0	55	0	0	0	0	110	150	0	0	0
	Cos	st to R	furbish W	ell, \$/ 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
	Nu	imber o	f Bell Hole	s, câ			0	0	0	0	0	0	0	. 0	45	0	. 0	0
	Cos	st per F	Bell Hole. S	i/ca			\$8,886	\$8,886	\$8,886	\$8,886	\$8,886	\$8,886	\$8,886	\$8,886	\$8,886	\$8,886	\$8,886	\$8,886
	Nu	mber o	f Header H	ouses, ca			0	0	0	0	0	0	0	. 0	\$40	c	10) 0
	Cos	st per I	Icader Hou	isc, S/ca			\$32,000	\$32,000	\$32,000	\$32,000	\$32,000	\$32,000	\$32,000	\$32,000	\$32,000	\$32,000	\$32,000	\$32,000
× .	Subtot	tal cost	per Mine	Unit			SO	S 0	\$770,000	\$0	· S0	· \$0	\$0	\$1,540,000	\$3,779,870	50	so	SO
Total C	lost of	Refur	ishing Mi	ne Unit to facilitate rest	oration		\$6,089,870					· · · · ·					1	
						L		ļ			1				1	1		1
TOT.	L GF	ROUT	D WAT	ER RESTORATIO	N COSTS		\$27,557,800.92											
						L				L	L	L	L	L	<u></u>	4	· · · · · · · · · · · · · · · · · · ·	

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			<u> </u>			Well Abandonment													
					Wei	1 Abandonment	·					·····	name la serie de l						
	Mine Unit-A	Mine Unit-B	Mine Unit-C	Mine Unit-C 22	Mine Unit-C Haul Dr	Mine Unit-D	Mine Unit-D Ext	Mine Unit-E	Mine Unit-F	Mine Unit-H	line Unit-I	Mine Unit-J	General	Totals					
Well Abandonment (Wellfields)							·												
# of Production Wells	' 0	. 141	137	0	0	49	13	120	614	136	249	197	,	1656					
# of Injection Wells	0	188	313:	0	0	102	29	237	948	329	459	387	1	2992					
# of Monitoring Wells	9	69	104	0	0	38	15	72	109	86	78	82		662					
Total Number of Wells		398	554	0	0	189	57	429	1671	551	786	666		5310					
Average Diameter of Casing (inches)	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	540	1	544					
Total Mine Unit Well Depth (ft), production wells	0	63450	75350	0	0	29400	7800	66000	399100	68000	161850	106380		242000					
Total Mine Unit Well Depth (ft), all others	4500	115650	229350	• 0	0	84000	26400	169950	687050	207500	, 349050	253260		629850					
Well Abandonment Unit Cost (\$/ft. of well)	\$2.50	S2 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	• \$2.8(\$2.80	\$2.80	\$2.80	\$2.80	\$2.80	\$2.80							
Subtotal Abandorment Cost per Wellfield	\$11,250	\$-466,785	\$784,355	\$0	SC	\$292,32	\$87,840	\$609,67	5: \$2,835,10	\$709,150	\$1,325,80	5 \$931,014		\$8,053,299					
										+									
III. Removal of Contaminated Soil Around Wells								1											
# of Production and Injection Wells 46-18					1			1	1										
Cost per well (\$/well) 214.23						[· ·	1	1			:i							
Subtotal Removal of Soil Around Wells	\$995,741.04							1					1	\$995,741.04					
IV. Delineation Hole Abandonment								+				······							
# of Projected Holes	0	0	0	0	0		0)): (0		1: 0	600						
Average Depth (ft)	500	450	\$50	550	550	604	600	550	650	500	650	540	1 600						
Hole Abandonment Unit Cost (\$/ft of hole)	\$2,50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.5	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50						
# of holes in 2-5yr revegitation period	0	0	' o	0			0) () (0 ((0	600						
Site Reclamation (S/site)	\$73.53	\$73.53	\$73,53	. \$73.53	\$73.53	\$73.5	\$73.53	\$73.5	\$73.53	3 \$73.53	\$73.53	\$73.53	\$73.53						
Subtotal Hole Abandonment per Welifield	\$0.00	\$0.00	S0.00	\$0.00	\$0.00	\$0.0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	3 \$944,118	\$944,118					
V. Waste Disposal Well Abandonment	Morton No. 1-20	Voliman No. 33-27	SRHUP#9	an ing an		• •				•		-	4						
A. Well Sealing													1						
Sealing cost per foot (in Reynolds UIC permit)	\$11.91	\$11.91	\$11.91			1	1					:							
Subtotal Plugging Costs per Well	\$107,190	\$119,100	\$119,100		1		1												
B Pump Dismantling and Decontamination]				1										
Number of Persons	2	2	2]			1	1					- Andrew and the second state of the second					
Number of Pumps	2	2	2		1		1	1											
Pumps/Dav	0.5	0.5	0.5			1		1					1						
Number of Days	. 4	4	4	•	1.	1	1	1.	1	1		1	'						
S/Day/Person	\$263	\$263	\$263		1			1											
Subtotal Dismantling and Decon Costs per Well	\$2,104	\$2,104	\$2,104		1		1	1					1						
C. Tubing String Disposal (NRC-Licensed Facility)		1								1	•								
Length of Tubing String (ft)	9.000	10.000	10.000		1			1					1						
Diameter of Tubing String (inches)	2.875	2.875	2.875		1		1		1										
Volume of Tubing String (ft ³)	210	233	233		line - tota o														
Transportation and Disposal Unit Cost (\$/ft')	\$6.06	\$6.06	\$6.06			1				1 · .		1	i						
Subtotal Tuhing String Disposal Costs per Well	\$1,269	\$1,410	\$1.410				1	1											
Subtotal Waste Disposal Well Abandonment Costs per Well	\$110,562.78	\$122,613.78	\$122,613.78		,		1						·						
Total Waste Disposal Well Abandonment Costs	\$355,790.33	·			<u>(</u>		1	1	1										
		· 4			· · · · · · · · · · · · · · · · · · ·														

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]					Mine Unit-C	Mine Unit-C						1 1	1	
Weilf	ield B	Buildings and Equipment Removal and Dispos	sal		Mine Unit-A	Mine Unit-B	Mine Unit-C	19N	Haul Drifts	Mine Unit-D	Mine Unit-D Ext	Mine Unit-E	Mine Unit-F	Mine Unit-H	Mine Unit-I	Mine Unit-J	
	11/-11	Gold Distance						Nat Hand Incl	udad wAGLC							·	
<u> </u>	Well	New York and All and A				1.9		Not Used, Incl	uded WMO-C			15	17	10		1	L
<u> </u>		Number of Header Houses per weilheid	(A) (a)		12800	12800	12000	12800	12800	12000	12800	12800	1 17800	10	1 112800	1 12000	
<u> </u>		Approximate Length of Piping per Header Ho	louse (11) (ave. 40 v	wens per with 500 ft	13800	13800	276000	13800	13800	13800	13800	20200	649600	13800	165600	170400	1081400
┣──	AD	Approximate rotar Length of Fiping (it)			09000	248400	270000				41400	207000	048000	158000	105000	175400	1701400
⊢—	<u>A.</u>	Wallfield Bining Ramount Unit Cast (\$/# of r	nina		¢1.92	£1 92	\$1.92	£1.92	\$1.83	\$1.83	¢1.83	¢1.83	\$1.83	\$1.83	\$1.83	\$1.83	
		weinield Fiping Removal Onit Cost (5/11 of p	pipe)		\$1.63	\$1.65	\$1.03	\$1.03	\$1.85	\$1.65	\$75 762	\$1.65	\$1.03	\$252.540	\$303.049	\$1.83	
F	о т а	uototat wennetu Fiping Removal and Loading	COSIS		\$120,270	3434,372	3303,080			314,040	\$75,702	\$578,810	\$1,180,338	\$252,540	5505,048	\$528,502	·
	D , 1	Tansport and Disposal Costs (IVRC-Licensed Fa	acinty)			2			2			2	· · · · · · · · · · · · · · · · · · ·	2		2	
<u> </u>		Chinned Volume Reduction (6 ³ /6)				0.011	0.011		0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	
<u> </u>		Chipped Volume nor Wallfield (6 ³)			740	2663	2050	0.011	0.011	86	444	2219	6054	1480	1775	1923	
\vdash		Volume for Disposel Assuming 10% Void Sp	nana (ft ³)	····	914	2003	2955	0	0	04	444	2441	7649	1628	1 1953	2116	
<u> </u>	+	Transportation and Disposal Unit Cost (\$/63)			\$6.06	\$6.06	\$6.06	\$6.06	\$6.06	\$6.06	\$6.06	\$6.06	\$6.06	\$6.06	\$6.06	\$6.06	
<u> </u>	c	ubtotal Wallfield Pining Transport and Disposa) al Costs		\$4.029	\$17.743	\$19.711	\$0.00	\$0.00	\$569	\$2.955	\$14 782	\$46 319	\$9.858	\$11.826	\$12.814	<u> </u>
	الم/11	field Pining Costs per Wellfield		^	\$131 199	\$472 315	\$524 791		50	\$15,209	\$78 717	\$393 592	\$1 233 257	\$262 398	\$314 874	\$341,116	
	Tota	Wellfield Pining Costs			\$3 767 468	9472,515	3524,751			010,200			01,200,207		1 1	45 11,110	
	IULA	r weinieu riping costs			33,707,408												
П,	Well	Pumps and DownholeTubing													<u> </u>		
	A	ssumptions:										L,			ļ		
L		60% of production/injection wells contain pu	umps and/or tubing	g	·										<u> </u>	<u> </u>	
	A. P	ump and Tubing Transportation and Disposal												l		L	
L		Number of Production Wells			0	141	137	0	0	49	13	120	614	136	249	197	
		Number of Injection Wells			. 0	188	313	0	0	102	29	237	948	329	459	387	
		Number of Monitor Wells			9	69	104			38	15	72	109	86	78	82	
	1	. Pump Volume													1		
_		Number of Production Wells with Pumps			0	141	137	0	0	49	13	120	614	136	249	197	
		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	
L		Pump Volume per Wellfield (ft ³)			0.0	732.9	712	. 0	0	255	68	624	3192	707	1 1294	1024	
	2	. Tubing Volume															
		Assumptions:															
		Average tubing length/wellfield based	on average well de	epth minus 25 ft						· · · · · ·					1		
		Number of Production & Monitor Wells v	with Tubing		9	210	241	0	0	87	28	192	723	222	327	279	
		Number of Injection Wells with Tubing			0	141	• 137	0	0	49	13	120	614	136	249	197	
		Average Tubing Length per Well (ft)			475	425	525	525	525	575	575	525	625	475	625	515	
		Tubing Length per Wellfield (ft)			4,275	149,175	198,450	0	0	78,200	23,575	163,800	835,625	170,050	360,000	245,140	
		Diameter of Production Well Fiberglass T	Tubing (inches)		2	2	2	2	2	2	2	2	2	2	2	2	
		Diameter of Injection Well HDPE Tubing	g (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	
		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	
1.		Chipped Volume per Wellfield (ft ³)			46	1599	2128	0	0	838	253	1756	8959	1823	; 3860	2628	
		Volume of Pump and Tubing (ft3)			- 46	2332	2840	0	0	1093	321	2380	12151	2530	i 5154	3652	
		Volume for Disposal Assuming 10% Void Sp	pace (ft ³)		51	2565	3124	0	0	1202	353	2618	13366	2783	5670	4017	
		Transportation and Disposal Unit Cost (\$/ft3	3)		\$6.06	\$6.06	\$6.06	\$6.06	\$6.06	\$6.06	\$6,06	\$6.06	\$6.06	\$6.06	\$6.06	\$6.06	
	F	Pump and Tubing Transport and Disposal Costs	Per Wellfield		\$309	\$15,532	\$18,917	\$0	\$0	\$7,279	\$2,138	\$15,853	\$80,938	\$16,853	\$34,335	\$24,325	
	Tota	I Pump and DownholeTubing Costs			\$216,479												
100	Pur	ad Townhilling (Includes & fan Changel															
<u> </u>	buri 1	eu trunkine (includes 5 for fiber ôptic cable	e removal)		· · · · · · · · · · · · · · · · · · ·	Dat 1			and and All C			ine what D					
F	1	anoth of Trunkling Trongh (A)			(500	nnc WMU-A		inc w/MU-C	inc w/wi0-C	12000		anc W/MU-D	11700	12200	10750	3500	60050
		Compared and Loading			0000		5900	0		12000		<u> </u>	11/00	13200	10/50	2500	00050
	A.	Nois Disaling							er 07		61.00			61.02	1		···
H	 .	Internet in the second and Leading Comparison of the	enca)		\$1.83	31.83	\$1.85	31.83	31.83	\$1.83	31,83	31.83	<u>(31.83</u>	31.83	<u> 31.83</u>	\$1.83	1
I		Subiotal Trunkline Removal and Loading Costs			\$11,895	50	\$10,797	\$0	\$0	\$21,960	\$10,065	20	\$21,411	\$24,156	\$19,673	34,575	
F	1 ¹⁰ .	Tansport and Disposal Costs (NKC-Licensed Fa	acinity)												<u> </u>		
L	1	. It Carbon Steel Frunkline				•		· ·			l	<u></u>	1	1	1	1	

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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-J	
Piping Length (ft)	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	
2. 1.5" HDPE Trunkline													
Piping Length (ft)	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	
Chipped Volume (ft ³)	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	2990
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	Ĺ
Chipped Volume (ft ³)	151	0	137	0	0	279	128	0	272	307	250	0	
4. 6" HDPE Trunkline											1		
Piping Length (ft)	0	0	0	0	0	0	11000	0	0	0	3000	0	1400
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	
Chipped Volume (ft ³)	0	0	0	0	0	0	917	0	0	0	250	0	
5. 8" HDPE Trunkline											1		
Piping Length (ft)	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	7 0.141	0.141	
Chipped Volume (ft ³)	. 0	0	0	0	0	0	0	0	0	0	0	0	
6. 10" HDPE Trunkline						T		1			1		
Piping Length (ft)	13000	0	0	0	0	0	0	0	0	0	750	2000	1375
Chinned Volume ner I ft (ft ³ /ft)	0.220	0.220	0.220	0.220	0.220	0.220	0 220	0 220	0 220	0 2 2 0	1 0 220	0 220	
Chipped Volume (t ³)	2854	0.220	0.120	0.220	0.000	0.220	0	0.220	0	0	165	439	
7 12" HDPE Trustline	2054	~		ļ			°	<u> </u>					<u> </u>
Pining I angth (ff)			11800	0	0	24000	0	0	i iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	0	. 0	2000	3580
Chinned Volume ner I ft (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	
Chipped Volume (ft ³)	0.505	0.505	3644	0.505	0.505	7411		0,507	0	0.505	0	618	
8 14" HDPE Trunkline		1	5044	°				~					h
Pining Length (ft)			0	0					23400	26400	8500	0	2340
Chinned Volume per I ft (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	
Chipped Volume (θ^3)	0.572	0.572	0.372	0.572	0.572	0.572	0.372	0.572	8712	9879	3165	0.572	<u> </u>
0 15" LIDDE Trunkline		<u></u>			°		·}			7027			
Pining Langth (ft)			·						23400	26400	1 8500	0	2340
Chinged Volume age I & (A ³ /A)		0.496	0.496	0.496	0.486	0.496	0.486	0.486	0.486	20400	1 0 496	0.186	
Chipped Volume (A ³)	0.480	0.480	0.480	0.480	0.480	0.480	0.480	0.480	11291 40391	12840 55914	4124 270612	0.480	
		·	· · · · ·	[[<u> </u>		·	11381.40381	12840,55814	4134.270013		
10.18" HDPE Trunkline			l										
Piping Length (ft)	0	0		0						0		0	
Chipped Volume per Litt (ft /ft)	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.016	0.616	0.616	0.616	ļ
Chipped Volume (fr')	0	0				0	· 0	· · · ·	· · · · · · · · · · · · · · · · · · ·	0	1 0	0	
						+							
Total Trunkline Chipped Volume (ft [*])	3006	0	3781	0		7691	1045		20366	22977	1 7964	1057	-
Volume for Disposal Assuming 10% Vold Space (ff.)	3306	0	4159	0		8460	1150		22403	25275	1 8/61	1162	
I ransportation and Disposal Unit Cost (\$/ft")	\$6.06	\$6.06	\$6.06	\$6.06	\$6.06	\$6.06	\$6.06	\$6.06	\$6.06	\$6.06	\$6.06	\$6.06	
Subtotal Trunkline Transport and Disposal Costs	\$20,020	\$0	\$25,185	\$0	\$0	\$51,230	\$6,964	<u> </u>	\$135,662	\$153,054	\$53,053	\$7,037	
I runkline Decommissioning Costs per Wellfield	\$31,915	\$0	\$35,982	\$0	50	\$73,190	\$17,029	\$0	\$157,073	\$177,210	\$72,726	\$11,612	I
I otal I runkune Decommussioning Costs	\$576,737	+	ļ	l	I		· · · · · · · · · · · · · · · · · · ·	ļ			·	·	<u> </u>
IV. Well Head Covers			1	Inc w/MU-C	Inc w/MU-C	1						1	<u> </u>
Total Quantity	. 90	490	552	0	. (117	97	331	1347	470	361	285	302
Average Well Head Cover Volume (ft ³)	1.86	1.86	1.86	1.86	1.80	5 1.86	1.86	1.80	1.86	1.86	1.86	1.86	1
A. Removal				1				1	1			1	
Total Volume (ft ³)	167.4	911.4	1026.72	0	(217.62	180.42	615.66	5 2505.42	874.2	671.46	530.1	1
Demolition Unit Cost per WDEQ Guideline No.12, App.K (\$/ft ³)	\$0.249	\$0.249	\$0,249	\$0.249	\$0,249	\$0.249	\$0.249	\$0.249	\$0.249	\$0.249	\$0.249	\$0.249	
Subtotal Well Head Cover Demolition Costs	\$42	\$227	\$255	50	SC	\$54	\$45	\$153	\$623	\$218	\$167	\$137	t —

