



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

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July 24, 2009

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

RE: Permit to Mine 633 Highland Uranium Project, 2009 Annual Report

Dear Mr. Spackman:

Enclosed please find two (2) copies of Power Resources, Inc. d/b/a/ Cameco Resources (CR) 2008-2009 Annual Report for the Highland Uranium Project. The report addresses applicable reporting requirements of the approved permit application, WDEQ Annual Report Form, and W.S. 35-11-411. An Index of Change has been included for the plates and figures.

If you have questions, please call me at (307) 358-6541, ext. 462.

Sincerely,

A handwritten signature in black ink, appearing to read 'K. Wenzel'.

Krista Wenzel
Manager-Environment, Health and Safety

Attachment: Index of Change, Annual Report, Figures 3-11 (including 3-11A through 3-11E)

cc: Steve Collings w/o atch Tom Cannon w/o atch Scott Bakken File HUP 4.3.3.2
D. Mandeville, USNRC (2 copies) T. Foertsch, Casper Field Office, BLM

INDEX SHEET FOR MINE PERMIT AMENDMENTS OR REVISIONS

Page 1 of 1
Date 7/24/09

MINE COMPANY NAME: Power Resources, Inc. dba Cameco Resources
MINE NAME: Smith Ranch – Highland Uranium Operation

TFN _____
PERMIT NO.: 633

Statement: I, Tom Cannon, an authorized representative of Cameco Resources declare that only the items listed on this and all consecutively numbered Index Sheets are intended as revisions to the current permit document. In the event that other changes inadvertently occurred due to this revision, those unintentional alterations will not be considered approved. Please initial and date. _____

NOTES:

- 1) Include all revision or change elements and a brief description of or reason for each revision element.
- 2) List all revision or change elements in sequence by volume number; number index sheets sequentially as needed.

Volume Number	Page, Map or other Permit Entry to be REMOVED	Page, Map or other Permit Entry to be ADDED	Description of Change
I	Figure 3-11	Figure 3-11	Annual Report updated map
I	New	Figure 3-11 A	Larger window of Figure 3-11 for detail
I	New	Figure 3-11 B	Larger window of Figure 3-11 for detail
I	New	Figure 3-11 C	Larger window of Figure 3-11 for detail
I	New	Figure 3-11 D	Larger window of Figure 3-11 for detail
I	New	Figure 3-11 E	Larger window of Figure 3-11 for detail
I	Figure 3-1	Figure 3-1	Annual Report update mining, reclamation and restoration schedule

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. (a) Name of Permittee.

Power Resources, Inc. d/b/a Cameco Resources

(b) Address and Phone Number.

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

(c) Mining Permit Number.

Wyoming Permit to Mine #633

(d) Date of Permit Issuance (and any Amendment).

The permit was issued on June 18, 1991. The permit was transferred to Power Resources, Inc. (CR) on July 22, 2002. Revisions are as follows:

Change No.1 (Reduce Production Rate-TFN 2 4/232): September 3, 1991

Change No.2 (Figures 3-2, 4-2, 403) : November 21, 1991

Change No.3 (Wetlands Submittal-TFN 2 3/237): November 21, 1991

Change No.4 (Amended Figures and radiological sampling changes in Pilot Plant): January 10, 1992

Change No.5 (Discontinue monitoring wells associated with Reclaimed Bill Smith Mine Area-TFN 3 5/28): September 20, 1995

Change No.6 (Revision of permit language concerning baseline vegetation monitoring-TFN 2 2/287): December 31, 1996

Change No.7 (Approval of revised bond-TFN 3 4/126): June 18, 1997

Change No.8 (Approved comments-vegetation baseline studies-TFN 3 3/134): November 21, 1997

Change No.9 (Updated site map-TFN 3 6/96): January 26, 1998

Change No.10 (Revision of Mine and Reclamation Plan and Wellfield 1 Package-TFN 3 6/142): June 8, 1998

Change No.11 (Wellfield 3 pre-operational data package-TFN 3 3/130): August 10, 1998

Change No.12 (Monitoring of Well MS-308-TFN 3 1/214): August 21, 1998

Change No.13 (Wellfield 4 Pre-operational Data-TFN 3 3/219): January 7, 2000

Change No.14 (Class I Injection Wells-TFN 3 2/285): July 13, 2000

Change No.15 (Wellfield 1 restoration target values and Wellfield Three groundwater classification-TFN 3 1/247): July 26, 2000

Change No.16 (Monitor well recompletion-TFN 4 3/5): December 10, 2001

Change No.17 (Transfer permit from Rio Algom Mining to Power Resources-TFN 4 6/46): July 22, 2002

Change No.18 (Water Quality Sampling Procedure and Deletion of Radium 228 from the sampling list-TFN 4 3/56): October 7, 2002

Change No.19 (Upper Control Limits and Baseline Water Quality for Wellfield 2-TFN 4 4/37): January 9, 2003

Change No.20 (Wellfield Baseline Monitoring procedures-TFN 4 4/129): January 27, 2004

Change No.21 (Mine Unit 15 Permit Amendment-TFN 4 5/128): October 15, 2004

Change No.22 (Mine Unit 15 addition-TFN 4 2/133): March 10, 2005

Change No.23 (Use of bioremediation and nutrient change-TFN 4 2/242): August 23, 2006

Change No.24 (Revision of MIT procedure-TFN 4 2/242): August 24, 2006

Change No.25 (Mine Unit 15A Baseline and Upper Control Limits-TFN 4 1/288): October 3, 2007

Change No.26 (Mine Unit K expansion-TFN 4 2/246): August 8, 2008

Change No.27 (Revise boundary Mine Unit 9-TFN 4 1/351): October 27, 2008

Change No.28 (Transfer from Power Resources to Cameco Resources-TFN 5 6/059): November 26, 2008

Change No.29 (Restoration Plan NOV 4231-08-TFN 5 4/049): December 31, 2008

Change No.30 (Mine Unit K extension-TFN 4 6/381): May 4, 2009

Change No.31 (Excursion reporting procedures-TFN 5 3/97): June 15, 2009

(e) Mineral(s) Mined.

Uranium

(f) State and Federal Mineral Lease Numbers.

State Lease Numbers

#48-057-087 #48-057-0009-1

No Federal Lease Numbers

2. Time period covered by the report.

June 18, 2008 through June 17, 2009

3. Mining:

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

Refer to Table 4-1, Reclamation Report and Figures 3-11 and 3-11a through 3-11e.

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

Refer to Table 3-1, Acreage Affected and Figures 3-11 and 3-11A through 3-11E.

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

Refer to Table 3-2, Estimated Topsoil Inventory 2008-2009 Annual Report Permit 633 and Figures 3-11 and 3-11A through 3-11E

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

There are not out-of-pit spoil volumes due to the nature of ISR mining.

(e) Tabulate quantity of commodity mined by years.

Refer to Table 3-3 U₃O₈ pounds

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

1. Shop facilities, erection sites.

Construction of Satellite SR2 was completed during the report period and is illustrated on Figures 3-11 and 3-11E.

2. Roads.

No new roads were constructed in the permit area.

3. Culverts.

Three new culverts were installed on the main road connecting Mine Units 15 and 9.

4. Diversion ditches, collector ditches, interceptor ditches, etc.

No new ditches were constructed in the permit area.

5. Sediment ponds, containment ponds.

No new ponds were constructed in the permit area.

6. Monitoring sites.

Two new radon monitoring sites were added - one in Section 33 T36N R74W and the second in Section 24 T36N R74W, as shown on Figure 3-11, these are designated sites AS-6 and AS-7, respectively.

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

1. Pit stability problems.

N/A to ISR mining.

2. Subsidence.

N/A to ISR mining.

3. Accidental water discharge, dam failure, etc.

During the report period there were 11 reportable spills as shown in Table 3-4, Wellfield Spill Summary.

4. Slumping or sliding.

N/A to ISR mining.

5. Revegetation problem areas

A few areas in the South west were problematic to reclamation activities during the period of report. The sites include areas along the SR2 road and three steeply sloped hillsides between Mine Unit 9 and Mine Unit 15 staging pad. The issues at these locations are high pH soil values and low

moisture content necessary to promote growth. Therefore, the goal is to lower the pH value of the soil and increase moisture availability to allow growth. To mitigate these problems both locations received broadcast fertilizer and seed was raked in. Additionally, the areas were then covered with erosion blankets. As a best practice, wattles were installed at the top of the slopes to prevent future erosion.

4. Reclamation

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

Table 4-1 includes the tabulated data and information pertaining to 4 a, d, f.

Distinguish between:

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

(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.

N/A to ISR mining

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

Refer to Table 4-2, Areas Previously Reclaimed

(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.

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

Refer to Table 4-3, Reclamation Results

1. Types of seed that have germinated and are growing.
2. Types of seed that are not growing successfully.

During the report period it was identified that the current permitted seed mix needed to be reviewed for plant community suitability. A proposed revision to the approved seed mix was submitted following the end of this report period.

3. Areas experiencing problems with weeds and weed types.

During summer 2008, weeds were sprayed with Escort XP, Milestone Speciality, and Edict 2SC herbicide for general weed control around office areas and specific broadleaf weed control (e.g., Canadian Thistle) in wellfield areas.

4. Significant erosional problems.
5. Areas of unsuitable overburden on the surface.
6. Procedures used or proposed to correct these problems.

(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.

This year detailed reclamation estimates were provided via the surety due to the NOV. That surety was submitted in February 2009.

5. 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.

The estimated plan for mining activities is found in Appendix B. During the next report period it is anticipated that mining activities will continue from Mine Units K, 2, 3, 15/15A and Mine Unit 9. Mine Units 4/4A are on standby status.

Due to the depletion of uranium reserves in Mine Unit 1, restoration activities will continue and will consist of Reverse Osmosis treatment. During the report period the total RO stream volume was 166,148,633 gallons at an average flow rate of 316 gpm.

Refer to Table 5-1, Planned Areas of Disturbance (2009-2010) and Table 5-2 Areas That Will Not Be Fully Reclaimed.

6. 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.

Refer to Table 6-1, Proposed Reclamation plans, for 2009-2010 reclamation plans.

NOTE: On Items 5 and 6 above, any proposed deviation from the approved mine and reclamation plan must be described in detail. The proposed mining and reclamation plans will be reviewed and the operator will be notified if further information is required. "Significant" deviations will require permit revision application (Form 11) and public notice pursuant to Chapter 7, Section 2 of Land Quality Division Noncoal Regulations.