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[[Mine Unit-C	Mine Unit-C		1		T	[, , , , , , , , , , , , , , , , , , , ,	[
Wellfield	Buildings and Equipment Removal and Disposal	Mine Unit-A	Mine Unit-B	Mine Unit-C	19N	Haul Drifts	Mine Unit-D	Mine Unit-D Ext	Mine Unit-E	Mine Unit-F	Mine Unit-H	Mine Unit-I	Mine Unit-J	
B	Survey and Decontamination													
	Cost per Wellhead cover	6.69	6.69	6.69	6.69	6.69	6.69	6.69	6.69	6.69	6.69	6 6 9	6.69	
	Subtotal Survey and Decontamination Costs	\$602	\$3 276	\$3 691	\$0	\$0	\$782	\$649	\$2,213	\$9.007	\$3,143	\$2,414	\$1,906	
C	Disposal at County landfill facility													
	Total Volume (rv)	6	34	38	0	0	8	7	23	93	32	25	20	
	Volume for disposal assuming 10% yoid space (cv)	7	37	42	0		9	7	25	102	36	+ 27	22	
	Transportation and Disposal Unit Cost (\$/cy)	\$8.115	\$8.115	\$8115	\$8.115	\$8 115	\$8,115	\$8,115	\$8,115	\$8,115	\$8,115	\$8,115	\$8,115	
\vdash	Subtotal Disposal Costs	\$57	\$300	\$341	50	50	\$73	\$57	\$203	\$828	\$292	1 \$219	\$179	
We	Il Head Covers Removal and Disposal Costs per Mine Unit	\$701	\$3.803	\$4 287	50	\$0	\$909	\$751	\$2,569	\$10,458	\$3,653	\$2,800	\$2.217	
To	tal Well Head Cover Removal and Disposal Costs	\$32,148										· · ·		
												1.		
V. He	ader Houses (Includes Booster Stations)											3		
	Total Quantity	5	18	20	0	0	4	3	15	47	10	12	13	
	Average Header House Volume (ft ¹)	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	37600	8000	9600	10400	
	Demolition Unit Cost per WDEQ Guideline No.12, App.K (\$/ft3)	\$0,230	\$0.230	\$0,230	\$0,230	. \$0.230	\$0.230	\$0.230	\$0,230	\$0,230	\$0.230	\$0.230	\$0.230	
	Subtotal Building Demolition Costs	\$919	\$3,307	\$3,675	\$0	\$0	\$735	\$551	\$2,756	\$8,636	\$1,837	\$2,205	\$2,389	
B .	Survey and Decontamination											1		
	Cost per Header House	\$579	\$579	\$579	\$579	\$579	\$579	\$579	\$579	\$579	\$579	\$579	\$579	
	Subtotal Survey and Decontamination Costs	\$2,895	\$10,422	\$11,580	\$0	\$0	\$2,316	\$1,737	\$8,685	\$27,212	\$5,790	\$6,948	\$7,527	
C.	Disposal													
	Total Volume (cy)	148	533	593	0	0	119	89	444	1393	296	356	385	
	Volume for Disposal Assuming 10% Void Space (cy)	163	587	652	0	0	130	98	489	1532	326	1 391	424	
	Disposal Unit Cost per WDEQ Guideline No. 12, App.K (\$/cy)	\$8.12	\$8.12	\$8.12	\$8.12	\$8.12	\$8,12	\$8.12	\$8.12	\$8.12	\$8.12	\$8.12	\$8.12	
	Subtotal County Landfill Disposal Costs	\$1,323	\$4,764	\$5,291	\$0	\$0	\$1,055	\$795	\$3,968	\$12,433	\$2,646	\$3,173	\$3,441	
	Headerhouse Soil Removal Volume ft3 (assumes 10'Wx20'Lx2.5'D)	500	500	500	500	500	500	500	500	500	500	500	500	
	11e.(2) Disposal Unit Cost (\$/ft3)	\$10.44	\$10.44	\$10.44	\$10.44	\$10.44	\$10.44	\$10.44	\$10.44	\$10.44	\$10.44	\$10.44	\$10.44	
	Subtotal 11e.(2) Disposal Costs	\$26,094	\$93,940	\$104,378	\$0	\$0	\$20,876	\$15,657	\$78,283	\$245,288	\$52,189	\$62,627	\$67,846	
He	ader House Removal and Disposal Costs per Wellfield	\$31,231	\$112,433	\$124,924	\$0	· \$0	\$24,982	\$18,740	\$93,692	\$293,569	\$62,462	\$74,953	\$81,203	[
To	tal Header House Removal and Disposal Costs	\$918,188											· · · · · · · · · · · · · · · · · · ·	
TOTAL	REMOVAL AND DISPOSAL COSTS PER WELLFIELD	\$195,355	\$604,083	\$708,901	\$0	\$0	\$121,569	\$117,375	\$505,706	\$1,775,295	\$522,576	\$499,688	\$460,473	1
												1		
VI. Ve	hicle Operation Costs									1		1		
	Number of Pickup Trucks/Pulling Units (Gas)	10										1		
	Unit Cost in \$/hr (UC-Equipment Costs)	\$18.08										1 .		
	Average Operating Time (Hrs/Year)	1000	1											<u> </u>
	Total Number of Years (Average)	11										1		
To	tal Vehicle Operation Costs	\$1,988,302										1		
											1	,		
VII. He	ader Houses (Includes Booster Stations)	5	18	20	0	0	4	3	15	47	10	12	13	
	Years of Active Restoration	0.00	0.00	2.50	0.00	0.00	1.83	1.50	8.42	9.00	9.00	7.42	7.50	
	Heating Cost per Year per header house	\$2 581	\$2,581	\$2,581	\$2.581	\$2,581	\$2.581	\$2,581	\$2 581	\$2 581	\$2.581	\$2.581	\$2,581	1
	Heating Costs per year	\$0	\$0	\$129,060	\$0	\$0	\$18,929	\$11,615	\$325,877	\$1,091.848	\$232,308	\$229,727	\$251,667	
Te	tal Header Heating cost	\$2,291.030								1		1	<u>_</u>	
									······	1	1	;		
			<u> </u>							+		;		
1													1	1

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							Mine Unit-D		1	
Wellfield and Satellite Surface Reclamation	Mine Unit-A/B	Mine Unit-C	Mine Unit-D	Mine Unit-E	Mine Unit-F	Mine Unit-H	Ext.	Mine Unit-I	Mine Unit-J	Mine Unit-JA
I. Wellfield Pattern Area Reclamation										
Pattern Area (acres)	42.75	67.5	12,375	49.5	171	56,25	9	45	60,75	0
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	\$27,287	\$36,837	\$0
Total Wellfield Pattern Area Reclamation Costs	\$311,749					_				
II. Weineia Koad Keciamation										
	12.0		2.4		10				i	
Length of Weineld Roads (1000 ft)	12.8	<u> 11.3</u> 11.3	\$1.010	E1 010	\$1.019	\$1.010	\$1.010	\$1.010	SI 010	\$1.010
Weinleid Road Rectamation Unit Cost (\$/1000 ft)	\$1,019	\$1,019	\$1,015	\$12 552	619 242	\$1,019	\$5,005	\$1.015	\$5.005	\$1,019
Tatal Walle Id David Parlameter Cate	\$13,043		- \$2,440		\$10,342	\$13,396	30,095	35,095	35,095	\$1,019
Total Weinfeld Road Reclamation Costs	371,201									
III. Laydown area reclamation									1	
Area of Disturbance (acres)	1	1	1	1	1	1	1	<u> </u>	<u>n</u>	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									1	
Ripping Unit Cost per WDEQ Guideline No.12, App.11 (\$/acre)	\$902.70	\$902.70	\$902.70	\$902.70	\$902.70	\$902.70	\$902.70	\$902.70	\$902.70	\$902.70
Subtotal Ripping Costs	\$903.00	\$903.00	\$903.00	\$903.00	\$903.00	\$903.00	\$903.00	\$903.00	\$903.00	\$903.00
B. Topsoil Application with Scraper										
Volume of Topsoil Removed (cv)	1081	1081	1081	1081	1081	1081	1081	1081	1081	1081
Application Unit Cost per WDEQ Guideline No.12, App.C (\$/cy)	\$0.85	\$0.85	\$0,85	\$0.85	\$0.85	. \$0.85	\$0.85	\$0.85	\$0,85	\$0.85
Subtotal Topsoil Application Costs	\$921	\$921	\$921	\$921	\$921	\$921	\$921	\$921	\$921	\$921
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	\$2,430	\$2,430	\$2,430	\$2,430	\$2,430	\$2,430	\$2,430	\$2,430	\$2,430	\$2,430
Total Wellfield Laydown Area Reclamation Costs	\$24,300								l.	
SUBTOTAL SURFACE RECLAMATION COSTS PER WELLFIELD	\$41,395	\$54,875	\$12,380	\$45,998	\$124,461	\$52,536	\$12,982	\$34,812	\$44,362	\$3,449
TOTAL WELLFIELD SURFACE RECLAMATION COSTS	\$427,250									
				6						
IV. Satellite Area Reclamation	Satellite No.1	Satellite No.2	Satellite No.3	Se Plant						,
Assumptions:			2.6							
Alex of Distangance (acres)		0.67	2.5	0.67						
Average Depin of Stripped Topson (n)		0.07	0.07	0.07					1	
Surface Grade: Level Ground									<u> </u>	
Average Length of Topsoil Haul (ft)	1000	. 500	500	500					;	
A. Ripping Overburden with Dozer		£002 70	\$002 70	1003 70						
Pupping Unit Cost per WDEQ Guideline No.12, App.11 (\$/acre)	\$902.70	\$902.70	3902.70	3902.70					i	
D Travell As Vision of Comments	\$903.00	\$2,708.00	\$2,257	\$1,805	-					
B. Topsou Application With Scraper	1/12		2702	21/2						
Volume of Lopson Removed (cy)	1613	3243	2/02	2162					<u></u>	
Application Unit Cost per WDEQ Guideline No.12, App.C (\$/cy)	\$1.02	\$1.02	\$1.02	\$1.02	· · · · · · · · · · · · · · · · · · ·				· · · · · · · · · · · · · · · · · · ·	
C Dispine and Souting	\$1,642	\$3,301	\$2,/51	\$2,201						
Discing And Seeding		P202	\$606	\$404						
Subtated Dissing/Seeding Costs	\$000	3000	\$1515	\$1006						
Subtotal Surface Reclamation Costs per Satellite	\$000 \$2.151	\$1,819	\$6 574	\$1,213	- -					
Total Satellite Building Area Reclamation Costs	\$3,131 \$31,711	\$1,626	\$0,524	¢12,219					i l	
	322,722								,	
TOTAL WELLFIELD AND SATELLITE SUBFACE RECLAMATION COSTS	\$449 072 00									
							<u>├</u>		1	
	4				L					

Equi	pme	nt Rer	noval and Loading			Central Plant	Satellite No. 1	Satellite No. 2	Satellite No. 3	Se Plant
<u>I.</u>	Rem	oval a	ind Loading Costs				<u>.</u> .			
	<u>A.</u>	Tanka	ge							
		Nu	mber of Tanks			26	8	14	18	7
		Vo	lume of Tank Constru	ction Material (ft')		· 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			\$263	\$263	\$263	\$263	\$263
		Su	btotal Labor Costs			\$43,254	\$6,816	\$12,202	\$16,704	\$12,202
		Equip	ment		·					
			Number of Days			41	6	12	16	12
			\$/Day			\$1,933	\$1,933	\$1,933	\$1,933	\$1,933
		Su	btotal Equipment Cost	s		\$79,478	\$12,525	· \$22,421	\$30,693	\$22,421
		Subto	tal Tankage Removal a	nd Loading Costs		\$122,732	\$19,341	\$34,623	\$47,397	\$34,623
	Β.	PVC/S	Steel Pipe	· ·			•			
		PV	C Pipe Footage			10000	1000	4000	4000	4000
		Av	erage PVC Pipe Diam	eter (inches)		3	3	3	3	3
		Sh	redded PVC Pipe Volu	me Reduction (ft ³ /	'ft)	0.023	0.023	0.023	0.023	0.023
		Vo	lume of Shredded PV	C Pipe (ft ³)		233	23	93	93	93
		Ste	el Pipe Footage			2000	0	0	0	0
		Av	erage Steel Pipe Diam	eter (inches)		2	0	0	0	0
		Vc	blume (ft ³)			0	0	0	0	0
		Labor	& Equipment						· · ·	
			Number of Persons			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			\$263	\$263	\$263	\$263	\$263
			\$/ Day Equipment			\$1,108	\$1,108	\$1,108	\$1,108	\$1,108
		Su	btotal PVC/Steel Pipe	Labor & Equipmer	nt Costs	\$86,402	\$7,200	\$28,801	\$28,801	\$28,801
		Subto	tal PVC/Steel Pipe Ren	noval and Loading	Costs	\$86,402	\$7,200	\$28,801	\$28,801	\$28,801
	C.	Pump	s ·	T T						
		Nı	mber of Pumps			50	10	14	13	14
		A١	erage Volume (ft ³ /pur	np)		4.93	4.93	4.93	4.93	4.93
		Vo	olume of Pumps (ft ³)			246.5	49.3	69.02	64.09	69.02

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Equipn	ner	nt f	Ren	ioval and L	oading		·	Central Plant	Satellite No. 1	Satellite No. 2	Satellite No. 3	Se Plant
]	Lat	юг	& Equipme	nt							
		T		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/Pers	on			\$263	\$263	\$263	\$263	\$263
	\neg			\$/ Day Equ	ipment			\$314	\$314	\$314	\$314	\$314
	-		Sub	total Labor	& Equipme	ent Costs		\$21,010	\$4,202	\$5,883	\$5,463	\$5,883
	_	Sut	otot	al Pump Re	noval and I	oading Costs		\$21,010	\$4,202	\$5,883	\$5,463	\$5,883
D.	. 1	Dry	ver									
		Dry	/er `	Volume (ft ³)			885				
		Lat	or	& Equipme	nt							
				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/Pers	on			\$263	\$263	\$263	\$263	\$263
				\$/Day Equ	pment (incl	ludes crane with	operator)	\$2,289				
			Tot	al Labor &	Equipment	Cost		\$23,657	\$0	- \$0	\$0	\$0
		Tot	tal l	Jumber of I	Oryers			3	. 0	0	0	0
		Tot	tal I	Dryer Disma	ntling and	Loading Cost			\$0	\$0	\$0	\$0
E.		RO) Ur	nits				7				
			Nu	mber of RO	Units							
				Current				0	0	2	0	0
				Planned				0	0	3	0	2
			Av	erage Volun	ne (ft3/RO	Unit)		250	250	250	250	250
		Lat	oor	& Equipme	nt	1						
				Number of	Persons			2	2	2	2	2
		_		Number of	Days				0	, 5	0	2
	-1			\$/Day/Pers	on			\$262.97	\$262.97	\$262.97	\$262.97	\$262.97
				\$/ Day Equ	pment			\$545.17	\$545.17	\$545.17	\$545.17	\$545.17
	1	Sul	btot	al RO Unit	Removal an	d Loading Costs		\$0	\$0	\$5,356	\$0	\$2,142
Sı	ubt	ota	l Ec	uipment Re	moval and	Loading Costs pe	er Facility	\$301,115	\$30,743	\$74,663	\$81,661	\$71,449
T	ota	l E	qui	pment Ren	loval and I	oading Costs		\$559,631				
п т.			. 	tion and I	ismasal Ca							
11. 1	1 41	To	orta alca	acion and L	isposar Co	SIS (INIC-LICED	scu racility)					
A		1.8	NG Vc	umo of Tor	lt Construct	tion Material (63	<u></u>	1030	160	200		
Su Ta HI. Tu A.	ubt ota rat	ota al E nsp Ta	l Ec qui ort nka Vo	uipment Re pment Ren ation and I ge	moval and loval and I lisposal Co k Construct	Loading Costs pe Loading Costs sts (NRC-Licen	sed Facility	\$301,115 \$\$59,631	\$30,743	\$74,663	\$81,661	

EQUIP .

Equi	pme	nent Removal and Loading	Central Plant	Satellite No. 1	Satellite No. 2	Satellite No. 3	Se Plant
<u> </u>		Volume for Disposal Assuming 10% Void Space (ft ³)	1131	178	319	437	319
		Transportation and Disposal Unit Cost (\$/ft ³)	\$6.06	\$6.06	\$6.06	\$6.06	\$6.06
		Subtotal Tankage Transportation and Disposal Costs	\$6,849	\$1,078	\$1,932	\$2,646	\$1,932
_	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)	\$6.06	\$6.06	\$6.06	\$6.06	\$6.06
		Subtotal PVC Pipe Transportation and Disposal Costs	\$1,550	\$151	\$618	\$618	\$618
	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)	\$6.06	\$6.06	\$6.06	\$6.06	\$6.06
		Subtotal Pump Transportation and Disposal Costs	\$1,641	\$327	\$460	\$424	\$460
	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)	\$6.06	\$6.06	\$6.06	\$6.06	\$6.06
		Total Dryer Transportation and Disposal Costs	• \$5,359	\$0	\$0	\$0	\$0
	E.	RO Units					
		Volume of RO Units (ft ³)	0	0	1250	0	500
		Volume for Disposal Assuming 50% Volume Reduction (ft ³)	0	0	625	0	250
		Transportation and Disposal Unit Costs	\$6.06	\$6.06	\$6.06	\$6.06	\$6.06
		Subtotal RO Unit Transportation and Disposal Costs	\$0	\$0	\$3,785	\$0	\$1,514
	Subt	ubtotal Equipment Transportation and Disposal Costs per Facility	\$15,399	\$1,556	\$6,795	\$3,688	\$4,524
	Tota	otal Equipment Transportation and Disposal Costs	\$31,962				
III.	Hea	ealth and Safety Costs	+				
_		Radiation Safety Equipment Accounted for on GW REST		*			
	Tota	otal Health and Safety Costs	·				
			ļ				
SUB	TOT	DTAL EQUIPMENT REMOVAL AND DISPOSAL COSTS PER FACILITY	\$316,514	\$32,299	\$81,458	\$85,349	\$75,973
TOT	AL	L EQUIPMENT REMOVAL AND DISPOSAL COSTS	\$591,593	·			

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EQUIP

		1	<u> </u>				r		Central	Dryer	Satellite	Satellite	Satellite	Sat. No. 3	Yellowcake	South	Suspended
Buil	ding [)em	olition ar	d Dispos	al (Hig	hland Uraniu	n Project Build	lings)	Plant	Building	No. 1	No. 2	No. 3	Fab Shop	Warehouse	Warehouse	Walkway
																	1
I	Deco	ntar	nination	Costs													1
	A. \	Wall	Deconta	nination					· · · · · · · · · · · · · · · · · · ·								
		A	to be	Decontar	ninated	1 (ft ²)			131,000	20,000	0	0	0	0	0	0	0
		F	ICI Acid	Vash, inc	luding	labor (\$/ft ²)	· <u> </u>		\$0.48	\$0.48	\$0.48	\$0.48	\$0.48	\$0.48	\$0.48	\$0.48	\$0.48
_		Subt	otal Wall	Decontar	ninatic	on Costs			\$63,028	\$9,623	\$0	\$0	\$0	• \$0	\$0	\$0	\$0
	B. (Con	crete Floo	r Deconta	uninati	on							(
		A	rea to be	Decontar	ninated	1 (ft ²)			17,820	0	6,000	9,600	9,600	0	0	0	0
		ł	ICI Acid	Wash, inc	luding	labor (\$/ft*)	L	·	\$0.51	\$0.51	\$0.51	\$0,51	\$0.51	\$0.51	\$0,51	\$0.51	\$0,51
	\$	Subt	otal Conc	rete Floor	r Deco	ntamination Co	sts		\$9,136	\$0	\$3,076	\$4,922	\$4,922	\$0	\$0	\$0	1 \$0
	<u>C.</u> [Deep	o Well Inj	ection Co	osts	L	L										1
		ĩ	otal Kgal	s for Injec	tion (l gal used per ft	2)		148.82	20	6	9.6	9.6	0	0	0	0
		I	Deep Well	Injection	Unit	Cost (\$/Kgals)		<u>_</u>	\$0.66	\$0.66	\$0.66	\$0.66	\$0.66	\$0.66	\$0.66	\$0.66	\$0.66
	1	Subt	otal Deer	Well Inj	ection	Costs			\$99	\$13	\$4	\$6	\$6				
	Subto	otal	Decontan	ination C	osts pe	er Building			\$72,263	\$9,636	\$3,080	\$4,928	\$4,928	\$0	\$0	\$0	\$0
	Total	De	contamir	ation Co	sts	·		L	\$104,926								_!
11	Demu												<u> </u>				
	A	01	disa														
	1 <u>0. (</u> *	Jun	/olume of	Building	(A ³)		[794.000	30 720	192 000	320.000	320.000	37 560	91.000	333.000	5 600
			Demolitio	Linit Co	ct ner '	WDEO Guideliu	No 12 App K	(\$/ft ³)	194,000	50,720	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25
		Sub	otal Build	ing Dem	olition	Costs	ю но.12, дрр.к		\$197 563	\$7 644	\$47 773	\$79.622	\$79.622	\$9 346	\$22.643	\$82 857	\$1 393
	B	Con	crete Flor	r	ontion	00303		÷			••••	\$15,022	077,022		012,010		1 01,000
┝──	<u> </u>		Area of Co	ncrete FL	oor (ff	<u></u>	<u> </u>		23 760	500	8 000	12800	12800		6500	18000	
		- ľ	Demolitio	Unit Co	st ner	y WDFO Guideliu	ne No 12 Ann K	(\$/#2)	\$5.05	\$5.05	\$5.05	\$5.05	\$5.05	\$5.05	\$5.05	\$5.05	\$5.05
		Sub	total Con	rete Floo	r Dem	lition Costs	10 110.12,1 ipp.it	(0/112)	\$120.058	\$2 526	\$40 424	\$64 678	\$64 678	\$0	\$32,844	\$90,953	50
	C	Con	crete Foo	ing		1											
├		II	ength of	Concrete	Footin	g (ft)			617	89	358	453	. 453	0	322	537	0
			Jemolitio	Unit Co	cf ner	WDEO Guidelin	ne No 12 Ann K	(\$/#)	\$18.14	\$18.14	\$18.14	\$18 14	\$18.14	\$18.14	\$18.14	\$18.14	1 \$18.14
	(Sub	total Con	rete Foot	ing De	molition Costs		T	\$11,182	\$1.622	\$6.488	\$8 207	\$8 207	\$0	\$5 848	\$9.732	\$0
<u> </u>	Subto	ntal	Demoliti	n Costs r	ner Bui	Iding		<u> </u>	\$328 803	\$11,792	\$94 685	\$152 507	\$152 507	\$9 346	\$61 335	\$183 542	\$1 393
í	Total	l De	molition	Costs	<u>, , , , , , , , , , , , , , , , , , , </u>			· · · · · · · · · · · · · · · · · · ·	\$1,401,883	011,12			4152,501				1
			1														- (
<u>m.</u>	Disp	osal	Costs					<u> </u>				·					
	A. 1	Buil	ding		. 												1
┝──	 `	Volu	ime of Bi	ilding (cy	<u>/)</u>		ļ		29407	1138	7111	11852	11852	1391	3370	12333	1 207
			Dif-Site C	ounty Lar	ndfill	·											1
·		_	Percer	tage (%)		L		·	100	100	100	100	100	100	100	100	100
	+		_ Volun	e for Dis	posal (cubic yards)	·	<u> </u>	29407	1138	7111	11852	11852	1391	3370	12333	207
	┨──┤.	C1	[Dispo:	al Unit C	ost (\$/	cy)	L		\$8.12	\$8.12	\$8.12	\$8.12	\$8.12	58.12	\$8.12	\$8.12	\$8.12
├		Sub	IOTAL COUL	ity Facilit	y On-	Site Disposal Co	osts	·	\$238,652	\$9,233	\$57,709	\$96,182	\$96,182	\$11,289	\$27,352	\$100,089	1 \$1,683
h	1 <u>0.</u>	Con	Liete rio	F	(0	<u>Į </u>						12000	12000				
۴	<u> </u>	14	uea oi U	ncrete FI	oor (ft)	L	1	23760		8000	_12800	12800	0	. 6500	18000	1186

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	Central	Dryer	Satellite	Satellite	Satellite	Sat. No. 3	Yellowcake	South	Suspended
Building Demolition and Disposal (Highland Uranium Project Buildings)	Plant	Building	No. 1	No. 2	No. 3	Fab Shop	Warehouse	Warehouse	Walkway
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	0	4875	13500	889.5
Volume of Concrete Floor (cy)	660	14	222	356	356	0	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	0	181	500	33
Disposal Unit Cost per WDEQ Guideline No.12, App.K (\$/cy)	\$8.12	\$8.12	\$8.12	\$8.12	\$8.12	\$8.12	\$8.12	\$8.12	\$8.12
Subtotal County Facility Off-Site Disposal Costs	\$4,017	\$85	\$1,353	\$2,885	\$2,885	\$0	\$1,465	\$4,058	\$267
2. NRC-Licensed Facility									1
Percentage (%)	25	25	25	0	0	0	0	0	, 0
Volume for Disposal (ft ³)	4455	94	1500	0	0	0	0	0	1 0
Transportation and Disposal Unit Cost (\$/ft ³)	\$10.44	\$10.44	\$10.44	\$10.44	\$10.44	\$10.44	\$10.44	\$10.44	\$10.44
Subtotal NRC-Licensed Facility Disposal Costs	\$46,500	\$979	\$15,657	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Concrete Floor Disposal Costs	\$50,517	\$1,064	\$17,010	\$2,885	\$2,885	\$0	\$1,465	\$4,058	\$267
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	1 . 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)	\$8.12	\$8.12	\$8.12	\$8.12	\$8.12	\$8.12	\$8.12	\$8.12	\$8.12
Subtotal Concrete Footing Disposal Costs (county landfill)	\$741	\$108	\$430	\$544	\$544	\$0	\$388	\$645	\$149
Subtotal Disposal Costs per Building	\$289,910	\$10,405	\$75,149	\$99,611	\$99,611	\$11,289	\$29,205	\$104,792	\$2,099
Total Disposal Costs	\$921,099			÷					
IV. Health and Safety Costs Accounted for on GW REST									
SUBTOTAL BUILDING DEMOLITION AND DISPOSAL COSTS	\$690,976	\$31,833	\$172,914	\$257,046	\$257,046	\$20,635	\$90,540	\$288,334	\$3,492
TOTAL BUILDING DEMOLITION AND DISPOSAL COSTS	\$2.427.908								1
									1
Building Utility Costs									
Number of years of operation required for restoration/reclamation	0	0	0	11	0	0	0	0	i 0
SUBTOTAL BUILDING ELECTRICAL COSTS (UC-Electrical Power)	\$0.00	\$0.00	\$0.00	\$238,810.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TOTAL BUILDING ELECTRICITY COSTS	\$578,188								
	· · · · · · · · · · · · · · · · · · ·								
SUBTOTAL PROPANE AND NATURAL GAS COSTS (UC-Heating Cost)	· · · · · · · · · · · · · · · · · · ·			\$33,371.99	-				
TOTAL PROPANE AND NATURAL GAS COSTS	\$113,965			·		· · · · · · · · · · · · · · · · · · ·			
						 · · <i>−</i>			
TOTAL UTILITY COSTS	\$692,153.65								,

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		Changehouse	Maintenance	Main	Office	Process/	Potable	Potable Water	Central Plant	Selenium	Exxon R&D
Bui	uilding Demolition and Disposal (Highland Uranium Project Buildings)	and Lab	Bldg	Office	Trailers	Fire Water	Water Bldg	Tank Slab	Tank Slabs	Plant	RO Bldg.
I.	Decontamination Costs										
	A. Wall Decontamination										
	Area to be Decontaminated (ft ²)	0	0	0	0	0	0	0	0	4,000	0
	HCl Acid Wash, including labor (\$/ft ²)	\$0.48	\$0.48	\$0.48	\$0.48	\$0.48	\$0.48	\$0.48	\$0.48	\$0.48	\$0.48
	Subtotal Wall Decontamination Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,925	, \$0
L	B. Concrete Floor Decontamination										
	Area to be Decontaminated (ft ²)	0	0	0	0	0	0	0	0	9,600	1260
L	HCl Acid Wash, including labor (\$/ft ²)	\$0.51	\$0.51	\$0.51	\$0.51	\$0.51	\$0.51	\$0.51	\$0.51	\$0.51) \$0.51
	Subtotal Concrete Floor Decontamination Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,922	\$646
	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
	Deep Well Injection Unit Cost (\$/Kgals)	\$0.66	\$0.66	\$0.66	\$0.66	\$0.66	\$0.66	\$0.66	\$0.66	\$0.66	\$0.66
	Subtotal Deep Well Injection Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9	' \$1
(Subtotal Decontamination Costs per Building	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,856	\$647
	Total Decontamination Costs										
п.	. Demolition Costs										1
	A. Building	·							l		1
	Volume of Building (ft ³)	73000	27,000	72,000	20,000	16;500	6,300	0	0	320,000	15120
	Demolition Unit Cost per WDEQ Guideline No.12, App.K (\$/ft ³)	\$0,25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25
	Subtotal Building Demolition Costs	\$18,164	\$6,718	\$17,915	\$4,976	\$4,106	\$1,568	\$0	\$0	\$79,622	\$3,762
	B. Concrete Floor			` <u>`</u>							1
	Area of Concrete Floor (ft ²)	5400	2100	6000	0	800	180	1256	7854	12800) 1260
	Demolition Unit Cost per WDEQ Guideline No.12, App.K (\$/ft2)	\$5.05	\$5.05	\$5.05	\$5.05	\$5.05	\$5.05	\$5.05	\$5.05	\$5.05	\$5.05
	Subtotal Concrete Floor Demolition Costs	\$27,286	\$10,611	\$30,318	\$0	\$4,042	\$910	\$6,347	\$39,686	\$64,678	\$6,367
	C. Concrete Footing										
	Length of Concrete Footing (ft)	294	183	310	0	113	54	0	0	453	142
	Demolition Unit Cost per WDEQ Guideline No.12, App.K (\$/ft)	\$18.14	\$18.14	\$18.14	\$18.14	\$18.14	\$18.14	\$18.14	\$18.14	\$18.14	\$18.14
	Subtotal Concrete Footing Demolition Costs	\$5,331	\$3,324	\$5,619	\$0	\$2,052	\$973	\$0	\$0	\$8,207	\$2,575
	Subtotal Demolition Costs per Building	\$50,781	\$20,653	\$53,852	\$4,976	\$10,200	\$3,451	\$6,347	\$39,686	\$152,507	\$12,704
	Total Demolition Costs							· · · · · · · · · · · · · · · · · · ·			1
111		[
	A Building		;						······································		l
	A. Durung Volume of Puilding (a)			244							<u> </u>
}—	Off Site County Law 4511	2704	1000	2007	741	611	233	0	0	11852	560
	Percentore (9/)	100			100	100	100				
	Volume for Disposal (oubia uards)	100	100	100	100	100	100	100	100	100	100
⊢	Disposal Unit Cast (\$(a))	2/04	1000	2667	/41	011	233	0	0	11852	560
<u> </u>	Subtotal County Facility Off Site Disposal Costs	58.12	58.12	58.12	\$8.12	58.12	\$8.12	\$8.12	\$8.12	\$8.12	\$8.12
-	B Concrete Floor	\$21,942	\$8,115	\$21,641	20,011	54,959	\$1,894	\$0	\$0	\$96,182	\$4,545
<u> </u>	Area of Concrete Floor (ft ²)			6000			100				<u> </u>
L		L0	2100	0000	0	800	180	1256	7854	12800	1260

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	Changehouse	Maintenance	Main	Office	Process/	Potable	Potable Water	Central Plant	Selenium	Exxon R&D
Building Demolition and Disposal (Highland Uranium Project Buildings)	and Lab	Bldg	Office	Trailers	Fire Water	Water Bldg	Tank Slab	Tank Slabs	Plant	RO Bldg.
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
Volume of Concrete Floor (ft ³)	0	1575	4500	0	600	135	942	5890.5	9600	945
Volume of Concrete Floor (cy)	0	58	167	0	22	5	35	218	356	35
1. Off-Site County Landfill										
Percentage (%)	100	100	100	100	100	100	100	100	100	1 100
Volume for Disposal (cy)	.0	58	167	0	633	5	35	218	356	35
Disposal Unit Cost per WDEQ Guideline No.12, App.K (\$/cy)	\$8,12	\$8.12	\$8.12	\$8.12	\$8.12	\$8.12	\$8.12	\$8.12	\$8.12	\$8.12
Subtotal County Facility Off-Site Disposal Costs	\$0	\$473	\$1.353	\$0	\$5,140	\$41	\$283	\$1,771	\$2,885	\$284
2. NRC-Licensed Facility										j
Percentage (%)	0	0	0	0	0	0	0	0	0	ş 0
Volume for Disposal (ft ³)	· 0	0	0	0	0	0	0	0	0	0
Transportation and Disposal Unit Cost (\$/ft ³)	\$10.44	\$10.44	\$10.44	\$10.44	\$10.44	\$10.44	\$10.44	\$10.44	\$10.44	\$10.44
Subtotal NRC-Licensed Facility Disposal Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Concrete Floor Disposal Costs	\$0	\$473	\$1,353	\$0	· \$5,140	\$41	\$283	\$1,771	\$2,885	\$284
C. Concrete Footing										1
Length of Concrete Footing (ft)	0	183	310	0	113	54	0	0	453	142
Average Depth of Concrete Footing (ft)	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
Volume of Concrete Footing (ft ³)	0	733	1239	0	453	215	0	0	. 1810	568
Volume of Concrete Footing (cy)	0	27	46	0	17	8	0	0	67	1 21
Disposal Unit Cost per WDEQ Guideline No.12, App.K (\$/cy)	\$8.12	\$8.12	\$8.12	\$8,12	\$8.12	\$8.12	\$8.12	\$8.12	\$8.12	\$8.12
Subtotal Concrete Footing Disposal Costs (county landfill)	\$0	\$220	\$373	\$0	\$136	\$65	\$0	\$0	\$544	\$171
Subtotal Disposal Costs per Building	\$21,942	\$8,808	\$23,367	\$6,011	\$10,235	\$2,000	\$283	\$1,771	\$99,611	\$5,000
Total Disposal Costs	<u>_</u>									1
IV. Health and Safety Costs Accounted for on GW REST									· ·	
SUBTOTAL BUILDING DEMOLITION AND DISPOSAL COSTS	\$72.723	\$29,461	\$77,219	\$10,987	\$20,435	\$5,451	\$6,630	\$41,457	\$258,974	\$18,351
TOTAL BUILDING DEMOLITION AND DISPOSAL COSTS				·						
┠━┼╼┼┼┼╎╴┦┉╴┝╌┈─┤┄──┉──┤╌──╵┈				i						
Building Utility Costs		· · · · · · · · · · · · · · · · · · ·								
Number of years of operation required for restoration/reclamation	0	0	0	0	0	0	0	0	7	0
SUBTOTAL BUILDING ELECTRICAL COSTS (UC-Electrical Power)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$226,822.86	\$0.00
TOTAL BUILDING ELECTRICITY COSTS						1				
							· · ·			
SUBTOTAL PROPANE AND NATURAL GAS COSTS (UC-Heating Cost)			1						\$80,593	
TOTAL PROPANE AND NATURAL GAS COSTS										
			1		1	1				
TOTAL UTILITY COSTS		[·						

	<u> </u>		Exxon R&D	SRHUP 9	VOLLMAN	MORTON 1
Buil	ding	Demolition and Disposal (Highland Uranium Project Buildings)	Process Bldg.	DDW	33-27 DDW	20 DDW
I.	Dec	ontamination Costs				
	Α.	Wall Decontamination				
		Area to be Decontaminated (ft ²)	0	0	0	0
		HCl Acid Wash, including labor (\$/ft ²)	\$0.48	\$0.48	\$0.48	\$0.48
		Subtotal Wall Decontamination Costs	\$0	\$0	\$0	\$0
	B.	Concrete Floor Decontamination				
		Area to be Decontaminated (ft ²)	. 1260	1260	1260	1260
		HCl Acid Wash, including labor (\$/ft ²)	\$0.51	\$0.51	\$0.51	\$0.51
-		Subtotal Concrete Floor Decontamination Costs	\$646	\$646	\$646	\$646
	C.	Deep Well Injection Costs				
		Total Kgals for Injection (1 gal used per ft2)	1.26	1.26	1.26	1.26
	-	Deep Well Injection Unit Cost (\$/Kgals)	\$0.66	\$0.66	\$0,66	\$0.66
		Subtotal Deep Well Injection Costs	\$1	\$1	\$1	\$1
	Sub	otal Decontamination Costs per Building	\$647	\$647	\$647	\$647
	Tot	I Decontamination Costs				
П.	Den	nolition Costs				
	A.	Building			•	
		Volume of Building (ft ³)	15120	15120	15120	15120
		Demolition Unit Cost per WDEQ Guideline No.12, App.K (\$/ft ³)	\$0.25	\$0.25	\$0.25	\$0.25
		Subtotal Building Demolition Costs	\$3,762	\$3,762	\$3,762	\$3,762
	В.	Concrete Floor				
		Area of Concrete Floor (ft ²)	1260	1260	1260	1260
		Demolition Unit Cost per WDEQ Guideline No.12, App.K (\$/ft2)	\$5.05	\$5.05	\$5.05	\$5.05
		Subtotal Concrete Floor Demolition Costs	\$6,367	\$6,367	\$6,367	\$6,367
	C.	Concrete Footing				
		Length of Concrete Footing (ft)	· 142	142	142	142
		Demolition Unit Cost per WDEQ Guideline No.12, App.K (\$/ft)	\$18.14	\$18.14	\$18.14	\$18.14
		Subtotal Concrete Footing Demolition Costs	\$2,575	\$2,575	\$2,575	\$2,575
	Sub	total Demolition Costs per Building	\$12,704	\$12,704	\$12,704	\$12,704
	Tot	al Demolition Costs				
111	D'					
	DIS					
┝──	A.				540	5(0)
I	┼──	Volume of Building (cy)				560
\vdash		Dif-Site County Landmin		100	100	100
<u> </u>		Volume for Disposel (subjected)	. 100	100	100	100
\vdash		Disposal Linit Cost (Club)	000	500	500	500
	+	Subtotal County Encility Off Site Disposal Costs			\$8.12 \$1.545	\$0.12 \$1.545
	h	Concrete Floor		\$4,545	34,343	
H	D.	Area of Concrete Floor (A ²)	1260	1260	1260	1260
	1	Area of Concrete Floor (IT)	1260	1260	1260	1260

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BLDGS

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Build	ding	Der	noliti	on and Disposal (Hi	ghland Uraniu	n Project Build	ings)	Process Bldg.	DDW	33-27 DDW_	20 DDW
.		1	Avera	ige Thickness of Cor	crete Floor (ft)			0.75	0.75	0.75	0.75
			Volu	ne of Concrete Floor	(ft ³)			945	. 945	945	945
			Volu	ne of Concrete Floor	(cy)			35	35	- 35	35
		1.	Off-S	ite County Landfill							
			P	ercentage (%)				100	100	100	100
			V	olume for Disposal (cy)			35	35	35	35
			E	isposal Unit Cost pe	WDEQ Guidel	ine No.12,App.K	(\$/cy)	\$8.12	\$8.12	\$8.12	\$8.12
			Subto	tal County Facility C	ff-Site Disposal	Costs		\$284	\$284	\$284	\$284
		2.	NRC	Licensed Facility							
			P	ercentage (%)				0	0	0	0
			V	olume for Disposal (<u>ft')</u>			0	0	0	0
			T	ransportation and Di	sposal Unit Cost	t (\$/ft ³)		\$10.44	\$10.44	\$10.44	\$10.44
			Subto	otal NRC-Licensed F	cility Disposal	Costs		\$0	\$0	\$0	\$0
		Sut	ototal	Concrete Floor Disp	osal Costs			\$284	\$284	\$284	\$284
	С.	Co	ncrete	Footing							· · · · · · · · · · · · · · · · · · ·
			Leng	th of Concrete Footir	<u>g (ft)</u>			142	142	142	142
			Aver	age Depth of Concret	e Footing (ft)			4	4	4	4
			Aver	age Width of Concre	e Footing (ft)			1	1	· _1	1
			Volu	me of Concrete Footi	ng (ft')		· · · · ·	568	568	568	568
			Volu	me of Concrete Footi	ng (cy)			21	21	21	21
			Dispo	osal Unit Cost per W	DEQ Guideline	No.12,App.K (\$/	cy)	\$8.12	\$8.12	\$8.12	\$8.12
		Sut	ototal	Concrete Footing Di	sposal Costs (co	unty landfill)		\$171	\$171	\$171	\$171
	Sub	ota	l Disp	osal Costs per Build	ng			\$5,000	\$5,000	\$5,000	\$5,000
	Tot	al D	ispos	al Costs							
IV	Hea	lth	and	afaty Casts	Accounted for	on GW PEST					
1	IICa				Accounted for	on ow REST	· ••• •				
SUB	TOT	AL	BUII	DING DEMOLITIO	N AND DISPOS	SAL COSTS		\$18,351	\$18,351	\$18,351	\$18,351
τοτ	TAL	BU	ILDI	NG DEMOLITION	AND DISPOSA	AL COSTS					
					L						
Buil	ding	Uti	lity C	Costs							
Num	ber o	of ye	ears o	f operation required	for restoration/re	eclamation		0	11	11	11
SUB	TOT	AL	BUII	DING ELECTRICA	L COSTS (UC-I	Electrical Power)	\$0.00	\$37,522.31	\$37,510.79	\$37,522.31
тот	AL	BU	ILDI	NG ELECTRICITY	COSTS						
					L						
SUI	вто	ΓAI	_ PRC	PANE AND NATU	RAL GAS COST	rs (UC-Heating	Cost)			L	
TO	TAL	PR	IOPA	NE AND NATURA	L GAS COSTS						
					L	•.					
TOT	AL	ЛІ	LITY	COSTS	L						