7. 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.

As part of the 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. The results of all operational monitoring are submitted to the WDEQ-LQD in the routine quarterly reports as required by Permit No. 633.

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 Table 4 of the Semi-Annual Effluent and Environmental Monitoring Reports, for periods January 1 through June 30, 2008, and July 1 through December 31, 2008 which are included in Appendix A

of this report. The monitoring data collected during the report period show compliance with all NRC requirements. The location of these monitoring sites is shown on Figure 3-11.

(b) Surface water analyses and discharge data.

Evaporation Ponds

With the commencement of commercial operations, the evaporation ponds are sampled semi-annually. The pond samples are analyzed for bicarbonate, calcium, chloride, sodium, sulfate, TDS, uranium, radium-226, and thorium-230. Use of the East Pond was discontinued in the second half of 2005 due to a leak in the liner. Following repairs, the pond was placed back into service in 2009 and sampling was performed in the second quarter. The results of water samples collected during the report period are provided in Table 7-4, Semi-Annual Sampling of Evaporation 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. These data are submitted to the NRC in Table 4 of the Semi-Annual Effluent and Environmental Monitoring Reports for periods January 1 through June 30, 2008, and July 1 through December 31, 2008 which are included in Appendix A of this report. The monitoring data collected during the report period show compliance with all NRC requirements. The location of these monitoring sites is shown on Figure 3-11.

(c) Precipitation data

Not Applicable. No precipitation data is collected on site.

(d) Subsidence monitoring.

N/A to ISR mining

(e) Overburden analyses.

N/A to ISR mining

(f) Topsoil quantities -compare calculated and actual.

Refer to Table 3-2 Estimated Topsoil Inventory

(g) Vegetation data.

No land application occurs within the permit area.

(h) Wildlife data.

During operational monitoring, no threatened or endangered species were seen within the permit area or the immediate area surrounding the permit boundary. The annual raptor nest survey was conducted during the spring of 2009. The survey covered areas of active or planned activities, including a one mile buffer area. Existing nests were checked for activity. Potential nesting sites were checked to see if any new nests had been constructed since the last survey.

The results of the 2009 raptor nest survey are shown on Figure 7 and in Table 7-5, Spring 2009 Annual Raptor Nest Survey. A total of 9 previous nest sites were observed. One new nest site was identified. During the surveys, raptor activity was observed at Nests No.3, No.4, No.7, No.17, No.21 and No.23. During the initial observation of nesting sites during April 2009, Nest No.21 was inhabited by Horned Owls, and Nests No.3 and No.7 were inhabited by Red-Tailed Hawks. Nest No.4 was inhabited by Swainson's Hawks and new Nest No.23 was inhabited by a Northern Harrier. No other raptors were observed during the survey period.

OTHER MONITORING:

The water balance for 2008 is shown in Tables 7-1, CPP Report Period Water Balance, 7-2, SR#1 Report Period Water Balance, and 7-3, SR#2 Report Period Water Balance.

Wastewater routed to disposal wells during 2008 was 39,304,897 gallons

Ambient Air Monitoring:

In accordance with the NRC Source Material License, CR currently maintains three air monitoring stations in the 633 permit 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 (Fenceline); the nearest downwind residence (Vollman Ranch); and an upwind background site (Dave's Water Well). Data are collected from these stations on a quarterly basis and submitted to the NRC in the Semi-Annual Reports. The monitoring data collected during the report period are shown in Table 2 of the Semi-Annual Effluent and Environmental Monitoring reports for the periods January 1 through June 30, 2008, and July 1 through December 31, 2008 included in Appendix A of this report and show compliance with all NRC requirements.

Environmental Radiological Monitoring Data

Radon-222 is measured at the facility at five (5) locations identified as Vollman Ranch (downwind), Fenceline (downwind), and Dave's Water Well (upwind). Two new sites were

added this year as background sites, as shown on Figure 3-11. Sites AS-4 and AS-5 are associated with the HUP Central Processing plant and are not applicable to this report.

These measurements are made using a continuous passive radon detector. The detector is exchanged for analysis on a quarterly basis and the results are submitted to the NRC in the Semi-Annual Effluent and Environmental Monitoring Reports. For a summary of radon-222 data collected during the report period, please see Table 2 of the NRC Semi-Annual Effluent and Environmental Monitoring Reports for the periods January 1 through June 30, 2008, and July 1 through December 31, 2008 provided in Appendix A.

Direct gamma radiation is measured quarterly at the active air monitoring locations and one background site located near the main office building. These measurements are submitted to the NRC in the Semi-Annual Effluent and Environmental Monitoring Reports. For a summary of gamma data collected during report period, please see the Table 3 NRC Semi-Annual Effluent and Environmental Monitoring Reports for the periods January 1 through June 30, 2008, and July 1 through December 31, 2008 provided in Appendix A.

(i) A map showing and identifying monitoring locations.

Refer to Figures 3-11 and 3-11A through 3-11E

8. Operator's Reclamation Performance Bond Estimate as required by Wyoming Statute §35-11-417. 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 bond estimate update was submitted in February 2009 as part of the restoration Settlement Agreement Notice of Violation Docket No. 5231-08. LQD recently provided the Technical Review for TFN 5 5/101. CR is in the process of reviewing and responding to those comments.

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

(a) Notices of Violation

During the report period there were no Notices of Violation associated with Permit No. 633.

(b) Orders

Not applicable

(c) Permit stipulations; and

Not applicable

(d) Other special conditions.

Not applicable

10. 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 Abandoned Drill Hole Program Supervisor and State Engineer.

Refer to Appendix C, Table 10-1 Delineation Drilling, and Figure 3-11 for drill hole information.

ANNUAL REPORT MAPS

1. Maps must be clear and legible contour maps or recent aerial photos. The preferred scale is 1" =500'.
2. Map sheets should be of a reasonable size, generally not to exceed 48" on a side.
3. Maps must have a title block with:
 - (a) Map title.
 - (b) Name and address of permittee.
 - (c) Permit and amendment numbers.
 - (d) Annual report period.
 - (e) Scale, north arrow, contour interval, date of photography, etc.
4. All maps must show:
 - (a) Legal subdivisions --section, township, and range lines clearly labeled.
 - (b) Permit area boundary clearly shown and labeled.
 - (c) Amendment areas clearly shown and labeled.
5. The following features should all be clearly identified:
 - (a) Topsoil stockpiles (numbered).
 - (b) Settling ponds and sediment control structures.
 - (c) Haul roads.
 - (d) Pits identified by location, name, number, etc.
 - (e) Ramps (numbered).
 - (f) Out-of-pit spoil dumps including date of initial placement of material (impermanent, give approval date).
 - (g) All waste disposal sites including, but not limited to:
 1. Carbonaceous waste dumps.
 2. Partings dumps.
 3. Fly ash disposal sites, etc.

4. Landfill sites.

- (h) Diversion ditches
- (i) Monitoring sites
- (j) Facilities location (silos, labs, crushers, washbays, etc.)

6. History of mining and reclamation should be documented for all areas. The preferred method is to outline separate areas on the map and assign each a number. Then a summary should be presented listing the following information for each separate area:

- (a) Acreage.
- (b) Initial date of disturbance.
- (c) Date of regrading.
- (d) Date of approval of grading.
- (e) Date of topsoiling and approximate depth, source of topsoil.
- (f) Date of mulching and type of mulch.
- (g) Date of seeding.
- (h) Seed mix.
- (i) Date and mix of reseeding.
- (j) Any reworking such as repair of gullies, etc.
- (k) Bond status of areas (type of bond, date of any release and percent released).

7. All areas to be affected by mining and reclamation activities in the coming year should be outlined and labeled.

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
PO Box 1210
Glenrock, WY 82637
(307) 358-6541

2. Party to Receive Notice:

Manager- Environment, Health and Safety
PO Box 1210
Glenrock, 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.

Stephen Collings, President, Cameco Resources
141 Union Blvd. Suite 330
Lakewood, CO 80228
(720) 879-5500

Ted Robinette, Controller, Cameco Resources
141 Union Blvd. Suite 330
Lakewood, CO 80228
(720) 879-5500

Greg Gabruch, Secretary, Cameco Corp
2121-11TH St. West
Saskatoon, Saskatchewan, Canada S7M 1J3
(306) 956-6200

ANNUAL REPORT – PERMIT 633

June 18, 2008 through June 17, 2009

Data Tables

TABLE 3-1
ACREAGE AFFECTED
2008-2009 ANNUAL REPORT PERMIT 633

Area	Year	Acreage
Bill Smith Surface Plant, Yard, Spoil	1971	10.57
Bill Smith Storage Yard (50% of 10.18 acres)	1971	5.09
Access Road (1/2 roadbed)	1968	4.75
Settling Ponds, Treatment Plant Area	1968	8.6
Topsoil Piles (pre-1996)	1968	3.36
Other Roads (Access to ISL Wellfield)	1982	5
Miscellaneous (Area around evap. ponds,	1981	3.61
Wellfield #1 (inclusive of Headerhouses and	1996	27.1
Oxygen Storage Facility	1997	0.2
Chemical Storage Facility ⁽¹⁾	1997	0
Disposal Well Area (Pad, Road & Spoil Pile)	1996	2.9
Drill Mud Storage Area	1996	0.25
Wellfield #1 Storage Area	1996	1.5
Topsoil #8	1996	0.2
Topsoil #9 ⁽²⁾	1997	0.3
Wellfield #2 Storage Area	1998	1.24
Wellfield #3 (inclusive of Headerhouses and	1998	37.52
Wellfield #3 Southern Storage Area	1998	1.2
Satellite #1	1998	2.05
Wellfield #4 Storage Area	1998	1.64
Wellfield #4 (inclusive of Headerhouses and	1998	29.59
Topsoil Pile #10	1998	0.4
Topsoil Pile #11	1998	0.08
Topsoil Pile #12	1998	0.29
Topsoil Pile #13	1998	0.72
Topsoil Pile #14	1998	0.16
Shop Building ⁽¹⁾	1997	0
Office Addition Building	1998	0.23
Trunkline #1	1998	3.1
Topsoil Pile #15	1999	0.1
Topsoil Pile #16	1999	0.2
Trunkline #2	1999	11.7
Topsoil Pile #6	1997	0.78

**TABLE 3-1
ACREAGE AFFECTED
2008-2009 ANNUAL REPORT PERMIT 633**

Area	Year	Acreage
Office Parking Lot	1999	0.4
Trunkline #2 Pipeline Lay down Area	1999	1.1
Wellfield #4/Phase #2	1999/2000	27
Wellfield #4A/Phase #2 Staging Area	2000	0.3
Drill Water Facility Including Topsoil Pile	1999	0.1
Topsoil Pile #17	1999	0.2
Facility Fire Water System Tank	2000	0.1
Deep Disposal Well #2 Pad	1999	1.9
Topsoil Pile #18	2000	0.1
Wellfield #4/Phase #2 Pipeline	2000	5.9
Topsoil Pile #19	2001	0.1
Topsoil Pile #20 ⁽³⁾	2001	0
Wellfield #4 HH4-5,6 Booster	2001	0.1
Wellfield #4/Phase #2 Pipeline for HH4-10,	2001	2.3
Deep Disposal Well #2 Pipeline	2001	0.1
Wellfield #4 Booster Station	2001	0.1
Wellfield #2 (inclusive of Headerhouses and	2001	52
Topsoil Pile #21 ⁽³⁾	2002	0
Smith Ranch-Highland Connecting Road	2002	10.9
Topsoil Pile #22	2002	0.3
Topsoil Pile #23	2002	0.6
Topsoil Pile #24	2002	0.4
Topsoil Pile #25	2002	0.4
Topsoil Pile #26	2002	0.4
Topsoil Pile #27	2002	0.4
Delineation Drilling, and Lay down Area	2004	2
Mine Unit-15 Access Road	2004	7.3
Topsoil Pile #28	2004	0.2
Topsoil Pile #29	2004	0.1
Topsoil Pile #30	2005	0.1
Topsoil Pile #31	2005	0.1
Mine Unit-15 Pipeline	2005	2.3
Mine Unit-15 Booster Station	2005	0.5

TABLE 3-1
ACREAGE AFFECTED
2008-2009 ANNUAL REPORT PERMIT 633

Area	Year	Acreage
Mine Unit-15 Wellfield Installation and	2004-2005	25
Mine Unit-K Development	2005	5
Topsoil Pile #32	2005	0.2
Topsoil Pile #33	2006	0.1
Topsoil Pile #34	2006	0.2
Topsoil Pile #35	2006	0.3
Topsoil Pile #36	2006	0.4
Topsoil Pile #37	2006	0.3
Topsoil Pile #38	2006	0.1
Topsoil Pile #39	2006	0.4
Topsoil Pile #40	2006	0.3
Topsoil Pile #41	2006	0.5
Mine Unit 15A Installation	2007	72
Mine Unit 9 (Southwest) delineation and lay-down	2007	5
Mine Unit K-Pipeline and well installation	2007	40
Topsoil Pile #42	2008	0.02
Topsoil Pile #43	2008	0.02
Topsoil Pile #44	2008	0.02
Topsoil Pile #45	2008	0.02
Topsoil Pile #46	2008	0.02
Topsoil Pile #47	2008	0.02
Topsoil Pile #48	2008	0.02
Topsoil Pile #49	2008	0.1
Topsoil Pile #50	2008	0.1
Topsoil Pile #51	2008	0.1
Road and wellfield installation, Southwest	2008	5
Satellite SR-2	2008	15
Topsoil Pile #52	2009	0.05
Topsoil Pile #53	2009	0.04
Topsoil Pile #54	2009	0.07
Topsoil Pile #55	2009	0.11
Topsoil Pile #56	2009	0.07
Topsoil Pile #57	2009	0.05

TABLE 3-1
ACREAGE AFFECTED
2008-2009 ANNUAL REPORT PERMIT 633

Area	Year	Acreage
Topsoil Pile #58	2009	0.06
Unreclaimed Areas	---	456.04
Areas Previously Reclaimed (See Table 4)	---	18.88
Total Acres	---	890.08

- (1) Included within "Bill Smith Surface Plant, Yard and Spoil"
- (2) Previous topsoil pile #9 was moved and combined several smaller topsoil piles to make new topsoil pile.
- (3) Topsoil located in areas already covered by bond.

TABLE 3-2
ESTIMATED TOPSOIL INVENTORY
2008-2009 ANNUAL REPORT PERMIT 633

Topsoil Pile No.	Year	Volume (yd³)	Amount Used (yd³)	Remaining
1	1968	14,300	0	14,300
2	1968	15,800	13,550	2,250
3	1968	12,100	0	12,100
4	1968	520	0	520
5	1983	3,350	0	3,350
6	1983 & 1998	1,621	0	1,621
7	1983	300	0	300
8	1996	1,820	0	1,820
9	1997	60	0	60
10	1998 & 1999	3,217	0	3,217
11	1998	495	0	495
12	1998 & 1999	1,872	0	1,872
13	1998	4,653	0	4,653
14	1998	751	0	751
15	1999	490	0	490
16	1999	3,500	0	3,500
17	2000	300	0	300
18	1999	170	0	170
19	2001	247	0	247
20	2001	72	0	72
21	2001	147	0	147
22	2002	338	0	338
23	2002	378	0	378
24	2002	645	0	645
25	2002	688	0	688
26	2002	689	0	689
27	2002	567	0	567
28	2004	1,155	0	1,155
29	2004	731	0	731
30	2005	575	0	575
31	2005	575	0	575
32	2005	2,281	0	2,281
33	2006	494	0	494
34	2006	696	0	696
35	2006	1070	0	1070
36	2006	1607	0	1607
37	2006	1035	0	1035

TABLE 3-2
ESTIMATED TOPSOIL INVENTORY
2008-2009 ANNUAL REPORT PERMIT 633

Topsoil Pile No.	Year	Volume (yd³)	Amount Used (yd³)	Remaining
38	2006	749	0	749
39	2006	1485	0	1485
40	2006	1210	0	1210
41	2006	1476	0	1476
42	2008	125	0	125
43	2008	125	0	125
44	2008	125	0	125
45	2008	125	0	125
46	2008	125	0	125
47	2008	125	0	125
48	2008	749	0	749
49	2008	749	0	749
50	2008	749	0	749
51	2008	749	0	749
52	2009	155	0	155
53	2009	89	0	89
54	2009	115	0	115
55	2009	349	0	349
56	2009	497	0	497
57	2009	92	0	92
58	2009	138	0	138
Total	---	89,411	13,550	75,861

TABLE 3-3
U₃O₈ POUNDS
2008-2009 ANNUAL REPORT PERMIT 633

Year	Amount (Pounds)
Pre-1982 ⁽¹⁾	24,800
1982-1989 ⁽²⁾	284,000
1990-1997 ⁽³⁾	24,529
1997 ⁽⁴⁾	174,139
1998 ⁽⁴⁾	863,857
1999 ⁽⁴⁾	1,633,780
2000 ⁽⁴⁾	1,137,630
2001 ⁽⁴⁾	907,938
2002 ⁽⁴⁾	1,179,302
2003 ⁽⁴⁾	869,286
2004 ⁽⁴⁾	1,256,011
2005 ⁽⁴⁾	732,156
2006 ⁽⁴⁾	1,993,324
2007 ⁽⁴⁾	1,986,141
2008 ⁽⁴⁾	1,374,339
Total	14,441,232

- (1) Underground conventional mining production.
- (2) ISL Pilot Plants production.
- (3) ISL Pilot Plants standby production.
- (4) Eluted commercial ISL production (calendar year).

**TABLE 3-4
WELLFIELD SPILL SUMMARY
2008-2009 ANNUAL REPORT PERMIT 633**

DATE	LOCATION	VOLUME (gal)	CAUSE
7/18/2008	Booster 5	2887	Pump Can
8/17/2008	K-6	8415	Poly fuse
9/17/2008	Booster KIC 2	16774	Poly tubing
10/29/2008	K-7	5500	Poly fuse
12/26/2008	SR2	823	Poly fuse
12/29/2008	HH 9-2	1144	Operator punctured poly while thawing line
1/9/2009	15-6	2169	1.5" transition rusted threads
1/10/2009	Sat 2	1820	8" Sched 80 spool pc.
2/9/2009	MU 2 valve station	14637	Steel T corroded flooding valve station
4/2/2009	K7	1474	Disconnected well down for repair accidentally turned on
6/10/2009	HH 9-6	187	Backhoe punctured polypipe

**TABLE 4-1
RECLAMATION REPORT
2008-2009 ANNUAL REPORT PERMIT 633**

MINE UNIT/LOCATION	TYPE OF DISTURBANCE (ROAD, WELLFIELD, SPILL AREA, ETC.)	RECLAMATION DATE	AREA SQ FT	MINE ACRES RECLAIMED BY DATE	TYPE OF SEED	SEEDING DATES	SEEDING PROCEDURE	RATE OF SEED APPLICATION	TYPE & RATE OF FERTILIZER	TYPE & RATE OF MULCH APPLIED	ACRES RECLAIMED IN 2008 BY MINE UNIT
MU15	WELLFIELD	7/8/2008	29146.00	0.67	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	7/8/2008	SOIL PREP-FERTILIZER/DRILL- SEED/CRIMP HAY MULCH/PLANTAGO TACKIFIER	14PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	
	WELLFIELD	7/1/2008	41162.00	0.94	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	7/1/2008	SOIL PREP-FERTILIZER/DRILL- SEED/CRIMP HAY MULCH/PLANTAGO TACKIFIER	14PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	
	DELIN HOLES	09/26/2008-10/01/2013	49451.00	1.14	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	09/26/2008-10/01/2013	SOIL PREP-FERTILIZER/DRILL- SEED/HYDRO- SEED/FLEXTERRA	16PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	
	DELIN HOLES	09/26/2008-10/01/2014	99813.00	2.29	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	09/26/2008-10/01/2014	SOIL PREP-FERTILIZER/DRILL- SEED/HYDRO- SEED/FLEXTERRA	16PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	5.04
SR2 ROAD	ROAD	7/8/2008	25564.00	0.59	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	7/8/2008	SOIL PREP-FERTILIZER/DRILL- SEED/CRIMP HAY MULCH/PLANTAGO TACKIFIER	14PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	
	ROAD	07/8,9,14,15,16/2008	63278.00	1.45	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	07/8,9,14,15,16/2008	SOIL PREP-FERTILIZER/DRILL- SEED/CRIMP HAY MULCH/PLANTAGO TACKIFIER	14PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	
	ROAD	07/30,31/2008 & 08/04/2008	2.00	0.00	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	07/30,31/2008 & 08/04/2008	SOIL PREP-FERTILIZER/DRILL- SEED/CRIMP HAY MULCH/PLANTAGO TACKIFIER	14PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	
	ROAD	08/05/2008 to 9/10,16/2008	550905.00	12.65	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	08/05/2008 to 9/10,16/2008	SOIL PREP-FERTILIZER/DRILL- SEED/HYDRO- SEED/FLEXTERRA	16PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	14.69
SR1 DDW1	DEEP DISPOSAL WELL	8/18/2008	48082.00	1.10	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	8/18/2008	SOIL PREP-FERTILIZER/DRILL- SEED/HYDRO- SEED/FLEXTERRA	16PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	1.10
TOTAL			5036309.00	115.62							115.62

* NOTE: This year detailed reclamation estimates were provided via the surety due to the Notice of Violation. That surety was submitted February 29, 2009.