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BLDGS

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Misce	lane	cous Reclamation						
=	1							
<u>.</u>	CPA	Office Area Reclamation						
		Concrete Pad= 0.3 acres						
-1		Total Area = 10 acres						
	A. /	Asphalt						
		Area of Asphalt (acres)	3.4					
		Demolition Unit Cost per WDEQ Guideline No. 12, App. I (\$/acre)	\$664.28					
		Average Thickness (ft)	0.50					
~†		Hauling Unit Cost per WDEO Guideline No. 12 App C (500 ft. 0% grade)	\$0.852					
	-	Volume of Asphalt (cv)	2 743					
-+	-†	Disposal Average Cost per WDEO Guideline No 12 App K (\$/cs)	\$8.12					
\rightarrow	-	Subtotal Concrete Bad Demalition and Disposal Costs	674 519					
	a 1	Rinning Quarthurden with Dozer	344,017					
	<u>, l</u>	Or ashurden Surface Area (seea)	10.6					
	-+-	Diversional Surface Area (acres)	10.0					·
	-	Kipping Unit Cost per WDEQ Guideline No.12, App.11 (S/acre)	\$902.70					
		Subtotal Ripping Overburden Costs	\$9,542	· · · · · · · · · · · · · · · · · · ·				
	<u>u.</u> [Topsoil Application	4					·
	1	Area of surface disturbance (ft ²)	- 130680					
		Average thickness of topsoil (ft)	0.5					
		Average haul distance (ft)	2000					
	-	Surface grade (%)	0%					
	- 1	Volume of Tonsoil (cv)	2 420					
-	-	Maxement of Tansail Unit Cast ner WDEO Guideline No. 12 App. C (\$/a)	\$1.32					
	-	Subtatal Tapsoil Application Casts	\$7.107					
		Diama /Sandina	33,172					
	v . p			,				
	+		13				·	
	_	Discing/Seeding Unit Cost (S/acre)	3006					
		Subtotal Discing/Seeding Costs	\$7,883					
	l'ota	al CPP/Office/Yard Area Reclamation	\$45,136					
							Sat No. 2 to	
u I	A	ess Road Reclamation (includes culverts)	CPE/Office Area	Sat No. 1	Sat No. 3	Connecting Road	Bancher Rd	
			CI I/Onice Area		54(110.5	Connecting Road	Ranchel Ru	
	A.	Assumptions						
	- 8	Surface grade	5%	0%	0%	0%	0%	
		Length of Road (It)	13200	15840	5280	10560	20-10	
		Width of Road (ft)	25		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)	5500	0	0	0	0.0	
		Average Thickness of Asphalt (ft)	. 0.5	. 0	0	0	0.0	
		Ripping Unit Cost Per WDEQ Guideline No. 12, App I (\$/acre)	\$664.28	\$664.28	\$664.28	\$664.28	\$664.28	
	1	Volume of Asphalt (cy)	6111	0	0	0	0	
		Hauling Unit Cost per WDEQ Guideline No. 12, App C (\$/ev)	\$3,57	\$3,57	\$3.57		\$3.57	
	C. 1	Gravel Road Base Removal						
		Average haul distance (ft)	0	1000	1000	1000	0	
		Gravel Road Base Width (ft)	0		14	14		· · · · · · · · · · · · · · · · · · ·
	t	Gravel Road Base Area (acres)	0.00	5.09	1 70	3 30		
		Average Road Base Depth (ft)	0.00	0.5	0.4	0.5		
	-+	Volume of Road Base (cv)			1360	2739		
است بينا				4107	1509	2/38		

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MISC REC

r			1			·					
Mise	cellan	ous Reclamation									
		Removal Unit Cost per WDE	Q Guideline	No.12. App.C (\$/cy))	\$0.00	\$1.02	\$1.02	\$1.02		
L	-	Subtotal Gravel Road Base Rem	oval Costs			\$0	\$4,181	\$1,394	\$2,787	50	i
í—	D.	Ripping Overburden with Dozer				[7.2	0.0	
<u> </u>		Overburden Surface Area (ac	res)			0.0	10.9	3.6	7.3	0.5	
		Ripping Unit Cost per WDE	2 Guideline P	No.12, App.11 (\$/acr	c)	\$902.70	\$902.70	\$902.70	\$902.70	\$902.70	
<u> </u>	F	Subtotal Ripping Overburden Co	ists	·			39,848	\$3,283	30,303	\$347	
	E.	Average have distance (0)			· · · · · · · · · · · · · · · · · · ·	1500	5000	1500	1500	1500	
	+	T is a c t c c 2				1500		168100	21(800	2(100	
_		Topsoil Surface Area (tt ⁻)				. 330000	4/5200	138400		20400	
⊢		Uchura of Tanavil (m)					0.5	7033	5867	489	·····
-		Movement of Topsoil Unit C	ort per WDF	O Guideline No.12	Ann C (\$/m)	\$1.02	\$1.02	\$1.02	\$1.02	\$1.02	
\vdash	+	Subtotal Tonsoil Application Con	te de la companya de	Q Outdenine 110.12,		\$6 221	\$8.958	\$2,986	\$5.972	\$498	
	F	Discing/Seeding				40,221					
	1-1	Surface Area (acres)				7.6	10.9	3.6	7.3	0.6	
		Discing/Seeding Unit Cost ((acre)			\$606	\$606	\$606	\$606	\$606	
-		Subtotal Discing/Seeding Costs				\$4,594	\$6,615	\$2,205	\$4,410	\$367	
	Mu	iplier for Projected Additions				0	0	0	0	0	
	Sub	otal Reclamation Costs per Acco	ss Road			\$10,815	\$29,602	\$9,868	\$19,734	\$1,412	
	Tot	I Access Road Reclamation C	osts			\$71,431					
		<u>─[₽]─┘</u> ╁───┼───				SAT2 to Morton	SAT3 to SAT2		Vollman WW	SRHUP 9 WW	Waste Transfer
III.	Tru	nk Lines			· ·	WW Pipeline	PSR	H-WF Rest. Bypass	Pineline ·	Pipeline	CPP to Sat #3
]					
		1			•						
1		Length of Trench (ft)				24000	22000	2200	13000	4000	9700
	A.	Length of Trench (ft) Removal and Loading				24000	22000	2200	13000	4000	9700
	A.	Length of Trench (ft) Removal and Loading Main Pipeline Removal Unit	Cost (\$/ft of	trench)		24000 \$1.83	\$1.83	\$1.83	\$1.83	4000 \$1.83	9700
	A.	Longth of Trench (ft) Removal and Loading Main Pipeline Removal Unit Subtotal Trunkline Removal and	Cost (\$/ft of Loading Cos	trench)		\$1.83 \$43.920	\$1.83 \$40,260	\$1.83 \$4,026	\$1.83 \$23,790	4000 \$1.83 \$7,320	9700 \$1.83 \$17.751
	A. B.	Length of Trench (ft) Removal and Loading Main Pipeline Removal Unit Subtotal Trunkline Removal and Transport and Disposal Costs (N	Cost (\$/ft of Loading Cos IRC-Licensed	trench) sts I Facility)		\$1.83 \$43,920	\$1.83 \$40,260	\$1.83 \$4,026	\$1.83 \$23,790	4000 \$1.83 \$7.320	9700 \$1.83 \$17.751
	A. B.	Length of Trench (ft) Removal and Loading Main Pipeline Removal Unit Subtotal Trunkline Removal and Transport and Disposal Costs (N 1. 3" HDPE Trunkline	Cost (\$/ft of Loading Cos IRC-Licensed	trench) sts I Facility)		\$1.83 \$43.920	22000 \$1.83 \$40,260	\$1.83 \$4,026	13000 \$1.83 \$23,790	4000 \$1.83 \$7,320	9700 \$1.83 \$17.751
	A. B.	Length of Trench (ft) Removal and Loading Main Pipeline Removal Unit Subtotal Trunkline Removal and Transport and Disposal Costs (N	Cost (\$/ft of Loading Cos	trench) ts 1 Facility)		24000 \$1.83 \$43.920 24000	\$1.83 \$40,260	\$1.83 \$4,026 2200	13000 \$1.83 \$23,790	4000 \$1.83 \$7.320 4000	9700 \$1.83 \$17,751
	A. B.	I.cngth of Trench (ft) Removal and Loading Main Pipeline Removal Unit Subtotal Trunkline Removal and Transport and Disposal Costs (N 1. 3" HDPE Trunkline Piping Length (ft) (Chipped Volume Reduc	Cost (\$/ft of Loading Cos IRC-Licensed tion (ft ³ /ft)	trench) ts 1 Facility)		24000 51.83 \$43.920 24000 0.023	22000 \$1.83 \$40,260 0 0.023	2200 \$1.83 \$4,026 2200 0.023	13000 \$1.83 \$23,790 0.023	4000 \$1.83 \$7.320 4000 0.023	9700 \$1.83 \$17.751 0 0 0,023
	A. B.	Length of Trench (ft) Removal and Loading Main Pipelime Removal Unit Subtotal Transhine Removal and Transport and Disposal Costs (N 1. 3" HÖPE Transhine Piping Length (ft) Chipped Volume Reduce Chipped Volume (ft) Chipped Volume (ft)	Cost (\$/ft of Loading Cos IRC-Licensec	trench) is 1 Facility)		24000 \$1.83 \$43.920 24000 0.023 559	22000 \$1.83 \$40,260 0 0.023 0	2200 \$1.83 \$4,026 2200 0,023 51	[3000 \$1.83 \$23,790 	4000 \$1.83 \$7.320 4000 0.023 93	9700 \$1.83 \$17,751 0 0,023 0
	A. B.	Length of Trench (ft) Removal and Loading Main Pipeline Removal Unit Subtotal Trunkline Removal and Transport and Disposal Costs (N 1. Piping Length (ft) Chipped Volume Reduc Chipped Volume (ft) 4" HOPE Trunkline	Cost (\$/ft of Loading Cos RC-Licensec tion (ft ³ /ft)	trench) its I Facility)		24000 \$1.83 \$43.920 24000 0.023 559	22000 \$1.83 \$40,260 0 0.023 0 0	2200 \$1.83 \$4,026 2200 0,023 51	[3000 \$1.83 \$23,790 0.023 0	4000 \$1.83 \$7.320	9700 \$1.83 \$17.751 0 0.023 0
	A. B.	I.cogth of Trench (ft) Removal and Loading Main Pipeline Removal Unit Subtotal Trunkline Removal and Transport and Disposal Costs (N I. 3" HDPE Trunkline Piping Length (ft) Chipped Volume Reduce Chipped Volume (h ⁵) 4" HDPE Trunkline Piping Length (ft)	Cost (\$/ft of Loading Cos RC-Licensee tion (ft ³ /ft)	trench) ils I Facility)		24000 \$1.83 \$43.920 24000 0.023 559 0	22000 \$1.83 \$40,260 0.023 0 22000	2200 \$1.83 \$4.026 2200 0.023 51	[3000 \$1.83 \$23,790 0.023 0 13000	4000 \$1.83 \$7,320	9700 \$1.83 \$17.751 0 0.023 0 9700
	A. B.	I.cngth of Trench (ft) Removal and Loading Main Pipeline Removal Unit Subtoal Transkine Removal and Transport and Disposal Costs (N I. 3" HDPE Transkine Piping Length (ft) Chipped Volume (Rt ¹) Z. 4" HDPE Transkine Piping Length (ft) Chipped Volume (Rt ¹) Z. 4" HDPE Transkine Piping Length (ft) Chipped Volume Reduc	Cost (\$/ft of Loading Cos IRC-Licensee tion (ft ³ /ft)	trench) its 1 Facility)		24000 \$1.83 \$43.920 24000 0.023 559 0 0 0.038	22000 \$1,83 \$40,260 0 0,023 0 22000 0,038	2200 \$1.83 \$4,026 2200 0,023 51 0 0,038	[3000 \$1.83 \$23,790 0.023 0 13000 0.038	4000 \$1.83 \$7.320 4000 0.023 93 0 0 0.038	9700 \$1.83 \$17.751 0 0 0.023 0 9700 0.038
	A. B.	Icogth of Trench (ft) Removal and Loading Main Pipeline Removal Unit Subtotal Trankline Removal and Transport and Disposal Costs (N 1. 3" HOPE Trankline Piping Length (ft) Chipped Volume (Rav Chipped Volume (R ¹) 4" HOPE Trankline Piping Length (ft) Chipped Volume (R ¹) Chipped Volume (R ¹) Chipped Volume (R ¹) Chipped Volume Reduc Reduc Chipped Volume Reduc Chipped	Cost (\$/ft of Loading Cos IRC-Licensec tion (ft ³ /ft)	trench) its i Facility)		24000 \$1.83 \$43.920 24000 0.023 559 0 0.038 0 0.038	22000 \$1.83 \$40,260 0 0.023 0 22000 0.038 846	2200 \$1.83 \$4,026 2200 0,023 51 0 0,038 0,038	[3000 \$1.83 \$23,790 0.023 0 13000 0.038 500	4000 \$1.83 \$7.320 4000 0.023 93 0 0.038 0 0.038 0 0	9700 \$1.83 \$17.751 0 0 0.023 0 9700 0.038 373
	A. B.	I.cogth of Trench (ft) Removal and Loading Main Pipeline Removal Unit Subtotal Trunkline Removal and Transport and Disposal Costs (N 1. 3" HDPE Trunkline Piping Length (ft) Chipped Volume Reduc Chipped Volume (R ¹) 4" HDPE Trunkline Piping Length (ft) Chipped Volume Reduc Reduct Subtotat Reduc Reduct Subtotat Reduct Subtotat Reduct Subtotat Reduct Subtotat Reduct Subtotat Reduct Subtotat Subtotat Reduct Subtotat Reduct Subtotat Reduct Subtotat Subtotat Reduct Subtotat Reduct Subtotat Reduct Subtotat Reduct Subtotat Reduct Subtotat Reduct Subtotatatatatatatatatatatatatatatatatatat	Cost (\$/ft of Loading Cos IRC-Licensection (ft ³ /ft)	trench) is I Facility)		24000 \$1.83 \$43.920 24000 0.023 559 0 0.038 0 0	22000 \$1,83 \$40,260 0 0,023 0 22000 0,038 846	2200 \$1.83 \$4,026 2200 0,023 51 0 0,038 0	[3000 \$1.83 \$23,790 0.023 0 13000 0.038 500	4000 \$1 83 \$7,320 4000 0,023 93 0 0 0,038 0	9700 \$1.83 \$17.751 0 0.023 0 9700 0.038 373
	A. B.	I.cngth of Trench (ft) Removal and Loading Main Pipeline Removal Unit Subtotal Trunkline Removal and Transport and Disposal Costs (N "Piping Length (ft) Chipped Volume Reduc Reduce Reduce Reduce Reduce Reduc	Cost (\$/R of Loading Cos RC-Licensee tion (ft ³ /R)	trench) is I Facility)		24000 \$1.83 \$43.920 24000 0.023 559 0 0 0.038 0 0 0 0 0 0 0 0 0 0 0 0 0	22000 51,83 \$40,260 0 0 0 0 0 0 0 0 0 0 0 0 0	2200 \$1.83 \$4,026 2200 0.023 51 0 0.038 0 0 0 0 0 0 0 0 0 0 0 0 0	[3000 \$1.83 \$23,790 0.023 0 13000 0.038 500 0 0 0 0 0 0 0 0 0 0 0 0	4000 51.83 \$7.320 4000 0.023 93 0 0.038 0 0 0.038 0 0 0 0 0 0 0 0 0 0 0 0 0	9700 \$1.83 \$17.751 0 0 0 0.023 0 9700 0.038 373 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	A. B.	Icogth of Trench (ft) Removal and Loading Main Pipeline Removal Unit Subtotal Trankline Removal Unit Subtotal Trankline Removal and Transport and Disposal Costs (N 1, 3" HOPE Trankline Piping Length (ft) Chipped Volume (Rain) Piping Length (ft) Chipped Volume (Rain) Piping Length (ft) Chipped Volume Reduc Chipped	Cost (\$/R of Loading Cos RC-Licensee lion (R ³ /R)	trench) IS Facility)		24000 \$1.83 \$43.920 24000 0.023 559 0 0.038 0 0 0 0 0 0 0 0 0 0 0 0 0	22000 \$1,83 \$40,260 0 0,023 0 22000 0,038 846 0 0,033 0,035	2200 \$1.83 \$4,026 2200 0,023 51 0 0,038 0 0 0 0 0 0 0 0 0 0 0 0 0	[3000 \$1.83 \$23,790 0.023 0 13000 0.038 500 0 0.083	4000 51 83 \$7,320 4000 0,023 93 0 0,038 0 0 0 0 0 0 0 0 0 0 0 0 0	9700 \$1.83 \$17.751 0 0 0.023 0 9700 0.038 373 0 0 0.038
	A. B.	ILength of Trench (ft) Removal and Loading Main Pipeline Removal Unit Subtotal Trunkline Removal Unit Subtotal Trunkline Removal Unit Piping Length (ft) Piping Length (ft) Chipped Volume Reduc Piping Length (ft) Chipped Volume Reduc Piping Length (ft) Chipped Volume Reduc	Cost (\$/n of Loading Cos RC-Licensed lion (\hbar^3/\hbar)	trench) is i Facility)		24000 \$1.83 \$43.920 24000 0.023 559 0 0 0.038 0 0 0 0 0 0 0 0 0 0 0 0 0	22000 \$1,83 \$40,260 0 0,023 0 22000 0,038 846 0 0,038 0 0,038 0 0,038 0 0,038 0 0,038 0 0 0,038 0 0 0 0 0 0 0 0 0 0 0 0 0	2200 \$1.83 \$4,026 2200 0.023 51 0 0.038 0 0 0 0 0 0 0 0 0 0 0 0 0	[3000 \$1.83 \$23,790 0.023 0 13000 0.338 500 0 0 0.083 0 0 0.083 0 0 0 0 0 0 0 0 0 0 0 0 0	4000 51 83 \$7,320 4000 0,023 93 0 0,038 0 0 0,038 0 0 0 0 0 0 0 0 0 0 0 0 0	9700 \$1.83 \$17.751 0 0.023 0 9700 0.038 373 0 0 0.038 0 0 0.038 0 0 0.038 0 0 0 0 0 0 0 0 0 0 0 0 0
	A. B.	I.cogth of Trench (ft) Removal and Loading Main Pipeline Removal Unit Subtotal Trunkline Removal Unit Subtotal Trunkline Removal and Transport and Disposal Costs (N 1 3" HDPE Trunkline Piping Length (ft) Chipped Volume Reduc Reduce Reduce Reduce	Cost (\$/n of Loading Cost RC-Licensee	trench) is 1 Facility)		24000 51.83 \$43.920 24000 0.023 559 0 0 0.038 0 0 0 0 0 0 0 0 0 0 0 0 0	22000 51,83 \$40,260 0 0,023 0 0 0 0 0 0 0 0 0 0 0 0 0	2200 \$1.83 \$4.026 2200 0.023 51 0 0.038 0 0 0 0 0 0 0 0 0 0 0 0 0	[3000 \$1.83 \$23,790 0.023 0 13000 0.038 500 0 0 0.083 0 0	4000 \$1.83 \$7,320 4000 0,023 93 0 0 0,038 0 0 0 0 0 0 0 0 0 0 0 0 0	9700 \$1.83 \$17.751 0 0.023 0 0.038 373 0 0.083 0 0.083 0 0 0 0 0 0 0 0 0 0 0 0 0
	A. B.	Icogth of Trench (ft) Removal and Loading Main Pipeline Removal Unit Subtotal Trankline Removal Unit Subtotal Trankline Removal Unit Subtotal Trankline Removal Onit Piping Length (ft) Chipped Volume Redue Chipped Volume (ft) Chipped Volume (ft) Chipped Volume Redue Chipped Volume (ft) Chipped Volume (ft) Chipped Volume (ft) Chipped Volume Redue Chipped Volume (ft) Chipped Volume Redue Rime Redue Chipped Volume Redue Chipped Volume Redue Chipped Volume Redue Rime Redue Chipped Volume Redue Chipped Volume Redue Rime Redue	Cost (\$/n of Loading Cos (RC-Licensed tion (ħ ¹ /ħ)	trench) IS I Facility)		24000 \$1.83 \$43.920 24000 0.023 559 0 0 0.038 0 0 0.033 0 0 0 0 0 0 0 0 0 0 0 0 0	22000 51.83 \$40,260 0 0 0 0 0 22000 0.038 846 0 0 0.038 0 0 0 0 0 0 0 0 0 0 0 0 0	2200 \$1.83 \$4,026 2200 0,023 51 0 0 0,038 0 0 0 0 0 0 0 0 0 0 0 0 0	[3000 \$1.83 \$23,790 0.023 0 13000 0,038 500 0 0 0,083 0 0 0 0 0 0 0 0 0 0 0 0 0	4000 \$1.83 \$7.320 4000 0.023 93 0 0.038 0 0 0 0 0 0 0 0 0 0 0 0 0	9700 \$1.83 \$17.751 0 0 0 0 0 9700 0 9700 0 9700 0 0 0 0 0 0 0 0 0 0 0 0
	A. B.	Icogth of Trench (ft) Removal and Loading Main Pipeline Removal Unit Subtotal Transkine Removal Unit Subtotal Transkine Removal unit Subtotal Transkine Piping Length (ft) Chipped Volume Redue Chipped Volume (ft ¹) Chipped Volume (ft ¹) Chipped Volume (ft ²) S" HDPE Transkine Piping Length (ft) Chipped Volume (ft ²) S" HDPE Transkine Piping Length (ft) Chipped Volume (ft ²) S" HDPE Transkine Piping Length (ft) Chipped Volume Redue Redue	Cost (\$/ft of Loading Cos IRC-Licensee Lion (R ³ /ft) Lion (R ³ /ft)	trench) is i Faoility)		24000 51.83 543.920 24000 0.023 559 0 0 0.038 0 0 0.083 0 0 0 0 0 0 0 0 0 0 0 0 0	22000 \$1.83 \$40,260 0 0.023 0 22000 0.038 8466 0 0.083 0 0 0.083 0 0 0.083 0 0 0 0 0 0 0 0 0 0 0 0 0	2200 \$1.83 \$4,026 2200 0,023 51 0 0,038 0 0 0 0 0 0 0 0 0 0 0 0 0	[3000 \$1.83 \$23,790 0.023 0 13000 0.038 500 0 0.083 0 0.083 0 0.083	4000 51 83 57,320 4000 0,023 93 0 0 0,038 0 0 0 0 0 0 0 0 0 0 0 0 0	9700 \$1.83 \$17.751 0 0 0.023 0 9700 0.038 373 0 0.083 0 0 0.083 0 0 0.083 0 0 0.023 0 0 0 0 0 0 0 0 0 0 0 0 0
		ILength of Trench (ft) Removal and Loading Main Pipeline Removal Unit Subtotal Trunkline Removal Unit Subtotal Trunkline Removal and Transport and Disposal Costs (N 1. 3" HDPE Trunkline Piping Length (ft) Chipped Volume Reduc Ruban Reduc	Cost (\$/n of Loading Cos (RC-Licensee tion (n ³ /n)	trench) is i Facility)		24000 51.83 543.920 24000 0.023 559 0 0 0.038 0 0 0 0 0 0 0 0 0 0 0 0 0	22000 51.83 \$40,260 0 0.023 0 22000 0.038 846 0 0.083 0 0.083 0 0.0141	2200 \$1.83 \$4,026 2200 0,023 51 0 0,038 0 0 0 0 0 0 0 0 0 0 0 0 0	[3000 \$1.83 \$23,790 0.023 0 13000 0.038 500 0 0.083 0 0 0 0 0 0 0 0 0 0 0 0 0	4000 51 83 \$7,320 4000 0,023 93 0 0 0,038 0 0 0 0 0 0 0 0 0 0 0 0 0	9700 \$1.83 \$17.751 0 0.023 0 9700 0.038 373 0 0.083 0 0 0.083 0 0 0.0141
	B.	Icogth of Trench (ft) Removal and Loading Main Pipeline Removal Unit Subtotal Trankline Removal Unit Subtotal Trankline Removal Unit Subtotal Trankline Removal Costs (N 1,3" HOPE Trankline Piping Length (ft) Chipped Volume Reduc Chipped Volume (R ¹) Chipped Volume (R ¹) Gripped Volume (R ¹) Gripped Volume (R ¹) Gripped Volume Reduc Chipped Volume Reduc Reduct Chipped Volume Reduc Reduct Chipped Volume Reduc	Cost (\$/n of Loading Cos (RC-Licensed Lion (n ² /n)	trench) IS I Facility)		24000 51.83 \$43.920 24000 0.023 559 0 0 0.038 0 0 0 0 0 0 0 0 0 0 0 0 0	22000 51.83 \$40,260 0 0.023 0 0 0 0 0 0 0 0 0 0 0 0 0	2200 \$1.83 \$4,026 2200 0,023 51 0 0,038 0 0 0 0 0 0 0 0 0 0 0 0 0	[3000 \$1.83 \$23,790 0.023 0 13000 0.038 500 0 0 0 0 0 0 0 0 0 0 0 0	4000 51.83 \$7.320 4000 0.023 93 0 0.038 0 0 0 0 0 0 0 0 0 0 0 0 0	9700
		ILength of Trench (ft) Removal and Loading Main Pipeline Removal Unit Subtotal Transline Removal Unit Subtotal Transline Removal Unit Subtotal Transline Piping Length (ft) Chipped Volume Redue Chipped Volume (ft) Chipped Volume Redue	Cost (\$/ft of Loading Cos (RC-Licensee Lion (R ³ /ft)	trench) is i Faoility)		24000 5.1.83 543.920 24000 0.023 559 0 0 0.038 0 0 0.038 0 0 0 0.038 0 0 0 0 0 0 0 0 0 0 0 0 0	22000 \$1.83 \$40,260 0 0.023 0 22000 0.038 8466 0 0.083 0 0 0.083 0 0 0.0141 0 0 0 0 0 0 0 0 0 0 0 0 0	2200 \$1.83 \$4,026 2200 0,023 51 0 0,038 0 0 0 0 0 0 0 0 0 0 0 0 0	[3000 \$1.83 \$23,790 0.023 0 13000 0.038 500 0 0 0.083 0 0 0.083 0 0 0 0 0 0 0 0 0 0 0 0 0	4000 51 83 \$7,320 4000 0,023 93 0 0 0,038 0 0 0 0 0 0 0 0 0 0 0 0 0	9700 \$1.83 \$17.751 0 0 0.023 0 9700 0.038 373 0 0.083 0 0 0.083 0 0 0.083 0 0 0.011 0 0 0 0 0 0 0 0 0 0 0 0 0