**TABLE 4-1
RECLAMATION REPORT
2008-2009 ANNUAL REPORT PERMIT 633**

MINE UNIT/LOCATION	TYPE OF DISTURBANCE (ROAD, WELLFIELD, SPILL AREA, ETC.)	RECLAMATION DATE	AREA SQ FT	MINE ACRES RECLAIMED BY DATE	TYPE OF SEED	SEEDING DATES	SEEDING PROCEDURE	RATE OF SEED APPLICATION	TYPE & RATE OF FERTILIZER	TYPE & RATE OF MULCH APPLIED	ACRES RECLAIMED IN 2008 BY MINE UNIT
	DELIN HOLES	10/8/2008	47879.00	1.10	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	10/8/2008	SOIL PREP-FERTILIZER/DRILL-SEED/HYDRO-SEED/FLEX TERRA	16PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	
	DELIN HOLES	10/8/2008	42886.00	0.98	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	10/8/2008	SOIL PREP-FERTILIZER/DRILL-SEED/HYDRO-SEED/FLEX TERRA	16PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	
	DELIN HOLES	10/8/2008	338850.00	7.78	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	10/8/2008	SOIL PREP-FERTILIZER/DRILL-SEED/HYDRO-SEED/FLEX TERRA	16PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	
	DELIN HOLES	10/8/2008	12585.00	0.29	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	10/8/2008	SOIL PREP-FERTILIZER/DRILL-SEED/HYDRO-SEED/FLEX TERRA	16PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	
	DELIN HOLES	10/17/2008	57437.00	1.32	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	10/17/2008	SOIL PREP-FERTILIZER/DRILL-SEED/HYDRO-SEED/FLEX TERRA	16PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	
	DELIN HOLES	10/17/2008	63412.00	1.46	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	10/17/2008	SOIL PREP-FERTILIZER/DRILL-SEED/HYDRO-SEED/FLEX TERRA	16PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	32.20
MU15A	WELLFIELD	07/30,31/2008 & 08/04/2008	30855.00	0.71	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	07/30,31/2008 & 08/04/2008	SOIL PREP-FERTILIZER/DRILL-SEED/CRIMP HAY MULCH/PLANTAGO TACKIFIER	14PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	
	WELLFIELD	8/5/2008	27153.00	0.62	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	8/5/2008	SOIL PREP-FERTILIZER/DRILL-SEED/CRIMP HAY MULCH/PLANTAGO TACKIFIER	14PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	
	WELLFIELD	8/5/2008	21652.00	0.50	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	8/5/2008	SOIL PREP-FERTILIZER/DRILL-SEED/HYDRO-SEED/FLEX TERRA	16PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	
	WELLFIELD	8/18/2008	4157.00	0.10	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	8/18/2008	SOIL PREP-FERTILIZER/DRILL-SEED/HYDRO-SEED/FLEX TERRA	16PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	
	DELIN HOLES	09/26/2008-10/01/2008	318732.00	7.32	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	09/26/2008-10/01/2008	SOIL PREP-FERTILIZER/DRILL-SEED/HYDRO-SEED/FLEX TERRA	16PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	
	DELIN HOLES	09/26/2008-10/01/2009	77771.00	1.79	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	09/26/2008-10/01/2009	SOIL PREP-FERTILIZER/DRILL-SEED/HYDRO-SEED/FLEX TERRA	16PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	
	DELIN HOLES	09/26/2008-10/01/2010	72385.00	1.66	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	09/26/2008-10/01/2010	SOIL PREP-FERTILIZER/DRILL-SEED/HYDRO-SEED/FLEX TERRA	16PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	
	DELIN HOLES	09/26/2008-10/01/2011	75186.00	1.73	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	09/26/2008-10/01/2011	SOIL PREP-FERTILIZER/DRILL-SEED/HYDRO-SEED/FLEX TERRA	16PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	
	DELIN HOLES	09/26/2008-10/01/2012	104102.00	2.39	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	09/26/2008-10/01/2012	SOIL PREP-FERTILIZER/DRILL-SEED/HYDRO-SEED/FLEX TERRA	16PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	
	DELIN HOLES	09/26/2008-10/01/2013	29895.00	0.69	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	09/26/2008-10/01/2013	SOIL PREP-FERTILIZER/DRILL-SEED/HYDRO-SEED/FLEX TERRA	16PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	17.49

**TABLE 4-1
RECLAMATION REPORT
2008-2009 ANNUAL REPORT PERMIT 633**

MINE UNIT/LOCATION	TYPE OF DISTURBANCE (ROAD, WELLFIELD, SPILL AREA, ETC.)	RECLAMATION DATE	AREA SQ FT	MINE ACRES RECLAIMED BY DATE	TYPE OF SEED	SEEDING DATES	SEEDING PROCEDURE	RATE OF SEED APPLICATION	TYPE & RATE OF FERTILIZER	TYPE & RATE OF MULCH APPLIED	ACRES RECLAIMED IN 2008 BY MINE UNIT
MU9	WELLFIELD	7/1/2008	383354.00	8.80	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	7/1/2008	DRILL-SEED/CRIMP HAY MULCH/PLANTAGO TACKIFIER	14PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	CERTIFIED WEED FREE HAY MULCH/CRIMPED	36.72
	WELLFIELD	7/8/2008	417722.00	9.59	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	7/8/2008	DRILL-SEED/CRIMP HAY MULCH/PLANTAGO TACKIFIER	14PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	CERTIFIED WEED FREE HAY MULCH/CRIMPED	
	WELLFIELD	07/8,9,14,15,16/2008	438736.00	10.07	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	07/8,9,14,15,16/2008	SOIL PREP-FERTILIZER/DRILL SEED/CRIMP HAY MULCH/PLANTAGO TACKIFIER	14PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	CERTIFIED WEED FREE HAY MULCH/CRIMPED	
	WELLFIELD	8/18/2008	110063.00	2.53	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	8/18/2008	SOIL PREP-FERTILIZER/DRILL SEED/HYDRO-SEED/FLEXTERRA	16PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	CERTIFIED WEED FREE HAY MULCH/CRIMPED	
	WELLFIELD	8/18/2008	127505.00	2.93	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	8/18/2008	SOIL PREP-FERTILIZER/DRILL SEED/HYDRO-SEED/FLEXTERRA	16PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	CERTIFIED WEED FREE HAY MULCH/CRIMPED	
	WELLFIELD	8/18/2008	9729.00	0.22	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	8/18/2008	SOIL PREP-FERTILIZER/DRILL SEED/HYDRO-SEED/FLEXTERRA	16PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	CERTIFIED WEED FREE HAY MULCH/CRIMPED	
	DELIN HOLES	10/17/2008	112502.00	2.58	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	10/17/2008	SOIL PREP-FERTILIZER/DRILL SEED/HYDRO-SEED/FLEXTERRA	16PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	CERTIFIED WEED FREE HAY MULCH/CRIMPED	
MU1	WELLFIELD	7/1/2008	15621.00	0.36	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	7/1/2008	SOIL PREP-FERTILIZER/DRILL SEED/CRIMP HAY MULCH/PLANTAGO TACKIFIER	14PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	CERTIFIED WEED FREE HAY MULCH/CRIMPED	0.36
MU2	WELLFIELD	7/1/2008	284074.00	6.52	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	7/1/2008	SOIL PREP-FERTILIZER/DRILL SEED/CRIMP HAY MULCH/PLANTAGO TACKIFIER	14PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	CERTIFIED WEED FREE HAY MULCH/CRIMPED	8.01
	WELLFIELD	7/29/2008	64915.00	1.49	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	7/29/2008	SOIL PREP-FERTILIZER/DRILL SEED/CRIMP HAY MULCH/PLANTAGO TACKIFIER	14PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	CERTIFIED WEED FREE HAY MULCH/CRIMPED	
MIJ	WELLFIELD	7/29/2008	435225.00	9.99	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	7/29/2008	SOIL PREP-FERTILIZER/DRILL SEED/CRIMP HAY MULCH/PLANTAGO TACKIFIER	14PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	CERTIFIED WEED FREE HAY MULCH/CRIMPED	1.20
	WELLFIELD	07/30,31/2008 & 08/04/2008	21170.00	0.49	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	07/30,31/2008 & 08/04/2008	SOIL PREP-FERTILIZER/DRILL SEED/CRIMP HAY MULCH/PLANTAGO TACKIFIER	14PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	
	WELLFIELD	8/4/2008	243487.00	5.59	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	8/4/2008	SOIL PREP-FERTILIZER/DRILL SEED/CRIMP HAY MULCH/PLANTAGO TACKIFIER	14PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	
	WELLFIELD	8/18/2008	37493.00	0.86	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	8/18/2008	SOIL PREP-FERTILIZER/DRILL SEED/HYDRO-SEED/FLEXTERRA	16PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	
	DELIN HOLES	10/8/2008	52383.00	1.20	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	10/8/2008	SOIL PREP-FERTILIZER/DRILL SEED/HYDRO-SEED/FLEXTERRA	16PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	
	DELIN HOLES	10/8/2008	49990.00	1.15	36-501B SEED MIX (Western Wheatgrass, Thickspike Wheatgrass, Slender Wheatgrass, Canby Blue grass, Green Needle grass)	10/8/2008	SOIL PREP-FERTILIZER/DRILL SEED/HYDRO-SEED/FLEXTERRA	16PLS#/LBS/ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	SUSTAIN FERTILIZER 4-6-4 500# PER ACRE	

MIJ

**TABLE 4-2
AREAS PREVIOUSLY RECLAIMED
2008-2009 ANNUAL REPORT PERMIT 633**

Area	Year	Acreage
Bill Smith Mine Test Well Sites	1968	2.8
Miscellaneous - Bill Smith Mine	1968	4.19
ISL Pilot Pipeline and Wellfield	1983	5.8
Mine Settling Pond #1 and #2	1997	2.8
Drill Mud Storage Area	1999	0.25
Wellfield #1 Staging Area	1999	1.5
Wellfield #3 North Staging Area	2001	1.54
Total Acres	---	18.88

TABLE 4-3
RECLAMATION RESULTS
2007-2008 ANNUAL REPORT PERMIT 633

Area	Type of Seed Germinated	Type of Seed Not Growing	Weed Problems	Areas of Unsuitable Overburden	Procedures To Correct Unsuitable Overburden
Bill Smith Mine Test Well Sites	(1)	All Growing	---	N.A.	N.A.
Misc. – Bill Smith Mine	(1)	All Growing	---	N.A.	N.A.
ISL Pilot Pipeline & Wellfield	(1)	All Growing	---	N.A.	N.A.
Mine Settling Ponds #1/#2	(1)	All Growing	---	N.A.	N.A.

(1) Slender wheatgrass, western wheatgrass, thickspike wheatgrass, green needlegrass, canby bluegrass, oats.

TABLE 5-1
PLANNED AREAS OF DISTURBANCE (2009-2010)
2009-2010 REPORT PERIOD

Area	Acreage (approximate)
Wellfield 3 - Installation of a new header house and road	5
Proposed Wellfield 7 - Installation of monitoring well ring	5
Proposed Wellfield 10 - Delineation and installation of monitoring well ring	29
Wellfield 15A - Installation of wellfields, header houses and roads (30 acres were proposed in 2007-2008 Annual Report which had not been completed and are planned for the next report period)	20
Proposed Wellfield K North - Delineation drilling and outer monitoring well ring	8
SW - Upgrade and widen the road into the SW	2
Total	69

TABLE 5-2
AREAS THAT WILL NOT BE FULLY RECLAIMED
2008-2009 ANNUAL REPORT PERMIT 633

Area	Year	Acreage
Bill Smith Mine Access (reduced to previous existing road)	1968	4.75
Total Acres	---	4.75

TABLE 6-1
PROPOSED RECLAMATION REPORT PLAN (2009-2010)
2008-2009 ANNUAL REPORT PERMIT 633

MINE UNIT/LOCATION	TYPE OF DISTURBANCE (ROAD, WELLFIELD, SPILL AREA, ETC.)	ACRES (approximate)	RECLAMATION ACTIVITY
MU K	wellfields	23	countour, drill seed, and stitch
MU 9	wellfields	29	countour, drill seed, and stitch
MU 15	staging area	0	countour, drill seed, broadcast straw, and stitch/crimp
	wellfield	11	countour, drill seed, broadcast straw, and stitch/crimp
South West Area	optic fiber route from SR1 to SR2	6	harrow disc, broadcast straw, stitch/crimp
	culverts & drainage systems	0.5	recountouring eroded areas, additional/replacement riprap rock, bale/wattle repair/replacement, soil amendments, additional waterbreaks as necessary
Totals		69	

**TABLE 7-1
 CPP REPORT PERIOD WATER BALANCE
 2008-2009 ANNUAL REPORT PERMIT 633**

Item	Gallons (unless noted)
Recovery Volume	1,334,955,324
Injection Volume	1,323,907,017
Over recovery Volume	11,048,245
Ave. Production Rate (gpm)	2,544

**TABLE 7-2
 SR#1 REPORT PERIOD WATER BALANCE
 2008-2009 ANNUAL REPORT PERMIT 633**

Item	Gallons (unless noted)
Recovery Volume	1,637,141,282
Injection Volume	1,748,130,359
Over recovery Volume	14,410,863
Ave. Production Rate (gpm)	3,365

**TABLE 7-3
 SR#2 REPORT PERIOD WATER BALANCE
 2008-2009 ANNUAL REPORT PERMIT 633**

Item	Gallons (unless noted)
Recovery Volume	309,107,491
Injection Volume	305,114,296
Over recovery Volume	1,697,757
Ave. Production Rate (gpm)	1,196

TABLE 7-4
SEMI-ANNUAL SAMPLING OF EVAPORATION PONDS
2008-2009 ANNUAL REPORT PERMIT 633

Parameter	West Evaporation Pond		East Evaporation Pond	
	10/6/2008	4/21/2009	10/6/2008	4/21/2009
Bicarbonate (mg/L)	686	388		671
Calcium (mg/L)	525	172	POND	311
Chloride (mg/L)	2120	496	NOT	570
Sodium (mg/L)	2700	563	IN	540
Sulfate (mg/L)	2910	944	USE	1170
TDS (mg/L)	8600	2680		3130
Uranium (mg/L)	490	218		39.8
Radium-226 (pCi/L)	51	201		647
Thorium-230 (pCi/L)	6.8	1.5		0.8

TABLE 7-5
SPRING 2009 ANNUAL RAPTOR NEST SURVEY
2008-2009 ANNUAL REPORT PERMIT 633

NEST NUMBER	LOCATION	STATUS	RAPTOR SPECIES	NEST LOCATION
3	NE SEC. 11 T35N, R74W	ACTIVE	RED TAILED HAWK	TREE
4	SW SEC. 2 T35N, R74W	ACTIVE	SWAINSON'S HAWK	TREE
6	NW SEC. 36 T36N, R74W	INACTIVE	N/A	TREE
7	NW SEC. 10 T35N, R74W	ACTIVE	RED TAILED HAWK	TREE
16	SW SEC. 34 T35N, R74W	INACTIVE	GREAT HORNED OWL	TREE
17	NW SEC. 36 T36N, R74W	ACTIVE	RED TAILED HAWK	TREE
21	NW SEC. 11 T35N, R74W	ACTIVE	GREAT HORNED OWL	TREE
22	NE SEC. 4 T35N, R74W	INACTIVE	N/A	CLIFF
23	NW SEC. 22 T35N, R74W	ACTIVE	NORTHERN HARRIER	GROUND

ANNUAL REPORT – PERMIT 633

June 18, 2008 through June 17, 2009

Appendix A

NRC Semi-Annual Effluent and Environmental Monitoring Reports

POWER RESOURCES, INC.

**SMITH RANCH - HIGHLAND URANIUM
PROJECT**

**SEMI-ANNUAL EFFLUENT AND
ENVIRONMENTAL MONITORING
REPORT**

FOR THE PERIOD

**JANUARY 1 THROUGH
JUNE 30, 2008**

**USNRC SOURCE MATERIAL LICENSE
NO. SUA-1548**

DOCKET NO. 40-8964

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1.0 RESULTS FROM EMPLOYEE URINALYSES IF AN EXPOSURE EXCEEDS ACTION LEVELS DESCRIBED IN THE OPERATIONS PLAN OF THE APPROVED LICENSE APPLICATION

During the period January 1 through June 30, 2008 one contract employee who worked under an RWP for less than two days had a bioassay with a uranium concentration of 44.3 µg/L, which exceeds the action level of 15 µg/L uranium. It was determined the elevated result was due to a failure to follow proper procedure when providing his bioassay sample. The contract employee had received on-site training prior to operations and signed an RWP.

2.0 INJECTION RATES, RECOVERY RATES, AND INJECTION TRUNK-LINE PRESSURES FOR EACH SATELLITE FACILITY

The required information for each Satellite facility for the 1st and 2nd Quarters of 2008 is presented in Tables 1A, 1B, 1C, and 1D included in Attachment A.

2.1 Satellite No. 1

Satellite No. 1 did not operate during the report period since restoration activities in the A and B Wellfield are complete. Therefore, no injection or recovery rates are available for the report period, as shown in Table 1A.

2.2 Satellite No. 2, Satellite No. 3, Satellite SR-1, Central Processing Plant

The injection rates, recovery rates, and injection pressure data for Satellite No. 2, Satellite No. 3, Satellite SR-1, and the Central Processing Plant (CPP) are contained in Tables 1B, 1C, and 1D. The injection rates represent the total recovery rates minus the purge (clean-out circuit) flow. The purge from Satellite No. 2 and No. 3 is treated for uranium and radium removal and pumped to the Satellite No. 2 Purge Storage Reservoir prior to disposal by irrigation at the Satellite No. 2 Land Application Facility. Purge from Satellite SR-1 and the CPP is disposed by deep injection through permitted waste disposal wells.

3.0 RESULTS OF EFFLUENT AND ENVIRONMENTAL MONITORING INCLUDING WATER QUALITY ANALYSES AND MONITORING REQUIRED BY THE WDEQ PERMIT FOR THE OPERATING IRRIGATION SYSTEMS

3.1 Stack Emission Surveys

When the Central Processing Facility (CPF) at the Highland Uranium Project is operational, PRI monitors the Yellowcake Dryer and Packaging scrubber exhaust stacks to determine the emission rate of particulates, uranium, radium, and thorium. During the report period, the Highland CPF remained on standby status as all yellowcake

processing activities (elution, precipitation, drying, and packaging) were conducted at the Smith Ranch CPP. The dryers at the Smith Ranch CPP are zero emission vacuum dryers that do not require emission stack testing. Therefore, no stack tests were conducted during the report period.

3.2 Air Particulate, Radon, and Gamma Radiation Monitoring

PRI maintains five Air Monitoring Stations at various locations on and around the licensed area. Two of these stations are used to monitor downwind conditions of the Highland CPF and monitoring is not required unless the CPF is in operation. The Air Monitoring Stations are used to monitor radionuclides, radon, and gamma radiation. The stations are located as follows:

- AS-1 (Dave's Water Well): This station monitors background conditions, upwind of both the Smith Ranch and HUP wellfields and yellowcake processing facilities.
- AS-2 (Smith Ranch Restricted Area): This station monitors conditions downwind of the Smith Ranch CPP Restricted Area Boundary.
- AS-3 (Vollman Ranch): This station monitors the nearest downwind resident to the Smith Ranch CPP Restricted Area.
- AS-4 (HUP Restricted Area): This station monitors conditions downwind of the HUP CPF Restricted Area Boundary (when the HUP CPF is operating).
- AS-5 (Fowler Ranch): This station monitors the nearest downwind resident to the HUP CPF Restricted Area (when the HUP CPF is operating).