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Misce	ilanco	us Ro	colamation							
	- T	1	Chipped Volume Reduction (ft ³ /ft)		0.220	0.220	0.220	0.220	0.220	0.220
		+	Chinned Volume (ft ³)		0	0	0	0	0	0
	4	12"	HDPE Trunkline			"				
		+	Piping Longth (ft)		0	0	0	0	0	0
		1-	Chipped Volume Reduction (ft ³ /ft)		0.309	0.309	0.309	0.309	0,309	0.309
			Chipped Volume (ff ³)		0	0	0	0	0	0
	. 5	14"	HDPE Trunkline							
		1-	Piping Length (ft)		. 0	0	0	0	0	. 0
			Chipped Volume Reduction (ft ³ /ft)		0,372	0.372	0.372	0.372	0.372	0.372
	1	1	Chipped Volume (ft ³)		0	0	0	0	0	0
	5	16"	HDPE Trunkline							
			Piping Length (ft)		0	0	. 0	0	0	0
			Chipped Volume Reduction (ft ³ /ft)		0,486	0,486	0.486	0.486	0.486	0.486
			Chipped Volume (ft ³)		0	0	0	0	0	0
	-	6 18"	HDPE Trunkline							·
		1	Piping Length (ft)		0	0	0	0	0	0
			Chipped Volume Reduction (ft ³ /ft)		0.616	0.616	0.616	0.616	0.616	0.616
			Chipped Volume (fl ³)		0	0	. 0	0	0	0
	Τ	otal P	incline Disposal Volume		559	846	- 51	500	93	373
		Vol	ume for Disposal Assuming 10% Void Space (ft ³)		615	931	56	550	102	410
	-	- T	and for Disposal Assuming 10% Vold Space (it)	(e)=3		251		F6.06	\$6 QC	\$6 D6
		uhtotr	I Transport and Disposal Costs) (3/(1))	\$0.00	\$5.638	\$30.00	\$0.00	\$618	\$2.483
		liscing	A Transport and Disposal Costs		33,724	35,058		10,00		, , , , , , , , , , , , , , , , , , , ,
		Wit	th of Pipeline Trench (ft)		10	10	8		8	4
		Are	a of Pipeline Trench (acres)		5.5	5.1	0.4	2.4	0.7	0.9
		Dis	cing/Seeding Unit Cost (\$/acre)		\$606	\$606	\$606	\$606	\$606	\$606
	S	ubtota	al Discing/Seeding Costs		\$3,341	\$3,062	\$245	\$1,448	\$445	\$540
	Subtotal Reclamation Costs per Pipeline					\$48,960	\$4,610	\$28,569	\$8,383	\$20,774
Total Pipeline Reclamation Costs					\$162,281					
îv.	Settli	ng Ba	sin/Storage Ponds Reclamation		E. Radium Pond	W. Radium Pond	Total	L		
	A. S	oil Sa	mpling and Monitoring] .	<u> </u>		
		Nu	mber of Soil Samples		173	174		· · · · · · · · · · · · · · · · · · ·		
		\$/S	ample		\$164	\$164				
	S	ubtota	al Soil Sampling and Monitoring Costs		\$28,419	\$28,583	\$57,002			
<u> </u>	B. (ontan	ninated Soil Removal and Disposal (Liner removed in 2003)			ļ				
		Thi	ckness of subsoil (ft)		1	1				
		Vo	lume of Contaiminated soil, (ft3)		3000	· 0		<u> </u>		
		Wie	dth of Pond (ft)		85	85				L
		Ler	ngth of Pond (ft)		140	140		ļ		
<u> </u>		Sur	Tace area of pond (II)		11900	11900			ļ	
	+	. Incer	Volume of contaminated coil (cr.)		111	1	L			
	⊢-ŀ	Contaminated soil Removal and Loading Unit Cost (\$/cv)		111 • • • • • • • • • • • • • • • • • •	l \$301	· · · · · · · · · · · · · · · · · · ·				
	\vdash	Sut	potential Subsoil Removal and Loading Costs		\$435	\$5.91	\$435			<u> </u>
[2	. Tra	insportation and Disposal. 11e.(2) facility							
			Volume of soil for Disposal(yd3)		111	0				

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MISC REC
		······································				
Miscellaneous Reclamation						_
Transportation and Disposal Unit Cost (\$/vd ²)	\$281.82	\$281.82				
Subtotal Subsoil Transportation and Disposal Costs	\$31,313	\$0				
Subtotal Subsoil Removal and Disposal Costs	\$31,748	\$0	\$31,748			
C. Grade and Contour						
Volume of Embankment Materials (cv)	6400	6400				
Average Grade (%)	0	0				
Distance (ft)	50	. 50				
Material Moving Cost per WDEO Guideline No. 12, App E (\$/ev)	0.126	0,126				,
Subjoial Grade and Conjour Costs	806.4	806.4	\$1,613			
D Soil Amendment						
Area of surface disturbance (ft ²)	99000	99000				
Area of surface disturbance (acres)	2.3	2.3				
Hay Mulch Crimped and Soil Amendment	540 38	540.38		······································		
Subtotal soil amendment Application Costs	\$1.228	\$1,228	\$2,456			
F Discing/Seeding	1	01,22-				
Area of surface disturbance (acres)	23	23				
Discing/Sading Linit Cost (Syster)	\$606	\$606				
Subtotal Dissing/Seeding Costs	\$1 376	\$1.376	\$2 752		······	
	\$20,000	\$1,070	\$40,000	······		·
	320,000	320,000	310,000	~		
Subtract Declaration Comp	594 012	\$51.004	\$136.006			
Subtrait Rectanation Costs	304,013	\$31,994	3150,000			
Total Setting Basin/Ponds Reclamation Costs	5130,000					
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	\$5,000	\$0				
C. Topsoil/Subsoil Application						
Assumptions:						
Average haul distance (ft)	1000	150				
Surface grade (%)	0	0		·		
Volume of Topsol/Subsoli (cv)	83000	/4000	+			
Movement of TopsoilUnit Cost per WDEQ Guideline No.12, App.C (\$/cy)	\$1.02	\$1.02		i		
Sublotal Topsoil/Subsoil Application Costs per Reservoir	384,494	\$13,332	L			
					·	
Surface Area (acres)	6	32				<u> </u>
Uniscing/Secong Unit Lost (S/acre)	\$606	\$606	l		·	
Subtotal Discing/Seeding Costs	\$3,638	\$19,404			<u>}</u>	
Subiolal Reclamation Costs per Reservoir	\$96,502	\$98,106				
1 otal rurge Storage Reservoir Reclamation Costs	\$194,608		L			
					·	<u> </u>
VI-AUTTERANON INTERACCE AND MONITORING COSTS	Irrigator No.1	irrigator No.2			·	<u> </u>
A. Imigation Maintenance and Repair						
Irrigation Uperation Months/Year	0	6				
Cost per Month	\$667	\$1,940				l
Total Number of Years	0	10				
Subtotal Maintenance and Repair Costs	\$0	\$116,395				L
B. Irrigation Monitoring and Sampling		· · · · · · · · · · · · · · · · · · ·			L	
# of Irrigation Fluid Samples/Year	0	6			l	L

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MISC REC

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Misco	llan	eous Reclamation				
		Cost/sample (Energy Labs - Casper Wyoming)	\$337	\$337		
		# of Vegetation Samples/Year	5	5		
-		Cost/sample (Energy Labs - Casper Wyoming)	\$337	\$337		
		# of Soil Sampler/Vear	30	3.1		
		Cost/comple (Energy Labs - Cosner Wroming)	\$337	\$117		
		# of Soil Water Sample (Vice	3557			
_		Contract (End to Constitution)	£227	£227		
		Cosusampie (Energy Laos - Casper wyoming)	\$337	1000		
-			50075	570 10C		
		Subtotal Sampling Costs	\$58,975	3/9,195		
	Sub	total Maintenance and Monitoring Costs per Irrigator	\$58,975	\$195,590		
	1 of	al irrigation Maintenance and Monitoring Costs	3234,303			
VI.B	Irn	gation Area Reclamation	Irrigator No. 1A	Irrigator No. 2		
	A.	Irrigation Equipment Removal Costs	\$2.000	\$2,000		
	<u>в</u> .	Plowing				
		Assumptions:				
		Plowing Unit Cost (\$/acre)	\$100	\$100		
	_	Irrigation Area (acres)	55	106		
		Number of Cultivations	2	2		
	_	Subtotal Plowing Costs	\$11,000	\$21,200		
	C.	Discing/Seeding				
		Discing/Seeding Unit Cost (\$/acre)	\$606	\$606		
		Subtotal Discing/Seeding Costs	\$33,350	\$64,275		
	Sub	total Reclamation Costs per Irrigation Area	\$46,350	\$87,475		
	Tot	al Irrigation Area Reclamation Costs	\$133,825			
VII.	Rev	egetation of Exxon Reclaimed Lands				
		Assumptions:				
		10% Reseeding potential areas of erosion (\$/acre)	\$606			
		Surface Area (acres)	217			
	Tat	al Exxon Reclaimed Lunds Revenuetation Costs	\$13 158			
	100		313,130			
VIII	Pot	antial Mitigatian Plan Far Irrightar No. 1 & (Paguartad by W/DFO-LOD)				
• • • • •	1.00	Assumptions				
		Hanacting grass for 2 years will further reduce Se levels in yeastation	·/			
		Harvesting grass for 2 years will fulfier reduce 36 revers in vegetation.	\$4.000			
		Analyze So in arors for 2 years (a) \$2000/year.	\$4,000			
		Analyze So in grass for 2 years (2010)/sample X 4 samples X 2 yrs.	31,320			
		Add 1 A of S. Gran with a fill and the second state of the second	\$9,744			
		Aug 1 n. of Se free water to 38 acre intigation area (a) cost of \$6000.	\$6,000			
	Traci	In desired, plow, disk and reseed area with attalfa (a; cost of \$4400.	\$33,330			
	1 01	ai rotentiai wilugation Plan Costs- Call \$30,000				
a.						
IX.	Pot	ential Mitigation Plan For Irrigator No.2 (Requested by WDEQ-LQD)				
		Assumptions:				
		Harvesting grass for 2 years will further reduce Se levels in vegetation.				
		Harvest grass for 2 years @ \$4000/year.	\$8,000			
		Analyze Se in grass for 2 years @\$165/sample X 4 samples X 2 yrs.	\$1,320			
		Analyze Se in soil for 2 years @\$174/sample X 32 samples X 2 yrs.	\$11,136			
1		Add 1 ft. of Se free water to 116 acre irrigation area @ cost of \$12000.	\$12,000		•	

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MISC REC

MISC REC

Miscellaneous Reclamation			
If desired plow disk and reseed area with alfalfa @ cost of \$8800	\$64,236		
Total Potential Mitigation Plan Costs- Call \$12,000	\$96.697		
V Detectual Mitigation Day for Shallow Wall Caring Leady Investigation			
A. Fotchila Willigation Flat for Subliow well Casing Leak Investigation			
Investigation and potential inligation plan as of Peo 2009.			
Assume cost of \$2.4M			
Total Preimmary Cost	SZ,400,000		
XI. Miscellaneous			
A. Fence Removal			
Total Length of Fence (ft)	100,377		
Fence Removal Cost	\$0.37		
Subtotal Fence Removal	\$37,139		
B. Drill Water Tank Removal (offer to rancher: dispose of timbers)			
Material (cy)	1.48		
4 hours Cat 924G Loader	\$175.72		
4 hours truck	\$72.30		
4 hours labor (operator)	\$131.49		
Disposal costs	\$12.01		
Subtotal Drill Water Tank Removal	\$397		
C BSB2 Monitor Walls			
	100.00		
	100,00		
Total Depth	600.00		
Cased Hole Abandonment cost	\$2.50		
Subtotal PSR2 Monitor Wells Abandonment	\$1,500.00		
Total Miscellaneous Structures Reclamation Costs	\$39,031		
XII. Infrastructure, Equipment Maintenance, Replacement and Repairs @\$62,000/yr for 11 years	\$682,000		
Note: 11 years is used to account for active restoration period	·		
XIII, Purge Storage Reservoirs, 33 acres			
I. Removal and Loading			
Volume 159718 8 vd2 x 6" deep (vd3)	26 619 80		
Removal and haulage cost per vd3	\$1 19		
Subtotal Purge Storage Reserviors materials removal and loading	\$31.677.56		
2 Transportation and Disposal 11e (2) facility			
Volume of soil for Disposal(vd [*])	26.620		
Transportation and Disposal Unit Cost (\$6/d ²)	\$281.82		
Subtotal Subsoil Transportation and Disposal Costs	\$7 501 992 04		
Total Purge Starage Reservoirs Reclaimation	\$7,533,669,60		
is where a state of the state is the state and a state of the state of	37,333,007,00		
TOTAL MISCELLANEOUS PECLAMATION COSTS	E11 816 707	łł	
	311,010,797		
NOTE: Valiale analysis and an extension dia WE REC			
ino i c. venicie operation cosis are captured in wr KEC	1		