Monitoring at AS-4 and AS-5 was not conducted during the reporting period since the Highland CPF remains on standby status.

Table 2 shows the radionuclide and radon data collected at these sites during the report period. All parameters are significantly less than the 10 CFR 20, Appendix B.

Gamma radiation data for the report period are provided in Table 3. 10 CFR 20 Appendix B contains no Effluent Concentration Limit for gamma radiation for comparison. However, gamma results for the report period are within normal background conditions and show no discernable trends with previous data.

3.3 Water Sampling Data

3.3.1 *Groundwater and Surface Water Monitoring Stations*

During the report period, monitoring was completed at nine water wells and eight stock ponds throughout the permit area. Water samples are collected from the water wells and stock ponds on a quarterly basis for analysis of uranium and radium-226. Table 4 provides the analytical data for samples collected during the report period. A review of data collected during the report period shows that nine water wells (GW-3, 5, 6, 8, 9, 10, 11, 12 and 20 did not run during the report period) and 2 stock ponds (SW-2 and 6) were dry for the entire period. A review of data collected from the nine water wells and eight stock ponds show that the concentrations of uranium and radium-226 are within normal background conditions and show no discernible trends with previous data.

3.4 Wastewater Land Application Facilities Monitoring

3.4.1 *Soil and Vegetation Sampling*

In accordance with the approved license application and the WDEQ permits for the Satellite No. 1 and Satellite No. 2 Wastewater Land Application Facilities, soil and vegetation sampling of the irrigation areas is conducted in late summer of each year. The soil and vegetation data are collected to monitor and evaluate any adverse effects to the irrigation areas. The 2008 soil and vegetation sampling at the irrigation areas will be conducted in August 2008 and results included with the July 1-December 31, 2008 semi-annual report.

3.4.2 *Irrigation Fluid*

In accordance with the approved license application and the WDEQ Wastewater Land Application permits, PRI monitors the treated irrigation fluid that is disposed of at both irrigation facilities. Grab samples are collected at the irrigator pivot during each month of operation and analyzed for various parameters. As noted in Table 5, Irrigator No. 1 did not operate for the entire reporting period.

Irrigation fluid data collected at Satellite No. 2 is provided in Table 6. A review of the data indicates that the concentration of uranium in the monthly grab samples was below the 10 CFR 20, Appendix B, Effluent Concentration Limit of $3.0 \text{ E-}7 \text{ } \mu\text{Ci/ml}$, and were less than the estimate provided in the original license application for the facility ($1.4\text{E-}6 \text{ } \mu\text{Ci/ml}$) The samples contained radium-226 concentrations slightly above the 10 CFR 20, Appendix B, Effluent Concentration Limit of $6.0\text{E-}08 \text{ } \mu\text{Ci/ml}$ and above the estimate provided in the original license application for the facility ($3.0\text{E-}9 \text{ } \mu\text{Ci/ml}$).

3.4.3 Radium Treatment Systems

PRI collects grab samples each month to ensure that the radium-226 treatment systems are adequately treating wastewater from Satellites No. 2 and No. 3 prior to discharge into the Purge Storage Reservoir. No samples were collected from the Satellite No. 1 radium treatment system since Satellite No. 1 did not operate during the report period. The monthly radium-226 grab samples for Satellite No. 2 and No. 3 are collected at the discharge points of the radium treatment system at each facility. The results of this monitoring are included in Table 7A and 7B. Review of the monitoring data shows that all radium-226 concentrations were below the 10 CFR 20, Appendix B, Effluent Concentration Limit of $6.0E-8$ $\mu\text{Ci/ml}$ at both Satellite No. 2 and Satellite No. 3 during the report period.

3.4.4 Soil Water

In accordance with the approved license application and the WDEQ Wastewater Land Application Facility permits, PRI collects soil water samples at the irrigation areas in June of each year and analyzes them for various parameters, including uranium and radium-226. Due to a scheduling error the 2008 sampling was not attempted until July 24, 2008. The sampling schedule has been updated to reflect the correct sampling date to ensure sampling is attempted on schedule in the following years.

As in previous years, the relatively limited amount of irrigation resulted in insufficient soil water available to produce a sample at any of the sample locations for the Satellite No. 1 and Satellite No. 2 irrigation areas.

3.4.5 Satellite No. 1 Purge Storage Reservoir Monitor Well

A shallow monitor well, located southwest of the Satellite No. 1 Purge Storage Reservoir is monitored at least weekly for potential seepage from the reservoir. There was no evidence of seepage during the report period. PSR-1 was dry for the entire period and it is not anticipated that water will be diverted to PSR-1 in the near future. Therefore, it is unlikely there will be any seepage from PSR-1 in the following report periods.

3.4.6 Satellite No. 2 Purge Storage Reservoir Shallow Wells

In accordance with the approved license application, water levels are measured on a quarterly basis and ground water samples are required on a semi-annual basis from the two shallow monitoring wells located adjacent to the Satellite No. 2 Purge Storage Reservoir (PSR-2). PRI conducts quarterly sampling of these two wells. Shallow Wells No. 1 and No. 2 are located adjacent to the south and east sides of the reservoir, respectively. During the report period, monitoring was conducted on March 19 and June 10, 2008. Table 8 contains the applicable data for samples taken during this period.

Comparison of the uranium and radium-226 data from the Shallow Wells does not indicate any significant trends or changes from previous report periods. Comparison of water level data collected during the report period with previous data continues to show a trend of higher water levels during the spring-summer months and lower water levels during the fall-winter months.

4.0 SAFETY AND ENVIRONMENTAL EVALUATIONS

There were no Safety and Environmental Evaluations completed during the report period.

5.0 RUTH ISL PROJECT

The Ruth Project is licensed for commercial ISL uranium activities, however none has been initiated. The existing buildings and evaporation ponds, along with a few remaining wells, are left from research and development testing conducted by Uranerz, USA, one of the previous licensees. The facilities at the project are non-operational and on stand-by status. Therefore, radiation and effluent monitoring was not conducted and is not required by the NRC or the WDEQ. The quantity of radionuclides released to unrestricted areas in liquid and in gaseous effluents is considered negligible and is not applicable at this time.

Activities conducted during the report period consisted of quarterly inspections of the existing facilities. Inspection of the perimeter fence, pond embankments, and pond liners yielded no deficiencies during the report period.

6.0 NORTH BUTTE ISL PROJECT

The North Butte Project is also licensed for commercial ISL uranium operations; however, construction of facilities has not commenced and is currently on hold. Since there are no radioactive materials present on site, no radionuclides were released to unrestricted areas in liquid or in gaseous effluents.

License Condition 9.5 requires PRI to submit, for the NRC and WDEQ-LQD approval, an itemized cost estimate for implementation of the NRC-approved decommissioning/restoration plan prior to commencement of construction of a commercial facility at the North Butte/Ruth sites. Currently, PRI is in the process of updating the Operations and Reclamation Plan for the North Butte ISL Project in pursuit of approval to commence construction activities at the North Butte site.

On August 28, 2007, pressure transducers were placed in three Monitor Wells to continuously record water levels and monitor any potential changes which may result from Coal Bed Methane development on the property. To date, only minor fluctuations of approximately one foot have been noted. Monitoring of water levels in these wells will continue for a period of one year.

7.0 ANNUAL INSPECTION

The Annual Inspection was conducted March 24 through March 27, 2008. The issues which arose as a result of this inspection are currently being addressed.

ATTACHMENT A
DATA TABLES 1-8

ATTACHMENT B

SAFETY AND ENVIRONMENTAL EVALUATIONS COMPLETED IN 2008

None in 2008

ATTACHMENT C

NOTICE OF VIOLATION

Not applicable

TABLE 1A
SATELLITE NO. 1 INJECTION RATES, RECOVERY RATES, INJECTION PRESSURES

MONTH	Injection Pressure (PSI)			Groundwater	Radium	RO	Injection	RO	Purge
	RO #1	RO #2	RO #3	Sweep	Ponds	Feed		Concentrate	
				GPM	GPM	GPM	GPM	GPM	GPM
Jan-08	0	0	0	0	0	0	0	0	0
Feb-08	0	0	0	0	0	0	0	0	0
Mar-08	0	0	0	0	0	0	0	0	0
Apr-08	0	0	0	0	0	0	0	0	0
May-08	0	0	0	0	0	0	0	0	0
Jun-08	0	0	0	0	0	0	0	0	0

TABLE 1B
AVERAGE INJECTION RATES (GPM)

MONTH	Satellite No. 2	Satellite No. 3	Satellite SR-1	Central Processing Plant
Jan-08	2,034	3,113	3,698	3,165
Feb-08	2,088	3,049	3,722	3,192
Mar-08	2,087	3,079	3,634	3,152
Apr-08	2,124	2,992	3,644	3,136
May-08	2,077	2,668	3,333	2,902
Jun-08	2,075	2,654	3,575	2,913

TABLE 1C
AVERAGE RECOVERY RATES (GPM)

MONTH	Satellite No. 2	Satellite No. 3	Satellite SR-1	Central Processing Plant
Jan-08	2,054	3,180	3,698	3,211
Feb-08	2,108	3,100	3,723	3,237
Mar-08	2,107	3,129	3,644	3,188
Apr-08	2,143	3,043	3,669	3,157
May-08	2,096	2,716	3,355	2,921
Jun-08	2,095	2,710	3,609	2,941

TABLE 1D
INJECTION TRUNK LINE PRESSURES (PSI)

MONTH	Satellite No. 2	Satellite No. 3	Satellite SR-1	Central Processing Plant
Jan-08	87	136	80	149
Feb-08	88	138	85	158
Mar-08	92	146	81	155
Apr-08	93	146	79	150
May-08	87	132	86	151
Jun-08	84	138	85	163

TABLE 2
AIR SAMPLING DATA - 2008
ENVIRONMENTAL MONITORING SITES
1st and 2nd Quarters 2008