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WELLFIELD ROAD RECLAMATION

Assumptions

- 1. Gravel road base removed at cost of \$0.85/cy/1000 ft (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 at cost of \$53.83/acre (WDEQ Guideline No. 12, Appendix P)
- 4. Grading of scarified roads prior to topsoil application at cost of \$58.69/acre (WDEQ Guideline No. 12, Appendix G)
- 5. Topsoil applied at cost of \$0.85/cy/1000 ft (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 Cost	ts per 1000 ft of Road						
1000 ft	X 0.25 ft	x	<u> 10 ft </u>	<u>1 cy</u> 27 ft ³	x -	\$0.85 cy	= \$ 79
Scarification Costs per 1000 ft of	Road						
1000 ft	x25 ft	х	1 acre 4.356E+04 ft ²	x		\$53.83 acre	= \$ 31
Grading Costs per 1000 ft of Roa	ad						
1000 ft	x25 ft	х	1 acre 4.356E+04 ft ²	x	_	\$58.69 acre	=\$34
 Topsoil Application Costs per 100 	00 ft of Road						
1000 ft	X0.67 ft	х	25 ft X	<u>1 cy</u> 27 ft ³	x -	\$0.85 cy	= \$ 527
Discing/Seeding Costs per 1000	ft of Road						
1000 ft	X25 ft	x	1 acre 4.356E+04 ft ²	—— x		\$606	= \$ 348

TOTAL WELLFIELD ROAD RECLAMATION COSTS PER

1000 FT OF ROAD

= \$ 1,019

Page 25 of 39

				Gre	oundv	vat	er Swe	ep (GW	S)	and Deep	Disp	osa	al	Well (DDW	/) Unit Co	sts	······································	
Assum	ptions:						l							·				
1.	Wellfield pu	mps a	ire :	5 hp pumping	at 25 g	om												
2.	Cost of elect	ricity	=											•			\$0.0478	kwh
3.	Operator lab	or cos	sts =	*													\$262.97	man-day
4.	One 60 hp p	ump a	at tł	he plant or sate	ellite fee	ds	two DD	Ws										
5.	One 75 hp a	t each	DI	DW (pumps ru	n on V	FD.	s which i	reduces op	erat	ing HP to ma	atch pa	ımp	oin	g rate)				
6.	Each DDW	can ta	ke	75 gpm														
7.	Se Plant Me	dia Co	ost i	3 changes with	n dispos	al (cost										\$114,000	per year
Wellfi	eld Pumping	Elec	tric	al Costs per l	1000 G	allo	ons											
	1000	gal/m	in		5	hp	/pump	1440	K	gal/day						_ ¢	0.12	
	25	gal/p	ump	р	0.746	K	wh/hp	\$0.0478	kν	vh						¢	0.12	
	40	pump	s		24	hr/	/day											
Wellfi	eld Pumping	Lab	or (Costs per 100	0 Gallo	ns												
	2	Oper			\$526	La	bor cost	/dav	╋				1			1	0.07	}
	\$263	Cost/	ope	er/day	1.440	ke	al/dav		1				 			=\$	0.37	
	4205	0000		in duj		1			╈			-						
Grour	dwater Swe	ep Pr	odı	uction Rate									-			\uparrow		
	150	gal	v	. 60	min	N	24	hr	L.	365	day	v		<u>1</u>	year	_	6,570,000	gallons
		min	X		hr			day	٦ X		year	^	-	12	month			month
						İ	a		+-									
Plant	or Satellite to	o DD'	wi	Pumping Elec	trical (Cos	ts per 1	000 Gallor	is									
	150	gal		216	K	al/	day	\$0.0478	\$/	Kwh		1		-			0.238	
	60	HP		0.746	Kwh/ł	ĪP		24	H	r/dav		1				=\$		
<u> </u>						1	·		1			1	-					
DDW	Pumping Co	sts p	er 1	000 gallons		-			+			+				1		1
	75	gal		151.2	Kgal/d	av		\$0.0478	\$/	Kwh		-					0.425	
	75	HP		0 746	Kgal?	lav		24	H	r/dav		1	<u> </u>	L		= \$		
						1		i	†	1	†	\square	1-					
						1			+		†	-	\vdash	<u> </u>		1		
	TOT	AL	GV	$\frac{1}{VS} + DDW$	IN.II	tr tr	TION	COSTS	PF	CR 1000 G	ALI		NS	3		= \$	1.15	1
		гот		L DDW IN.	IECT	10	N COS	STS PER	1	000 GALI	ONS	5		<u> </u>	·	= \$	0.66	
									Ť		<u></u>	1	<u> </u>		<u>+</u> -	+		
Seleni	um Plant - N	ledia	Co	ost	<u> </u>		<u> </u>		+		†	┢	1			- <u> </u> .		
· ·																		
	}						1					1						
	1				min/d						ŀ							
	180	gpm	x	1440	ay	X	356	days/yr	=	92,275,200	gal	=		92275.2	kgal			
										<u> </u>		1_						
	Se Media C	ost p	er y	year =		1		\$114,000				=		\$1.24	kgal			

UC-GWS DDW Se Treat

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<u>†</u>	1	ſ	1 (1	1	1	1	1	1		1	1 1	1	1)	1	1
					Groun	dw	ater Reverse ()smosis (R	O) a	nd Bio	remed	liati	on Unit	Costs			
	Assum	ntions		1		T	1	<u> </u>	ŕ		T	T J	-				1
	1	Cost of e	lectricit	V =		+								+		\$0.0479	VVU
		Operator	labor ci	osts =		-	{·						+			\$0.0478	day
+		RO Svete	m Hore	enower.		+-										\$202.97	uay
		ico sysie		RO Unit Pume		\vdash		60	ho								
		<u>├</u> ────────────────────────────────────		Permeste/Inie	1	\vdash		60	hp.			+					-
	'		┝─┼─	Waste nump		+			h np								
	┿──┤	<u> </u>	├	TOTAL:		\vdash		136	hp		+	+				<u> </u>	
	+	Chaminal		TOTAL.		+		153	np								
+		Chemical	Costs:	Codium Cult 1	<u></u>	┢					<u> </u>	$\left - \right $				60.20	-
	<u> </u>	<u> </u>	┟╾╌┼╴	Soutum Suina	e				1							\$0.38	pou
			┣───┝─	Methanol =		-	·									\$2.43	gal
			L:	Antiscalant =		-			<u> </u>							\$16.19	gal
	- <u> </u>	MIX Rate	s			-	<u> </u>		<u> '</u>		<u> </u>					·	
	+			Sodium Sulfid	e	<u> </u>		0.0001	pou	nd/gal					_		
	<u>+</u>	<u> </u>	┢╌╺┢╸	Methanol (not	used)			0.00025	gal	gal							
	+			Antiscalant		L.,		0.00000833	gal	gal							
	0.1	Based on	40 pun	ips to produce	1000 gpm - each j	pum	p does 25 gpm		1		<u> </u>				_	1,440	Kga
	<u> /.</u>	KO Main	tenance	Costs		<u> </u>										\$0.07	per
	Wellfie	ld Pumni	ing Elec	trical Costs no	er 1000 Gallons	\square			+			+	+			<u> </u>	1
	40	numns		0 746	Kwh/HP	\vdash	\$0.0478	electric rate			1						<u> </u>
	5	HP		24	Hrs/Day	1			1			$\frac{1}{2}$				\$ \$0.12	per
	- <u>-</u>		<u>t (</u>		1113/2019	<u> </u>		<u> </u>	1		1		1		-+-		
	Revers	e Osmosi:	s/Biore	mediation Elec	ctrical Costs per	100) Gallons										
	135	HP		0.746	Kwh/HP	Γ	\$0.0478	electric rate	1				1			0.080	
				24	Hrs/Day]			1 [-1- 2	0.000	per
	Revers	e Osmosi:	s/Biore	mediation Lab	or Costs per 100	0 G	allons, moved lat	or to GW Re	st pa	ge, secti	on VII	Ĺ					
	0	Oper.		\$0.00	Labor cost/day				1			,				0.000	-
	\$263	Cost/oper	r/day		1	T			ł.						i		
	Treatm		ir day	1,440	kgal/day				1			1 ľ			≈ \$	10.000	per
		ent chemi	cal cost	1,440 s per 1000 Gall	kgal/day ons	┢			1			$\left \right $			~ \$ 		per
1		ent chemi Antiscala	cal cost	1,440 s per 1000 Gall	kgal/day ons	╞									= \$		per
		ent chemi Antiscala 1000	cal cost int: gal	1,440 s per 1000 Gall 0.000008330	kgal/day ons gal antiscalant		\$16.19								= \$		per
-		ent chemi Antiscala 1000	cal cost int: gal X	1,440 s per 1000 Gall 0.000008330 1	kgal/day ons gal antiscalant gal	x	\$16.19 gal antiscalant								= §	0.135	per per
		ent chemi Antiscala 1000 Methanol	cal cost unt: gal X	1,440 s per 1000 Gall 0.000008330 1 ;ed)	kgal/day ons) gal antiscalant gal	- x	\$16.19 gal antiscalant								= \$	0.135	per per
	· · · ·	ent chemi Antiscala 1000 Methanol 1000	cal cost mt: gal X l (not us gal X	1,440 s per 1000 Gall 0.000008330 1 sed) 0.00000	kgal/day ons) gal antiscalant gal) gal methanol	- X	\$16.19 gal antiscalant \$2.43								= \$	0.135	per per
	· · · · · · · · · · · · · · · · · · ·	ent chemi Antiscala 1000 Methanol 1000	cal cost unt: gal X l (not us gal X	1,440 s per 1000 Gall 0.00000833(1 sed) 0.00000 1	kgal/day ons) gal antiscalant gal) gal methanol gal	- x - x	\$16.19 gal antiscalant \$2.43 gal methanol								= \$ = \$ = \$	0.135	per per
		ent chemi Antiscala 1000 Methanol 1000 Sodium S	cal cost unt: gal X l (not us gal X Julfide	1,440 s per 1000 Gall 0.00000833(1 sed) 1 1	kgal/day ons gal antiscalant gal gal methanol gal	- x - x	\$16.19 gal antiscalant \$2.43 gal methanol								= \$ = \$ = \$	0.135	per per
		ent chemi Antiscala 1000 Methanol 1000 Sodium S 1000	cal cost nt: gal X l (not us gal X Julfide gal Y	1,440 s per 1000 Gall 0.00000833(1 sed) 1 0.000000 1 0.000000	kgal/day ons gal antiscalant gal gal methanol gal gal	x	\$16.19 gal antiscalant \$2.43 gal methanol \$0.38								= \$ = \$ = \$	0.135	per per
		ent chemi Antiscala 1000 Methanol 1000 Sodium S 1000	cal cost mt: gal X l (not us gal X Sulfide gal X	1,440 s per 1000 Gall 0.00008330 1 sed) 0.00000 1 0.00010 1	kgal/day ons gal antiscalant gal gal methanol gal pounds gal	- x - x - x	\$16.19 gal antiscalant \$2.43 gal methanol \$0.38 pound sodium su	lfide							= \$ = \$ = \$	0.000	per per per
		ent chemi Antiscala 1000 Methanol 1000 Sodium S 1000	cal cost unt: gal X l (not us gal X Sulfide gal X	1,440 s per 1000 Gall 0.0000833(1 sed) 0.00000 1 0.00010 1	kgal/day ons) gal antiscalant gal) gal methanol gal) pounds gal	x x x	\$16.19 gal antiscalant \$2.43 gal methanol \$0.38 pound sodium su	lfide							= \$ == \$ == \$	0.000	per per per
	Revers	ent chemi Antiscala 1000 Methanol 1000 Sodium S 1000	cal cost unt: gal X l (not us gal X Sulfide gal X Sulfide s Produ	1,440 s per 1000 Gall 0.00000833(1 sed) 0.000000 1 	kgal/day ons) gal antiscalant gal) gal methanol gal) pounds gal		\$16.19 gal antiscalant \$2.43 gal methanol \$0.38 pound sodium su	lfide							= \$ == \$ == \$	0.000	per per per
	Reverso	ent chemi Antiscala 1000 Methanol 1000 Sodium S 1000 •••••••••••••••••••••••••••••••••	cal cost ant: gal X gal X gal X Sulfide gal X s Produ gal X	1,440 s per 1000 Gall 0.000008330 1 sed) 0.000000 1	kgal/day ons) gal antiscalant gal gal methanol gal pounds gal j min	x	\$16.19 gal antiscalant \$2.43 gal methanol \$0.38 pound sodium su	lfide hr		365	day	· · · · · · · · · · · · · · · · · · ·		year	= \$ = \$ = \$	0.000 0.135 0.000 0.038 	per per per gali
	Reverso	ent chemi Antiscalz 1000 Methanol 1000 Sodium S 1000 commosis 1000	cal cost ant: gal X l (not us gal X Sulfide gal X s Produ gal X min	1,440 s per 1000 Gall 0.000008330 1 sed) 0.000000 1 0.000000 1 ction Rate 60	kgal/day ons gal antiscalant gal gal methanol gal pounds gal pounds gal pounds hr		\$16.19 gal antiscalant \$2.43 gal methanol \$0.38 pound sodium su 24	ifide hr day	- X	365	day			year	= \$ == \$ == \$ == \$	0.000 0.135 0.000 0.038 43,800,000	per per per per gali mor
	Reverso	ent chemi Antiscalz 1000 Methanol 1000 Sodium S 1000 costante 1000	cal cost int: gal X gal X gal X Sulfide gal X Sulfide gal X Sulfide	1,440 s per 1000 Gall . 0.000008330 1 sed) . 0.000000 1 .	kgal/day ons 2 gal antiscalant gal 2 gal methanol gal 2 pounds gal 2 min hr	x x x	\$16.19 gal antiscalant \$2.43 gal methanol \$0.38 pound sodium su 24	lfide hr day		365	day year		1	year month	= \$ == \$ == \$ == \$	0.000 0.038 43,800,000	per per per per gali
	Revers	ent chemi Antiscalz 1000 Methanoi 1000 Sodium S 1000 • Osmosis 1000	cal cost int: gal X gal X gal X Sulfide gal X Sulfide gal X s Produ gal X	1,440 s per 1000 Gall 0.00000833(1 sed) 0.00000 1 0.00010 1 ction Rate	kgal/day ons gal antiscalant gal gal methanol gal pounds gal hr		\$16.19 gal antiscalant \$2.43 gal methanol \$0.38 pound sodium su 24	lfide		365	day		1 12	year month	= \$ = \$ = \$ = \$ = \$	0.000 0.135 0.000 0.038 43,800,000	per per per per gali
	Revers	ent chemi Antiscalz 1000 Methanol 1000 Sodium S 1000 c Osmosis	cal cost ant: gal X gal X Sulfide gal X Sulfide gal X s Produ	1,440 s per 1000 Gall 0.0000833(1 sed) 0.00000 1 - 0.00010 1 	kgal/day ons jgal antiscalant gal gal methanol gal pounds gal min hr		\$16.19 gal antiscalant \$2.43 gal methanol \$0.38 pound sodium su 24	lfide hr day		365	day year	X	1 1 12	ycar month	= \$ = \$ = \$ = \$ = \$	0.000 0.135 0.000 0.038 <i>+3,800,000</i>	per per per gall mor

4

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ssumption	ons: ulling												1
1 P	ulling	!											
1 P 2 M	ulling	~					┝──੶						
2 M		Unit f	or 8 hr/day				<u> </u>						
-	IT U	nit for	8 hr/day				1						
3 L	abor f	or ope	ration of pu	lling	; unit	require	<u>s</u> 2 v	vorkers					
4 L	abor f	or ope	ration of M	IT U	nit re	equires	1 wo	rker					
1IT Cost	s per	Well					ļ						
<u> </u>		7 1 .											
quipmen	it and	Labo	r:				 					ļ	
P	ulling	Unit v	vith Operate	or									
		8	hours	$ \mathbf{X} $	\$	82.74	per	hour				=\$	661.90
L	abore	r											
		8	hours	X	\$	22.48	per	hour				=\$	179.80
N	IIT U	nit wit	h Operator				1						
		8	hours	Χ	\$	67.22	per	hour				=\$	537.76
		-			/								
						T	<u>)TA</u>	L MIT	CC	ST	PER DAY	=\$	1379.00
			L				-					L	
V	Vells (Comple	eted			6	per	day					
)STS	DFL	WELT										220.83
)6T6		DEEDI		nog			T (20		<u> </u>		-3	223.03

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UC-MIT

		·····	W	ELL	ABA	NDONN	IENT Uni	t Costs				
				_	We	lls withou	it pumps					
Assumpt	ions:											
1	Typical 8 hour working d	lay						_				
2	Average 700 feet per we	<u>الــــــــــــــــــــــــــــــــــــ</u>										
3	Plug four (4) Wells per d	lay	700	ft	x	4	=			2,800		
Cased W	ell Abandonment Costs									\$ per day	S per toot	
	Cat 416 Backhoe	8	hours	<u>x</u>	5	116.88	per hour		_=	\$ 935.00	\$0.33	
	Water Truck	8	hours	X	\$	106.25	per hour		=	\$ 850.00	\$0.30	
	Hose Reel	8	hours	x	<u>s</u>	62.50	per hour		=	\$ 500.00	\$0.18	
	Cementer	8	hours	x	\$	32.90	per hour		=	\$ 800.00	\$0.29	
Material	s per foot of well			l								_
	Cement	0.0857143	sacks/	x	\$	16.00	per sack		=	\$ 3,840.00	\$1.37	
	Bentonite	0.006	sacks/	x	\$	4.31	per sack		=	\$ 68.96	\$0.02	
Total E	stimated Cost per Day	,	}			•				\$ 6,993.96		
Total E	stimated Cost per Foo	t based on	Tylei	Exp	lorat	ion Quot	e #502 dat	ed 3-11-1	1:	,	\$2.50	
					1			TT				
					W	ells with	pumps					
Assumpt	tions:			-			r	1 1			•	-
1	Typical 8 hour working o	lay										_
2	Average 700 feet per we	əll										
3	Plug four (4) Wells per c	lay	700	ft	X	4	=			2,800		
Cased W	ell Abandonment Costs		L							\$ per day	\$ per foot	
	Cat 416 Backhoe	8	hours	X	5	116.88	per hour	_	=	\$ 935.00	\$0.33	
	Pulling Unit	8	hours	X	5	106.25	per hour		=	\$ 850.00	\$0.30	
	Water Truck	8	hours	X	5	106.25	per hour		=	\$ 850.00	\$0.30	
,	Hose Reel	8	hours	X	5	62.50	per hour		** .	\$ 500.00	\$0.18	
	Cementer	8	hours	x	5	139.76	per hour		=	\$ 800.00	\$0.29	
Materia	ls per foot of well										·	
•	Cement	0.0857143	sacks/	x	\$	16.00	per sack		=	\$ 3,840.00	\$1.37	
	Bentonite	0.006	sacks/	x	\$	4.31	per sack		=	\$ 68.96	\$0.02	
Total E	stimated Cost per Day	<u>y</u>				<u> </u>				\$ 7,843.96		
Total E	Estimated Cost per Foo	t based on	Tyle	r Exp	lorat	ion Quot	e #503 dat	ed 4-29-1	1:		\$2.80	
1				1								
									<u> </u>			
				1		1	1					
	<u> </u>			<u> </u>								