SAMPLE LOCATION	SAMPLE PERIOD	RADIONUCLIDE ($\mu\text{Ci/ml}$)	CONCENTRATION ($\mu\text{Ci/ml}$)	ERROR EST. +/- ($\mu\text{Ci/ml}$)	L.L.D. ($\mu\text{Ci/ml}$)	EFF. CONC. LIMIT ($\mu\text{Ci/ml}$)	% EFF. CONC. LIMIT %
FENCE LINE Air Station Restricted Area Boundary	1st Quarter	U-Nat	6.83E-16	N/A	1.00E-16	9.00E-14	0.8
		Th-230	3.00E-16	1.5E-16	1.00E-16	3.00E-14	1.0
		Ra-226	1.38E-15	2.17E-16	1.00E-16	9.00E-13	0.2
		Pb-210	5.47E-15	7.50E-16	2.00E-15	6.00E-13	0.9
	2nd Quarter	U-Nat	3.49E-16	N/A	1.00E-16	9.00E-14	0.4
		Th-230	2.38E-16	2.38E-16	1.00E-16	3.00E-14	0.8
		Ra-226	1.43E-16	1.59E-16	1.00E-16	9.00E-13	0.0
		Pb-210	7.70E-15	3.92E-15	2.00E-15	6.00E-13	1.3
		Rn-222	1.70E-09		3.00E-10	1.00E-08	17.0
VOLLMAN RANCH Air Station Downwind Nearest Residence	1st Quarter	U-Nat	2.81E-16	N/A	1.00E-16	9.00E-14	0.3
		Th-230	3.44E-16	1.72E-16	1.00E-16	3.00E-14	1.1
		Ra-226	4.53E-16	1.25E-16	1.00E-16	9.00E-13	0.1
		Pb-210	5.75E-15	7.50E-16	2.00E-15	6.00E-13	1.0
	2nd Quarter	U-Nat	5.69E-16	N/A	1.00E-16	9.00E-14	0.6
		Th-230	<1E-16	N/A	1.00E-16	3.00E-14	< 1.0
		Ra-226	<1E-16	N/A	1.00E-16	9.00E-13	< 1.0
		Pb-210	7.96E-15	4.94E-15	2.00E-15	6.00E-13	1.3
		Rn-222	1.10E-09		3.00E-10	1.00E-08	11.0
DAVE'S WATER WELL Air Station Background Site	1st Quarter	U-Nat	1.02E-16	N/A	1.00E-16	9.00E-14	0.1
		Th-230	2.04E-16	1.84E-16	1.00E-16	3.00E-14	< 1.0
		Ra-226	4.08E-16	1.43E-16	1.00E-16	9.00E-13	< 1.0
		Pb-210	1.42E-14	1.31E-15	2.00E-15	6.00E-13	2.4
	2nd Quarter	U-Nat	1.02E-16	N/A	1.00E-16	9.00E-14	< 1.0
		Th-230	2.04E-16	N/A	1.00E-16	3.00E-14	< 1.0
		Ra-226	4.08E-16	N/A	1.00E-16	9.00E-13	< 1.0
		Pb-210	1.42E-14	3.81E-15	2.00E-15	6.00E-13	2.4
		Rn-222	1.20E-09		3.00E-10	1.00E-08	12.0

TABLE 3

**DIRECT RADIATION (GAMMA) MEASUREMENT DATA - 2008
ENVIRONMENTAL MONITORING SITES
1st & 2nd QUARTERS 2008**

SAMPLE LOCATION	SAMPLE PERIOD	EXPOSURE RATE (mR/qtr)
FENCE LINE		
Air Station	1st Quarter	53
Restricted Area Boundary	2nd Quarter	44
VOLLMAN'S RANCH		
Air Station	1st Quarter	43
Downwind Nearest Residence	2nd Quarter	36
DAVE'S WATER WELL		
Air Station	1st Quarter	44
Background Site	2nd Quarter	38

TABLE 4
WATER SAMPLING DATA - 2008
ENVIRONMENTAL MONITORING SITES
1st & 2nd QUARTERS 2008

SAMPLE LOCATION	SAMPLE DATE	RADIONUCLIDE	CONCENTRATION (mg/L)	CONCENTRATION (pCi/L)	ERROR EST. +/- (pCi/L)	CONCENTRATION (µCi/ml)	EFF. CONC. LIMIT (µCi/ml)	% EFF. CONC. LIMIT
SW-1 Stock Pond Section 3 T35N, R74W	1st Quarter	U-Nat Ra-226	DRY				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	0.0159	0.1	1.00E-01	1.1E-08 1.0E-10	3.0E-07 6.0E-08	3.6 0.2
SW-2 Stock Pond Section 2 T35N, R74W	1st Quarter	U-Nat Ra-226	DRY				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	DRY				3.0E-07 6.0E-08	
SW-3 Stock Pond Section 35 T36N, R74W	1st Quarter	U-Nat Ra-226	DRY				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	0.0341	7.4	5.00E-01	2.3E-08 7.4E-09	3.0E-07 6.0E-08	7.7 12.3
SW-4 Stock Pond Section 36 T36N, R74W	1st Quarter	U-Nat Ra-226	DRY				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	0.0019	1.0	2.00E-01	1.3E-09 1.0E-09	3.0E-07 6.0E-08	0.4 1.7
SW-5 Stock Pond Section 21 T36N, R73W	1st Quarter	U-Nat Ra-226	DRY				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	0.0026	3.4	4.00E-01	1.8E-09 3.4E-09	3.0E-07 6.0E-08	0.6 5.7
SW-6 Stock Pond Section 22 T36N, R73W	1st Quarter	U-Nat Ra-226	DRY				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	<3.0E-7	5.1	5.00E-01	5.1E-09	3.0E-07 6.0E-08	8.5

TABLE 4 (Continued)

SAMPLE LOCATION	SAMPLE DATE	RADIONUCLIDE	CONCENTRATION (mg/L)	CONCENTRATION (pCi/L)	ERROR EST. +/- (pCi/L)	CONCENTRATION (pCi/ml)	EFF. CONC. LIMIT (pCi/ml)	% EFF. CONC. LIMIT
SW-7 Stock Pond Section 22 T36N, R73W	1st Quarter	U-Nat Ra-226	0.0006	0.9	3.00E-01	4.1E-10 9.0E-10	3.0E-07 6.0E-08	0.1 1.5
	2nd Quarter	U-Nat Ra-226	<3.0E-7	2.7	3.00E-01	2.7E-09	3.0E-07 6.0E-08	4.5
SW-8 Stock Pond Section 18 T36N, R72W	1st Quarter	U-Nat Ra-226	0.0008	0.2	2.00E-01	5.4E-10 2.0E-10	3.0E-07 6.0E-08	0.2 0.3
	2nd Quarter	U-Nat Ra-226	0.0024	2.2	3.00E-01	1.6E-09 2.2E-09	3.0E-07 6.0E-08	0.5 3.7
SW-9 Stock Pond Section 18 T36N, R72W	1st Quarter	U-Nat Ra-226	0.0006	0.2	2.00E-01	4.1E-10 2.0E-10	3.0E-07 6.0E-08	0.1 0.3
	2nd Quarter	U-Nat Ra-226	0.0008	0.6	2.00E-01	5.4E-10 6.0E-10	3.0E-07 6.0E-08	0.2 1.0
SW-10 Stock Pond Section 19 T36N, R72W	1st Quarter	U-Nat Ra-226	DRY				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	0.0131	4.5	4.00E-01	8.9E-09 4.5E-09	3.0E-07 6.0E-08	3.0 7.5
GW-1 Windmill Section 1 T35N, R74W	1st Quarter	U-Nat Ra-226	0.025	1.1	2.00E-01	1.7E-08 1.1E-09	3.0E-07 6.0E-08	5.6 1.8
	2nd Quarter	U-Nat Ra-226	0.0259	0.7	2.00E-01	1.8E-08 7.0E-10	3.0E-07 6.0E-08	5.8 1.2
GW-2 Water Well Section 35 T36N, R74W	1st Quarter	U-Nat Ra-226	0.0286	0.7	2.00E-01	1.9E-08 7.0E-10	3.0E-07 6.0E-08	6.5 1.2
	2nd Quarter	U-Nat Ra-226	0.0422	0.7	2.00E-01	2.9E-08 7.0E-10	3.0E-07 6.0E-08	9.5 0.0

TABLE 4 (Continued)

SAMPLE LOCATION	SAMPLE DATE	RADIONUCLIDE	CONCENTRATION (mg/L)	CONCENTRATION (pCi/L)	ERROR EST. +/- (pCi/L)	CONCENTRATION (pCi/ml)	EFF. CONC. LIMIT (pCi/ml)	% EFF. CONC. LIMIT
GW-3 Windmill Section 2 T36N, R74W	1st Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
GW-4 Windmill Section 23 T36N, R74W	1st Quarter	U-Nat Ra-226	0.0768	0.5	2.00E-01	5.2E-08 5.0E-10	3.0E-07 6.0E-08	17.3 0.8
	2nd Quarter	U-Nat Ra-226	0.0779	0.5	2.00E-01	5.3E-08 5.0E-10	3.0E-07 6.0E-08	17.6 0.8
GW-5 Windmill Section 30 T36N, R73W	1st Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
GW-6 Windmill Section 28 T36N, R73W	1st Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
GW-8 Windmill Section 23 T36N, R73W	1st Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
GW-9 Windmill Section 14 T36N, R73W	1st Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	

TABLE 4 (Continued)

SAMPLE LOCATION	SAMPLE DATE	RADIONUCLIDE	CONCENTRATION (mg/L)	CONCENTRATION (pCi/L)	ERROR EST. +/- (pCi/L)	CONCENTRATION (µCi/ml)	EFF. CONC. LIMIT (µCi/ml)	% EFF. CONC. LIMIT
GW-10 Water Well Section 14 T36N, R73W	1st Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
GW-11 Water Well Section 11 T36N, R73W	1st Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
GW-12 Water Well Section 7 T36N, R72W	1st Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
GW-13 Water Well Section 9 T36N, R74W	1st Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	0.0158	1.1	2.00E-01	1.1E-08 1.1E-09	3.0E-07 6.0E-08	3.6 1.8
GW-14 Water Well Section 10 T36N, R74W	1st Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	0.0017	1.4	2.00E-01	1.2E-09 1.4E-09	3.0E-07 6.0E-08	0.4 2.3
GW-15 Water Well Section 15 T36N, R74W	1st Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	0.0198	1.0	2.00E-01	1.3E-08 1.0E-09	3.0E-07 6.0E-08	4.5 1.7