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<u> </u>													
	RE	MOVAL C	DF CC	DNTA	MIN	NATED S	OIL AROU	ND WE	LLS Uni	t Cost			
		····		L		L	[1		<u> </u>		
Assumpt	ions:					ļ					<u> </u>		
1	Use backhoe for 0.25 hr/we	ell to dig	L	<u> </u>	L	L							
2	Radiation Technician measure	ures extent of	contar	nination	n for ().25 hr/well							
						L					ļ		
Assessme	ent/Removal Costs				L						Cost	per well	
					ļ								,
					<u> </u>	<u> </u>					<u> </u>		
·	Cat 416 Backhoe					05.40					<u> </u>	\$6.25	
	Padistian Technisian	0.25	nours		3	25.42	per nour					\$0.33	
	Radiation Technician	0.25	houre	v	•	27 43	per hour				<u> </u>	\$6.86	
	Operator	0.25	nours			27.45			<u> </u>		<u>+</u>	40.00	<u> </u>
	Operator	0.25		x	3	32.87	per hour				\frown	\$8.22	
	Remove Casing	1	well	x	5	15.00	per well		=		t	\$15.00	
	Hole Plug/Cap	1	each	X	5	7.50	each		=		<u> </u>	\$7.50	
	Site Grading & Seeding	2,13	each	X	\$	31.00	per sm site		=			\$66.03	
													_
Disposal	and Transportation Costs												_
	Contaminated Soil per Wel	1				0.370	cy per well		1				•
	Disposal and Transportatio	n			\$	281.82	per cy					\$104.27	_
						<u> </u>		·			L		
				<u> </u>									
Total E	stimated Cost per We	ll:										\$214.23	
							``						
											L_		
		DEL	INEA	IOIT	N H()LE ABA	NDONME	NT Unit	Costs				
							T						
Assumpt	ions:												
1	Use the cased well abandor	ment cost as	base.										
2	Other cost per Guideline 12	2 appendix L											
				1							Τ.		
[[[f	1	1	<u> </u>		1		-		
		1											
1		}			1						Cost	per ft (based	
Hole Ab.	andonment Costs					1				Cost per Well	on 70	0 ft holes)	_
			5	-			<u> </u>				1	700	
	Cased Well Abandonment	Cost (per abo	ve brea	kdown)					1,750.00	\$	2.500	_
L	<u> </u>		L								+		
L	l			<u> </u>	 		l			·	_		_
	Hole Plug/Cap	1	each	<u> </u>	1 1	5 7.50	each		=	7.50	\$	0.011	_
L	Site Grading & Seeding	2.13	each		[]	31.00	per sm site		=	66.03	\$	0.094	_
	L		<u> </u>		1		1			73.53			_
Total E	stimated Cost per We	<u>11</u>							<u> </u>	1,823.53			
Total E	stimated Cost per Foo	ot:									1	\$2.61	
		1		T	-						1		·
	1		1	1	1	1	1			1	1		_

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Wellfield Building/Clay Li	ner Removal				
			_		
Cost per Well Head Cove	r				
	Radiation Tech =	27.43	per hour		
	Operator =	32.87	per hour		
	Total Wellhead Covers =	3,024.00			
	HCI 35% Cost =	\$ 0.160	per pound		
	Acid Usage Rate =	4.1	pounds pe	er wellhead	cover
	Acid Unit Cost =	\$ 0.66	per wellhe	ad cover	
	Total Labor Rate =	\$ 66.87	per hour		
	Cleaning Rate	10	wellheads	per hour	
	Survey / Decon.	\$ 6,69	per wellh	ead cover	
Cost per Header House					
	Rad Technician =	27.43	per hour		
	Operator =	32.87	per hour		
	Number of Operators =	2			
	HCI 35% Cost =	\$ 0.160	per pound		
	Acid Usage Rate =	20	pounds pe	er header h	ouse
	Acid Unit Cost =	\$ 3.20	per heade	r house	
	Total Labor Rate =	\$ 578.98	per hour		
	Cleaning Rate	. 1	header ho	use per da	y
	Survey / Decon.	\$ 578.98	per head	er house	
Clay Liner/Subsoil Remo	val Cost			1	
	Operator =	32.87	per hour		
	Trackhoe =	\$ 79.68	per hour		
	Loader =	\$ 43.93	per hour		
	Loader Size =	1.5	cubic yar	ds	
	Disposal Rate =	40	yards/hou	r	
	Total Removal	\$ 3.91	per cubic	yard	

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UC-WFBLDGS

ACID WASH							
Assumptions:							
10% wash solution is	sused						
0.25 gallon of acid w	ash is used pe	r sq ft	. to clean v	valls.			
1 gallon of acid wash	is used per so	q ft. to	clean floo	rs.			·
 Using the CPP square f	ootages the as	sump	tion is as fo	ollows			
 		L					L
 Acid Wash	(Walls)			L			
 Labor	2	Men					
 Rate	\$22.48	hr.				ļ	
 Time	20	8hr. [Days			L	
 Manlift Rental	\$49.85	Mont	h				
 CPP Wall Area	26710	squa	re feet				
 Labor and manlift	\$0.27	per s	quare foot				
 Acid	\$0.16	poun	d			· .	
Consumables	\$0.05	per s	quare foot				
 Total	\$0.48	per s	quare foot				
						·	
 Acid Wash	(Floors)						
 Labor	2	Work	kers				
 Rate	\$22.48	hr.				L	
 Time	15	8hr. [Days			L	
CPP Floor Area	17820	squa	re feet				
 Labor	\$0.30	per s	quare foot				
 Acid	\$0.16	poun	d				
Consumables	\$0.05	per s	quare foot				
Total	\$0.51	per s	quare foot				

6/30/2011

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Electrical Power Consumption and Costs - During Restoration

				Lighting		Electric Air							
	Operating		_	Watts (1.25	Electric	Condioning			Operating		Power Cost		Electrical
Description	Horsepower	Voltage	Lighting FT ²	watts/FT ²)	Heat Kw	Kw	Kw/HP	Kwhr/HP hr	Hours/yr	Kwhr/yr	\$/Kwhr		Cost/year
BO Food Putting (cost of notice in PO operating cost)		480					0 746	0 746	8.760		0.04780	\$	-
Decar/Re-injection Pump (cost of power in RO operating)		480					0.746	0.746	8,760	-	0.04780	ŝ	-
Decat/Re-injection r amp (cost of power in RO operating)	5.0	480					0 746	0.746	8,760	32.675	0.04780	ŝ	1.561.86
Mice Equip (motoring number for summ numps)	10.0	480					0.746	0 746	8 760	65 350	0.04780	s	3 123 71
Air Comproving pumps, raits, sump pumps)	75	480					0.746	0.746	8 760	49 012	0.04780	s	2 342 78
An Compressors	1.5	460	28.050	1.25			0,710		8 760	307 148	0.04780	s	14 681.65
Sat 2 Electrical Power Cost per Year Total			20,050	, 1.25	•				0,100			ŝ	21,710.00
Se Plant 500 Gallon RO and Support Equip.	•												
PC Booster Pump	40.0	480					0.746	0.746	8,760	261,398	0.04780	\$	12,494.84
RO Feed Pump (cost of power in RO operating cost)		480					0.746	0.746	8,760	-	0.04780	\$	-
Decar/Re-injection Pump ((cost of power in RO operating cost)		480					0,746	0.746	8,760	-	0.04780	\$	-
Decarb-Compressor	5.0	480					0.746	0.746	8,760	32,675	0.04780	\$.	1,561.86
Decarb Booster Pump	10.0	480					0.746	0.746	8,760	65,350	0.04780	\$	3,123.71
Misc. Equip. (metering pumps, fans, sump pumps)	10.0	480					0.746	0.746	8,760	65,350	0.04780	S	3,123.71
Air Compressors	7.5	480	•				0.746	0.746	8,760	49,012	0.04780	\$	2,342.78
Lighting (1.25 watts/sqft)			18.640	1.25					8,760	204,108	0.04780	\$	9,756.36
Se Plant 500 Gallon RO and Support Equip. Total												S	32,403.27
DDW Vollman 33-27													
DDW PD Injection Pump (is included in DDW Cost)		480					0,746	0.746	8,760	-	.0.04780	\$	•
Misc. Equip. (metering pumps, fans, sump pumps)	1.0	480					0.746	0.746	8,760	6,535	0.04780	\$	312.37
Air Compressors	1.0	480					0.746	· 0.746	8,760	6,535	0.04780	\$	312.37
Heater - electric Kw (includes wellhead)	-	480			12.5				4,320	54,000	0.04780	\$	2,581.20
Lighting (1.25 watts/sqft)			390	1.25					8,760	4,271	0.04780	\$	204.13
DDW Vollman 33-27 Injection Pump Support Equip. Total													\$3,410.07
DDW SHRUP #9													
DDW PD Injection Pump (is included in DDW Cost)		480					0.746	0.746	8,760	-	0.04780	\$	-
Misc. Equip. (metering pumps, fans, sump pumps)	1.0	480					0.746	0.746	8,760	6,535	0.04780	\$	312.37
Air Compressors	1.0	480	i i				0.746	0.746	8,760	6,535	0.04780	\$	312.37
Heater - electric Kw (includes wellhead)	-	480			12.5	;			4,320	54,000	0.04780	.\$	2,581.20
Lighting (1.25 watts/sqft)			392	1.25					8,760	4,292	0.04780	s	205.18
DDW SRHUP 9 Injection Pump Support Equip. Total													\$3,411.12
DDW Morton 1-20													
DDW PD Injection Pump (is included in DDW Cost)		480	1				0.746	0.746	8,760	-	0.04780	\$	-
Misc. Equip. (metering pumps, fans, sump pumps)	1.0	480	l i i i i i i i i i i i i i i i i i i i				0.746	0.746	8,760	6,535	0.04780	\$	312.37
Air Compressors	1.0	480	F				0.746	0.746	8,760	6,535	0.04780	\$	312.37
Heater - electric Kw (includes wellhead)	-	480	1		12.5	5			`4,320	54,000	0.04780	\$	2,581.20
Lighting (1.25 watts/sqft)			392	1.25					8,760	4,292	0.04780	\$	205.18
Morton 1-20 Injection Pump Support Equip. Total				`									\$3,411.12
PSR2 & Irrigator													
Feed Water Pump	40.0	480	F				0.746	0.746	3,600	107,424	0.04780	\$	5,134.87
Irrigator	50.0	480	1				0.746	0.746	3,600	134,280	0.04780	\$	6,418.58
Sampler	-	480)		0,5	5			3,600	1,800	0.04780	\$	86.04
PSR2 & Irrigator Total												\$	11,639.49
y Header House beging Tunical													
Heater - electric Kw (includes wellbead)		10/			10.				4 3 30	54.000	0.04790	¢	2 581 20
Header House heating, Typical Total	•	480	,		12,3	,			4,520	54,000	0,04780	э	2,301.20
riouger riouse meaning, rypicar rougi													\$4,281.20

UC - Electrical Power

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Heating Cost by Building				Determine Which Fuel is Used							
	Flooring	Wall	Number	Fan	Exchange BTU/hr	Building BTU/hr	Combined	Heating	\$\$ per Million BTUs	Nat. Gas \$\$ / yr	Propane \$\$ / yr
	Sq. Feet	Sq. Feet	Of Fans	CFM	(ΔT=40)	(AT=40, R=20)	BTU/hr	Months	(Fuel Specific)		
Sat-2 (6x6" Tank Fans)	12,375	12,000	6	1,500	61,772	48,750	110,522	5	\$6.00	\$3,034	1
Se Removal Bldg. (2009/2010)	12,000	12400	1	9,000	370,630	48,800	419,430	5	\$6.00	\$11,513	í –

Estimated Ventilation CFM and impact on heating \$\$/yr does not account for time with building doors left open.



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UC - Heating Costs

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														1.5 2	11 11	0D 1,900 2.375	ID 1.534 1.917	0.183 0.229	n (ft ²) 0.0069 0.0107	0.0069	
		·												1.5 2 3	11 11 11	0D 1,900 2.375 3.500	ID 1.534 1.917 2.825	0.183 0.229 0.3375	n (ft ⁻) 0,0069 0,0107 0,0233	0.0069 0.0107 0.0233	
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														1.5 2 3 4 6	SDR 11 11 11 11	OD 1,900 2.375 3.500 4.500 6.625	ID 1.534 1.917 2.825 3.633 5.348	0.183 0.229 0.3375 0.4335 0.6385	n (fr) 0.0069 0.0107 0.0233 0.0385 0.0834	0.0069 0.0107 0.0233 0.0385 0.0834	
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		· · · · · · · · · · · · · · · · · · ·												1.5 2 3 4 6 8	SDR 11 11 11 11 11 11	OD 1.900 2.375 3.500 4.500 6.625 8.625 8.625	ID 1.534 1.917 2.825 3.633 5.348 6.963	0.183 0.229 0.3375 0.4335 0.6385 0.6385	n (ft [*]) 0,0069 0,0107 0,0233 0,0385 0,0834 0,1413	0.0069 0.0107 0.0233 0.0385 0.0834 0.1413	
														1.5 2 3 4 6 8 10	SDR 11 11 11 11 11 11 11	OD 1.900 2.375 3.500 4.500 6.625 8.625 10.750	ID 1.534 1.917 2.825 3.633 5.348 6.963 8.678	1 nickness 0.183 0.229 0.3375 0.4335 0.6385 0.6385 0.831 1.036	n (ft [*]) 0,0069 0,0107 0,0233 0,0385 0,0834 0,1413 0,2196	0.0069 0.0107 0.0233 0.0385 0.0834 0.1413 0.2196	
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														1.5 2 3 4 6 8 10 12 14 16 18	SUR 11	OD 1.900 2.375 3.500 4.500 6.625 8.625 10.750 12.750 14.000 16.000 18.000	ID 1.534 1.917 2.825 3.633 5.348 6.963 8.678 10.293 11.302 12.916 14.531	Inickness 0.183 0.229 0.3375 0.4335 0.6385 0.8311 1.036 1.2285 1.349 1.542 1.7345	n (ff') 0.0069 0.0107 0.0233 0.0385 0.0834 0.1413 0.2196 0.3088 0.3723 0.4864 0.6155	0.0069 0.0107 0.0233 0.0385 0.0834 0.1413 0.2196 0.3088 0.3723 0.4864 0.6155	
														1.5 2 3 4 6 8 10 12 14 16 18	SDR 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11	OD 1.900 2.375 3.500 4.500 6.625 8.625 10.750 12.750 14.000 16.000 18.000	ID 1.534 1.917 2.825 3.633 5.348 6.963 8.678 10.293 11.302 12.916 14.531	Inickness 0.183 0.229 0.3375 0.4335 0.6385 0.831 1.036 1.2285 1.349 1.542 1.7345	n (ff*) 0,0069 0,0107 0,0233 0,0385 0,0834 0,1413 0,2196 0,3088 0,3723 0,4864 0,6155	0.0069 0.0107 0.0233 0.0385 0.0834 0.1413 0.2196 0.3088 0.3723 0.4864 0.6155	

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UC-WFPIPE

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Equipment Costs - based on Cost Reference	e Gi	uide - Eq	uipme	ent Wa	tch 2	010					_		Ga	soline co	ost/gallon= 2.	\$	2.63			GEC	= grou	ind e	ngagin	g co	mponent	s			18%		
			Hou	rly Own	nersh	ip & Ov	erha	ul Cost					Die	esel Cost	/ gailon =	\$	2.68	8					·								
			Own	ership				Ove	rhau					Field Rep	pair & Operat	ting	Expense	es (r	10 opera	tor lat	oor)				Tatal		Fatal	0			
Equipment Description		Depr. \$	CF	°C \$	0'ł	lead \$	La	abor \$	P	arts \$	La	abor \$	P	Parts \$	Fuel consum. Gal/hr		Fuel \$	L	ube \$	Tire	es \$	G	EC \$	ot Ot	perating cost/hr	H	lourly Cost	Pri Ol	ofit& H/hr	C	ost/hr
Cat 14H Grader - 14' Blade	\$	16.53	\$	7.29	\$	9.16	\$	3.95	\$	8,32	\$	3.29	\$	8.07	7.04	\$	18.87	\$	4.22	\$	5.14	\$	0.64	\$	40.23	\$	85.48	\$	15.39	\$	00.86
Bobcat S250 Skid Steer Loader	\$	1.95	\$	0.64	\$	0.78	\$	1.75	\$	1.31	\$	1.42	\$	0.93	2.78	\$	7.44	\$	0.84	\$	0.85	\$	0.08	\$	11.56	\$	17.99	\$	3.24	\$	2 1.23
Backhoe 416E Extendable Boom	\$	3.85	\$	1.51	\$	1.30	\$	1.21	\$	0.92	\$	1.23	\$	1.14	2.88	\$	7.71	\$	1.57	\$	0.95	\$	0.15	\$	12.75	\$	21.54	\$	3.88 /	\$	25.42
Cat 924H 4-WD Wheel Loader	\$	8.05	\$	2,76	\$	2.63	\$	2.30	\$	1.85	\$	2.85	\$	1.80	4.12	\$	11.05	\$	1.87	\$	1.83	\$	0.24	\$	19.64	\$	37.23	\$	6.70 ¹	\$	43.93
Cat 615C Elevating Scarper	\$	17.88	\$	7.79	\$	7.88	\$	7.89	\$	14.79	\$	12.27	\$	13.31	10.07	\$	26.98	\$	5.18	\$	3.33	\$	1.14	\$	62.21	\$	118.44	\$	21.32	\$	39.76
Cat D8R Dozer - Semi U Blade	\$	21.97	\$	7.90	\$	7.53	\$	7.89	\$	14.36	\$	8.77	\$	13.86	11.36	\$	30.44	\$	5.41	\$	-	\$	2.01	\$	60.49	\$	120.14	\$	21.63	\$	41.77
Cat 3200 L Trackhoe	\$	16.31	\$	5.02	\$	3.64	\$	5.70	\$	5.60	\$	5.70	\$	5.60	5.80	\$	15,53	\$	3.52	\$ ¢	•	\$	0.90	\$	31.25	\$	67.52	\$	12.15	\$	79.68
Concrete Jaws Labounty - CP-60	Ф	1.57	\$	0.47	\$	0.47	\$	0.81	\$	0.39	Ф	7.30	\$	1.95	-	Ф	-	Ф	0.21	Ф	-	Ф	-	\$	9.40	Э	13.17	\$	2.37	¢	15.54
Grove RT700E 50 ton RT Crane	\$	20.62	\$	6.85	\$	8.83	\$	6.07	\$	9.81	\$	5.85	\$	13.79	11.54	\$	30.93	\$	6.22	\$	5.70	\$	-	\$	62.49	\$	114.67	\$	20.64	\$	135.31
Vermeer 1230 Chipper	\$	2.19	\$	0.40	\$	0.60	\$	1.21	\$	1.38	\$	0.99	\$	1.02	2.92	\$	7.82	\$	0.83	\$	0.26	\$	0.69	` \$	11.61	\$	17.39	\$	3.13	\$	20.52
JLG 600S Manlift - 60 ft (Gas)	\$	11.12	\$	2.18	\$	1.51	\$	· 5.10	\$	4.52	\$	5.26	\$	1.87	3.11	\$	8.18	\$	1.71	\$	0.80	\$	-	\$	17.82	\$	42.25	\$	7.60	\$	49.85
Pressure Washer 5 gpm 2200 psi	\$	0.21	\$	0.04	\$	0.03	\$	0.34	\$	0.09	\$	0.52	\$	0.04	0.50	\$	1.32	\$	0,17	\$		\$	-	\$	2.05	\$	2.76	\$	0.50	\$	3.25
Pick-up Truck 3/4 ton 4X4	\$	2.66	\$	0.44	\$	0.37	\$	0.59	\$ _.	0.54	\$	0.75	\$	0.52	3.14	\$	8.26	\$	0.79	\$	0.40	\$	-	\$	10.72	\$	15.32	\$	2.76	\$	18.08
Pulling Unit - Truck 1.75 Ton 4X4 Hoisting Unit - Hydraulic 18000# Pulling Unit Total	\$ \$ \$	4.06 4.91 8.97	\$ \$ \$	0.71 0.90 1.61	\$ \$ \$	0.72 0.78 1.50	\$ \$ \$	0.66 1.46 2.12	\$ \$ \$	0.88 1.32 2.20	\$ \$ \$	0.83 1.80 2.63	\$ \$ \$	0.85 1.52 2.37	6.88 - 6.88	\$ \$ \$	18.09 - 18.09	\$ \$ \$	1.66 0.46 2.12	\$ \$ \$	0.65 - 0.65	\$ \$ \$	-	\$ \$ \$	22.08 3.78 25.86	\$ \$ \$	29.11 13.15 42.26	\$	7.61	\$	49.87
MIT Truck - 1.75 Ton 4X4 Gas	\$	4.06	\$	0.71	\$	0.72	\$	0,66	\$	0.88	\$	0.83	\$	0.85	6.88	\$	18.09	\$	1.66	\$	0.65	\$	- '	\$	22.08	\$	29.11	\$	5.24	\$	34.35
Mobile Mixer Trailer Mounted - Cementer - Grout mixer pumper	\$	5.86	\$	1.12	\$	1.07	\$	4.16	\$	1.68	\$	5.48	\$	1.85	2.02	\$	5.41	\$	0.85	\$	0.40	\$	-	\$	13.99	\$	27.88	\$	5.02	\$	32.90
GooseNeck Trailer 3 Axle - fixed	\$	2.85	\$	0.76	\$	0.45	\$	1.42	\$	0.88	\$	1.64	\$	1.22	-	\$	-	\$	0.29	\$	2.24	\$	-	\$	5.39	\$	11.75	\$	2.12	\$	13.87
GEHL DL-8 Rough Terrain Lift Truck	\$	8.35	\$	1.88	\$	1.92	\$	5.06	\$	4.93	\$	5.28	\$	3.31	3.23	\$	8.66	\$	1.61	\$	1.43	\$	-	\$	20,29	\$	42.43	\$	7.64	\$	50.07

UC-Equipment Costs

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			Mine	Unit Data										
				wells added for restoration no increase in affected volume	,	Mine Unit-C Haul								
		Mine Unit-A	Mine Unit-B	Mine Unit-C	Mine Unit- C22	Drifts	Mine Unit-D	Mine Unit- D Ext	Mine Unit E	Mine Unit F	Mine Unit H	Mine Unit I	Mine Unit J	Mine Unit J Ext
Total number of production wells Total number of nucceim wells Total number of nucceim wells Flare Factor Wellfield Area (LATS) Wellfield Area (LATS) Affacted Vo Sate Area (LT) Are Completed Thickness Pavarity Affacted Volume (H3)		0 9 2.94 151.900 3.49 151.900 15.0 0.27 6,698,790	141 188 69 2.94 690,900 15.86 690,900 15.0 0.27 30,468,690	137 313 104 2 1.067,056 24.50 1,067,056 16.0 0.27 34,145,792	0 0 2 325,000 7,46 325,000 15 0 8,27 9,750,000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	49 102 38 2.5 326,750 7.50 326,750 17.0 0.27 13,886,375	13 29 15 2.5 201,509 4.63 201,509 17.0 0.27 \$,564,133	120 237 72 2.6 971,941 22 31 971,941 16.6 0.27 40,432,746	614 948 109 2 3.775,191 86 67 3.775,191 16.0 0.27 120,806,112	136 329 86 2.4 1,222,583 ~ 28.07 1,222,583 16 0 0.27 46,947,187	249 459 78 2.5 2.293.918 52.66 2.293.918 20 0 0.27 114,695,900	197 387 82 2.5 1.148,680 26:37 1.148,680 15.0 0.27 43,075,500	0 0 2.5 29,600 0.64 29,600 0.27 0
Kgallous per Pore Volume		13,529	61,535	68,961	19,691	o	28,046	17,296	\$1,65%	243,920	94,815	231,640	\$6,995	0
Number of Parterns in Units)									previous, sf	3431990		1146959		
Number of Wells in Unit(s) Production Wells					Wells included in MI	ж								
1	Cunat	٥	141	137	0	0	49	13	120	614	136	249	197	٥
Televia Br.B.	Total Estimated	0	141	137	0	0	49	13	120	614	136	249	197	٥
Injection were	Current	0	188	313	0	D	102	29	237	948	329	459	387	o
	Total Estimated	0	183	313	0	٥	102	29	237	948	329	459	387	0
NIGHTOF AND RESTORATION WELLS	Current	9	69	104	0	0	38	15	72	109	86	72	\$2	0
Namber of Wells per Wellfield Tout Number of Wells Average Well Depth (ff) Average Diameter of Canang (inches) Delinestion [Hole Estimated Next Report Period Length of Fercing (f) Nimber of Dep Daposal Wells	Total Estimated	9 5310 500 5 0 0	69 398 450 5 0 0	104 554 550 5 0 18694	0 550 5 4 0	0 0 550 5 0 0	38 189 600 5 0 14060	15 57 600 5 0 0	72 429 550 5 6 18426	109 1671 - 650 5 0 29540	86 551 500 5 0 9680	72 726 650 5 0 0	82 666 540 5 0 9977	0 0 540 5 0 9977

	Electrical	Costs		
			2008 Actual	
Power cost			\$0.0478	kwHr
Kilowati to Horsepowar			0.746	Kw/HP
Horsepower per gallon per minute			0.167	HP/gpm
	Labor R	145		
Latest Available, Wyonung, Mountain States Employ	ren Council, July, 200	19	Inc 45% benefits	
			(i.e., overhead)	
Environmental Manager/RSO		\$45 43	\$65.87	hour
Restoration Manager/Hydrologist	'	\$32.21	\$46.70	hour
Operator		\$22 67	\$32.\$7	hour
Laborer		\$15.50	\$22.48	hour
Engineer		\$32 21	\$46.70	hour
Radiation/Environmental Engineering Technician		\$18.92	\$27.43	hour
2,080 working hours in a year		176	hours per month	
	Chemical	Costa		
			2010 Actual	
Antiscalant for RO			\$16.19	gai
Sodium Sulfide			\$0.38	pound
Methanol			\$2.43	gal
Canani			\$5.94	sack
Bettorile ubes			\$2.90	fube
Plug Gel			\$7.30	sack
Well Cap - per guideline 12			\$7.50	each
Hydrochlonic Acid			. 50.16	pound
······································	Analytical	Costs		
	•		2010 Actual	
Modified Guideline 8 (contract lab adjusted for curre	nt contract cost)		\$337.00	analysis
6 parameter (contract lab) Eat Rate (CPI)			\$100.00	analysis
Other (radon, hio, etc.) Est Rate (CPI)			\$1,000.00	month

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Cost to refurbiush Well	\$14,000
Cost to refurbish Header House	\$32,000
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Master Cost Basi

Master Cost Basis

Equipment Cold	Rear Portal	Labor Costs	Ta	ed Schri
<u>Egutiment</u>	accentenae	10001 (010		
Cat 924G Loader - 2.25 cu yd bucket	\$43.93	N/A		\$43.93
Cat 416 Backhoe	\$25 42	N/A		\$25.42
Shredder	\$20 52	N/A		\$20.52
Cat D8N Bulldozer	\$141.77	N/A	:	141.77
Pulling Unit with Operator	\$49 87	\$32.87		\$\$2.74
AIT Unit with Operator	\$ 34.35	\$32.87		\$67.22
GEHL DL-8 Rough Terrain Lift Truck	\$50 07	N/A		\$50 O7
Drill Rig (workover, repair, P&A) with all labor, water truck	\$200.00	inc	•	200.00
Goose Neck Traiter	\$13 87	N/A		\$13 87
Manlift	\$49,85	N/A .		\$49 85
Cementer	\$32.90	N/A		\$32.90
Crane with operator	\$135.31	\$32.87	,	\$168.18
Cat 320C L Trackhoe - 1,5 cu yd bucket	\$79 63	N/A		\$79.68
Concrete Jaws Labourity - CP-60	\$15 54	N/A		\$15.54
Pick-up Truck 3/4 ton 4X4	\$18.08	N/A		\$1\$.08
Hose Real	\$62.50	N/A		\$62.50
Bobcat 3250 Skid Steer Loader	\$21.23	N/A		\$21.23
Cat 14H Grader - 14 Blade	\$100.86	N/A		\$100.86
Cat 615C Elevating Scarper Basis: Drill ng based on current 2010 contracts Emission of the band on Cat Reference Amine Emismonet	\$139.76	N/A	innia Cont Tak	\$139.76

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Waste Disposal Costs								
Waste Form	Ecc*		Loud Correction Factor (Tons/Yd3)	Fee ver Cubic Yard	Transport Cost**		<u>Total Transporta</u> <u>C</u> i	tion and <u>Dispo</u> sal 211
Soil, Concrete, Bulk, Byproduct Material = 11E2	\$141.20	per Tou	1.1	\$155 32	\$126.50	per Y d3 **	\$281.82	per Yd3
Unpackaged Bulk Byproduct Material (o g . pipe) - 11E2	\$165.22	per Tan	0.42	\$69.39	\$94.11	per Yd3 ***	\$163.50	per Yd3
Solid Waste (county landfill) Solid Waste (county landfill)	\$0 00827 \$133.75	per Lb			Incl. Incl.	per Lb per Load	\$0.00827 \$133.75	per Lb per Load
			0.42				\$0.66	per it3
Void Factor (for disposal)	1.25							
 Fee includes all mist laxes and other surcharges. Based on Denison 3 Transport costs based on invoice from Greenfield logistics rec'd 4/14 Transport costs based on rates from enigments watch last at 2009 	fines Invoice rec. 4/25/11 /11, all-in rate is \$224 07/0 no actual cost available at p	n . 22s time, \$75.1u * 25.	3 to dump site / 15cv loa	d				

County landfill charges 3yd = \$113.58, 6yd = \$172.10 plus surcharge

Losd Conrection Fetors - difference botween solid material and when it is braken bocause of kir space botween the piezes of material, the cancer the material the tower the load factor (or the fines the material the kighter the Kirst). The table below shows some examples of load factors for several common materials, including converse. These factors are from the Chargellar Performance Handbook and the Engineering Pocket Reference Guide.

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		Pounds/CY			Com: To		
Material	Solid (bank)	Brokan (Loose)	% Dif	Load Factor	<u>cv</u>		
Gratuite	4536	2781	39%	0.61	1.631068		
Limestone	4401	2619	40%	0.60	1.680412		
Sandatone	3915	2538	35%	0.65	1.542553		
Concrete	3996	2176	46%	0.54	1.836397		
Sand & gravel	2700	2400	11%	0.89	1.125		

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upp K. Cost Estimator for Demolituos and Removal	of Railroad Spurs and Factimes Building	0	
ank .	Cost per unit	Regional Cost Adjustment	Adjusted Cost per Unit
taxture of Types	\$0 26 ft3	0.957	\$0.249 ft3
explosive Demolstion. Concrete or Stod	0 24 n3	0.957	\$0.230 ft3
Disposal (Average)	8 43 cy	0.957	\$8.115 cy
Try Landfill Dump Charges	\$100.00 tap	. 0.957	\$95.700 ton
Concrete Footings and Foundations			
6" Thick with Rebar	5 28 ft2	0.957	\$5.053 \$2
Footings - 2' Thick, 3' Wide	18.95 lin. tt.	0.957	\$1\$.135 hn. ft.
Constrole Disposal Off-Sate	1 48 cy	0.957	\$8.115 cy
App C. Calculations for Moving Materials with a C	aterpillar 637G Push-Pull Scraper Flort	Operating Cost per bank (in sits) cub	ic yards
One-Way Distance 500 feet, 0% grade		\$0.852	\$0.852 boy
One-Way Distance 1.000 feet 0% grade		\$1 01\$	\$1.018 bey
Oue-Way Destance 2.000 feet. 0% grade		\$1,319	\$1.319 ber
One-Way Distance 6,500 feet, 5*+ grade		\$3.566	\$3.566 bey
Aon E. Calculations for Moving Material with a Ca	ternillar D9R Dozer	Operating Cost per linear cubic yard	
Distance 50 feet		\$0.126	\$0.126 ley
App H. Cost Estimates for Haudling Wire Feuting	and Electrical Power Lines		
Fencing Removal		\$0.37	\$0.37 linear foot
App I, Cost Estimate for Ripping Asphalt Using a C	aterpillar D9R Dozer	Operating Cost	
		\$564.28	\$664.28 per acre
App II, Cost Estimate for Ripping Overburden Uni	ng a Caterpillar D10R Dozer	Operating Costs	
	0 27 acru/hour	\$243.73	\$243.73 per hour
			\$902.70 per acre

Seeding Unit Costs	
Discing / Stechne/Tonial Costa	2010 Actual
Seed cost	\$65.99 per atte
Hay Mulch Crimped and Soil Amendment	\$540 per stee
Soud and Mulch	\$606 per acre
Depth of Topsoil	0.5 feet
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6/30/2011

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Master Cost Basis

Appendix D

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SAMPLE LOCATION	SAMPLE DATE	RADIONUCLIDE	CONCENTRATION (mg/L)	CONCENTRATION (pCi/L)	ERROR EST. +/- (pCi/L)	CONCENTRATION (µCi/ml)	10 CFR 20 App. B, Table 2 Values (μCi/ml)	% EFF. CONC LIMIT
SW-1 Stock Pond	3rd Quarter	U-Nat Ra-226	DRY				3.0E-07 6.0E-08	
T35N, R74W	4th Quarter	U-Nat Ra-226	DRY				3.0E-07 6.0E-08	
SW-2 Stock Pond	3rd Quarter	U-Nat Ra-226	DRY				3.0E-07 6.0E-08	
T35N, R74W	4th Quarter	U-Nat Ra-226	DRY				3.0E-07 6.0E-08	
SW-3 Stock Pond	3rd Quarter	U-Nat Ra-226	DRY			:	3.0E-07 6.0E-08	
T36N, R74W	4th Quarter	U-Nat Ra-226	DRY			•	3.0E-07 6.0E-08	· · ·
SW-4 Stock Pond	3rd Quarter	U-Nat Ra-226	DRY				3.0E-07 6.0E-08	
T36N, R74W	4th Quarter	U-Nat Ra-226	DRY				3.0E-07 6.0E-08	
SW-5 Stock Pond	3rd Quarter	U-Nat Ra-226	0.0074	1.30	0.29	5.0E-09 1.3E-09	3.0E-07 6.0E-08	1.7 2.2
Section 21 T36N, R73W	4th Quarter	U-Nat Ra-226	DRY				3.0E-07 6.0E-08	
SW-6 Stock Pond	3rd Quarter	U-Nat Ra-226	0.0006	0.07	0.15	4.1E-10 7.0E-10	3.0E-07 6.0E-08	0.1
T36N, R73W	4th Quarter	U-Nat Ra-226	FROZEN				3.0E-07 6.0E-08	



SAMPLE	SAMPLE	RADIONUCLIDE	CONCENTRATION (mg/L)		ERROR EST. +/- (pCi/L)	CONCENTRATION (µCi/ml)	10 CFR 20 App. B, Table 2 Values (µCi/ml)	% EFF. CONC. LIMIT
SW-7 Stock Pond	3rd Quarter	U-Nat Ra-226	DRY	(,)	1		3.0E-07 6.0E-08	
T36N, R73W	4th Quarter	U-Nat Ra-226	DRY				3.0E-07 6.0E-08	
SW-8 Stock Pond	3rd Quarter	U-Nat Ra-226	0.0039	0.61	0.24	2.6E-09 6.1E-10	3.0E-07 6.0E-08	0.9 1.0
Section 18 T36N, R72W	4th Quarter	U-Nat Ra-226	FROZEN				3.0E-07 6.0E-08	
SW-9 Stock Pond	3rd Quarter	U-Nat Ra-226	DRY				3.0E-07 6.0E-08	
Section 18 T36N, R72W	4th Quarter	U-Nat Ra-226	DRY				3.0E-07 6.0E-08	
			. •					
SW-10 Stock Pond	3rd Quarter	U-Nat Ra-226	DRY				3.0E-07 6.0E-08	
T36N, R72W	4th Quarter	U-Nat Ra-226	DRY				3.0E-07 6.0E-08	
GW-1 Windmill	3rd Quarter	U-Nat Ra-226	0.029	4.20	0.44	2.0E-08 4.2E-09	3.0E-07 6.0E-08	6.5 7.0
T35N, R74W	4th Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
			· .					
GW-2 Water Well Section 35	3rd Quarter	U-Nat Ra-226	NOT RUNNING	• •			3.0E-07 6.0E-08	
T36N, R74W	4th Quarter	U-Nat Ra-226	NOT RUNNING	• •			3.0E-07 6.0E-08	•



SAMPLE, LOCATION	SAMPLE DATE	RADIONUCLIDE	CONCENTRATION (mg/L)	CONCENTRATION (pCi/L)	ERROR EST. +/- (pCi/L)	CONCENTRATION (µCi/ml)	10 CFR 20 App. B, Table 2 Values (μCi/ml)	% EFF. CONC. LIMIT
GW-3 Windmill	3rd Quarter	U-Nat Ra-226	0.147	1.80	0.31	1.0E-07 1.8E-09	3.0E-07 6.0E-08	33.2 3.0
T36N, R74W	4th Quarter	U-Nat Ra-226	NOT RUNNING	•			3.0E-07 6.0E-08	
GW-4 Windmill	3rd Quarter	U-Nat Ra-226	0.0728	0.45	0.19	4.9E-08 4.5E-10	3.0E-07 6.0E-08	16.4 0.8
Section 23 T36N, R74W	4th Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
. GW-5 Windmill	3rd Quarter	U-Nat Ra-226	NOT RUNNING			· .	3.0E-07 6.0E-08	
T36N, R73W	4th Quarter	U-Nat Ra-226	NOT RUNNING	. a			3.0E-07 6.0E-08	
GW-6 Windmill	3rd Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
T36N, R73W	4th Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	·
GW-8 Windmill	3rd Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
T36N, R73W	4th Quarter	U-Nat Ra-226	NOT RUNNING			•	3.0E-07 6.0E-08	
GW-9 Windmill Section 14	3rd Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
T36N, R73W	4th Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	



SAMPLE LOCATION	SAMPLE DATE	RADIONUCLIDE	CONCENTRATION (mg/L)	CONCENTRATION (pCi/L)	ERROR EST. +/- (pCi/L)	CONCENTRATION (µCi/ml)	10 CFR 20 App. B, Table 2 Values (µCi/ml)	% EFF. CONC LIMIT
GW-10	3rd Quarter	U-Nat	0.0056			3.8E-09	3.0E-07	1.3
Water Well Section 14		Ra-226		0.34	0.17	3.4E-10	6.0E-08	0.6
T36N, R73W	4th Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
		10 220					1	
GW-11	3rd Quarter	U-Nat	0.0008			5.4E-10	3.0E-07	0.2
Water Well Section 11		Ra-226		0.41	0.20	4.1E-10	6.0E-08	0.7
T36N, R73W	4th Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
			•			、 ·		
GW-12 Water Well	3rd Quarter	U-Nat Ra-226	NOT RUNNING	T	:		3.0E-07 6.0E-08	
Section 7 T36N, R72W	4th Quarter	U-Nat Ra-226					3.0E-07 6.0E-08	
GW-13 Water Well	3rd Quarter	U-Nat Ra-226	0.016	1.80	0.32	1.1E-08 1.8E-09	3.0E-07 6.0E-08	3.6 3.0
T36N, R72W	4th Quarter	U-Nat	0.0053	х · ·		3.6E-09	3.0E-07	1.2
• •		Ra-226		0.77	0.19	7.7E-10	6.0E-08	1.3
GW-14 Water Well Section 10	3rd Quarter	U-Nat Ra-226	0.0019	0.37	0.23	1.3E-09 3.7E-10	3.0E-07 6.0E-08	0.4 0.6
T36N, R72W	4th Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
GW-15 Water Well Section 15	3rd Quarter	U-Nat Ra-226	0.0206	0.29		1.4E-08 2.9E-10	3.0E-07 6.0E-08	4.6 0.5
T36N, R72W	4th Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	

TABLE 4

WATER SAMPLING DATA ENVIRONMENTAL MONITORING SITES 3rd & 4th QUARTERS 2010

SAMPLE LOCATION	SAMPLE DATE	RADIONUCLIDE	CONCENTRATION (mg/L)	CONCENTRATION (pCi/L)	ERROR EST. +/- (pCi/L)	CONCENTRATION (µCi/ml)	App. B, Table 2 Values (µCi/ml)	% EFF. CONC LIMIT
GW-16 Water Well Section 11	3rd Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
T36N, R72W	4th Quarter	. U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
GW-17 Water Well Section 8	3rd Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
T36N, R72W	4th Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
GW-18 Water Well Section 2	3rd Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
T36N, R72W	4th Quarter	U-Nat Ra-226	NOT RUNNING	-			3.0E-07 6.0E-08	
GW-20 Water Well Section 27 T36N, R73W	3rd Quarter	U-Nat Ra-226	<.001	0.26	0.17	2.6E-10	3.0E-07 6.0E-08	0.4
	4th Quarter	U-Nat Ra-226	<.001	0.2	0.13	2E-10	3.0E-07 6.0E-08	0.3

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Plates

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"HIGHLAND URANIUM PROJECT PERMIT TO MINE 603"

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