TABLE 4 (Continued)

SAMPLE LOCATION	SAMPLE DATE	RADIONUCLIDE	CONCENTRATION (mg/L)	CONCENTRATION (pCi/L)	ERROR EST. +/- (pCi/L)	CONCENTRATION (pCi/ml)	EFF. CONC. LIMIT (pCi/ml)	% EFF. CONC. LIMIT
GW-16 Water Well Section 11 T36N, R74W	1st Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	0.162	0.7	2.00E-01	1.1E-07 7.0E-10	3.0E-07 6.0E-08	36.6 1.2
GW-17 Water Well Section 8 T36N, R74W	1st Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
GW-18 Water Well Section 2 T36N, R74W	1st Quarter	U-Nat Ra-226	NOT RUNNING				3.0E-07 6.0E-08	
	2nd Quarter	U-Nat Ra-226	0.0158	1.1	2.00E-01	1.1E-08 1.1E-09	3.0E-07 6.0E-08	3.6 1.8
GW-20 Water Well Section 27 T36N, R73W	1st Quarter	U-Nat Ra-226	<3.0E-7	0.5	2.00E-01	5.0E-10	3.0E-07 6.0E-08	0.8
	2nd Quarter	U-Nat Ra-226	<3.0E-7	0.5	2.00E-01	5.0E-10	3.0E-07 6.0E-08	0.8

TABLE 5

SATELLITE NO. 1 LAND APPLICATION FACILITY (IRRIGATOR NO. 1)
MONTHLY IRRIGATION FLUID DATA

IRRIGATION CYCLE		<u>Jan-08</u>	<u>Feb-08</u>	<u>Mar-08</u>	<u>Apr-08</u>	<u>May-08</u>	<u>Jun-08</u>
VOLUME (AF)							
MAJOR IONS (mg/L)	REP. LIMIT						
Ca	1.0						
Mg	1.0	Irrigator Did					
Na	1.0	Not Operate					
K	1.0						
HCO ₃	1.0						
SO ₄	1.0						
Cl	1.0						
NON-METALS							
TDS @ 180° C (mg/L)	10.0						
pH (standard units)	0.010						
SAR	0.01						
TRACE METALS (mg/L)							
As	0.001						
Ba	0.10						
B	0.10						
Se	0.001						
RADIOMETRIC							
U-nat (uCi/mL)	2.03E-10						
Ra-226 (uCi/mL)	2.00E-10						
Ra Err. Est. +/-							

TABLE 6

SATELLITE NO. 2 LAND APPLICATION FACILITY (IRRIGATOR NO. 2)
MONTHLY IRRIGATION FLUID DATA

IRRIGATION CYCLE		<u>Jan-08</u>	<u>Feb-08</u>	<u>Mar-08</u>	<u>Apr-08</u>	<u>May-08</u>	<u>Jun-08</u>
VOLUME (AF)						5.34	21.00
MAJOR IONS (mg/L)	REP. LIMIT						
Ca	1.0					436	409
Mg	1.0	Irrigator Did	Irrigator Did	Irrigator Did	Irrigator Did	110	111
Na	1.0	Not Operate	Not Operate	Not Operate	Not Operate	96	88
K	1.0					30	29
HCO ₃	1.0					187	167
SO ₄	1.0					738	774
Cl	1.0					521	535
NON-METALS							
TDS @ 180° C (mg/L)	10.0					2420	2380
pH (standard units)	0.010					7.92	7.96
SAR	0.01					1.1	1
TRACE METALS (mg/L)							
As	0.001					0.002	0.004
Ba	0.1					0.1	0.1
B	0.10					<0.1	0.3
Se	0.001					1.22	1.24
RADIOMETRIC							
U-nat (uCi/mL)	2.03E-10					3.94E-07	3.91E-07
Ra-226 (uCi/mL)	2.00E-10					4.4E-09	2.70E-09
Ra Err. Est. +/-						2E-08	3.00E-10

TABLE 7A

**MONTHLY RADIUM GRAB SAMPLES
AT THE DISCHARGE FROM THE RADIUM TREATMENT SYSTEM
SATELLITE NO. 2**

SAMPLE DATE	25-Jan-08	14-Feb-08	19-Mar-08	15-Apr-08	15-May-08	10-Jun-08
RADIOMETRIC						
Ra-226 (uCi/mL)	4.90E-09	3.40E-09	5.20E-09	2.70E-09	2.00E-09	3.40E-09
Ra Err. Est. +/-	8.00E-10	4.00E-10	4.00E-10	3.00E-10	3.00E-10	3.00E-10

TABLE 7B

**MONTHLY RADIUM GRAB SAMPLES
AT THE DISCHARGE FROM THE RADIUM TREATMENT SYSTEM
SATELLITE NO. 3**

SAMPLE DATE	24-Jan-08	14-Feb-08	19-Mar-08	15-Apr-08	15-May-08	10-Jun-08
RADIOMETRIC						
Ra-226 (uCi/mL)	6.00E-10	4.10E-09	2.00E-10	8.00E-10	2.00E-10	1.50E-09
Ra Err. Est. +/-	3.00E-10	1.30E-09	1.00E-10	2.00E-10	1.00E-10	2.00E-10

TABLE 8

**SATELLITE NO. 2 PURGE STORAGE RESERVOIR
SHALLOW MONITORING WELLS
QUARTERLY WATER LEVEL DATA
SEMI-ANNUAL WATER QUALITY DATA**

SAMPLE SITE	Shallow Well No. 1 (South)		Shallow Well No. 2 (East)		
	19-Mar-08	10-Jun-08	19-Mar-08	10-Jun-08	
SAMPLE DATE					
WATER LEVEL (DTW)	13.7	11.25	10.2	7.53	
MAJOR IONS (mg/L)	Rep. Limit				
HCO ₃	1.0	227	224	236	317
SO ₄	1.0	2110	2470	2450	2380
Cl	1.0	291	245	316	489
NON-METALS					
Cond (µmho/cm)	1.0	4270	4590	4930	5370
pH (standard units)	0.01	7.53	7.69	7.81	7.37
TRACE METALS (mg/L)					
B	0.001	<.001	0.200	<.001	0.2
Se	0.0025	2.060	1.60	0.045	0.08
RADIOMETRIC					
U-nat (uCi/mL)	6.77E-10	1.07E-07	4.34E-10	2.53E-08	1.20E-09
Ra-226 (uCi/mL)	2.00E-10	2.00E-10	3.00E-10	2.00E-10	2.00E-10
Ra-226 Err. Est. +/- (uCi/mL)		2.00E-10	2.00E-10	1.00E-10	2.00E-10

POWER RESOURCES, INC.

**SMITH RANCH - HIGHLAND URANIUM
PROJECT**

**SEMI-ANNUAL EFFLUENT AND
ENVIRONMENTAL MONITORING
REPORT**

FOR THE PERIOD

**JULY 1 THROUGH
DECEMBER 31, 2008**

**USNRC SOURCE MATERIAL LICENSE
NO. SUA-1548**

DOCKET NO. 40-8964

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1.0 RESULTS FROM EMPLOYEE URINALYSES IF AN EXPOSURE EXCEEDS ACTION LEVELS DESCRIBED IN THE OPERATIONS PLAN OF THE APPROVED LICENSE APPLICATION

No bio-assays exceeded the action level of 15 µg/L uranium during the report period

2.0 INJECTION RATES, RECOVERY RATES, AND INJECTION TRUNK-LINE PRESSURES FOR EACH SATELLITE FACILITY

Tables 1A through 1D of Attachment A contain rate and pressure data at the satellite facilities for the period of the report.

2.1 Satellite No. 1

Satellite No. 1 did not operate during the report period since restoration activities in the A and B Wellfield are complete. Therefore, no injection or recovery rates are available for the report period, as shown in Table 1A.

2.2 Satellite No. 2, Satellite No. 3, Central Processing Plant, Satellite SR-1, Satellite SR-2,

The injection rates, recovery rates, and injection pressure data for these facilities are contained in Tables 1B, 1C, and 1D. The injection rates represent the total recovery rates minus the purge (clean-out circuit) flow. The purge from Satellite No. 2 and No. 3 is treated for uranium and radium removal and pumped to the Satellite No. 2 Purge Storage Reservoir prior to disposal by irrigation at the Satellite No. 2 Land Application Facility. Purge from Satellite SR-1 and the CPP is disposed by deep injection through permitted waste disposal wells.

3.0 RESULTS OF EFFLUENT AND ENVIRONMENTAL MONITORING INCLUDING WATER QUALITY ANALYSES AND MONITORING REQUIRED BY THE WDEQ PERMIT FOR THE OPERATING IRRIGATION SYSTEMS

3.1 Stack Emission Surveys

When the Central Processing Facility (CPF) at the Highland Uranium Project is operational, PRI monitors the Yellowcake Dryer and Packaging scrubber exhaust stacks to determine the emission rate of particulates, uranium, radium, and thorium. During the report period, the Highland CPF remained on standby status and is anticipated to maintain that status during several upcoming report periods. All yellowcake processing activities (elution, precipitation, drying, and packaging) were conducted at the Smith Ranch Central Processing Plant. The dryers at the Smith Ranch Central Processing Plant are zero emission vacuum dryers that do not require emission stack testing. No stack tests were conducted during the report period.

3.2 Air Particulate, Radon, and Gamma Radiation Monitoring

PRI maintains five Air Monitoring Stations at various locations on and around the licensed area. Two of these stations are used to monitor downwind conditions of the Highland CPF, and monitoring is not required unless the CPF is in operation. The Air Monitoring Stations are used to monitor air particulates, radon, and gamma radiation. The stations are located as follows:

- AS-1 (Dave's Water Well): This station monitors background conditions, upwind of both the Smith Ranch and HUP wellfields and yellowcake processing facilities.
- AS-2 (Smith Ranch Restricted Area-Fenceline): This station monitors conditions downwind of the Smith Ranch CPP Restricted Area Boundary.
- AS-3 (Vollman Ranch): This station monitors the nearest downwind resident to the Smith Ranch CPP Restricted Area.
- AS-4 (HUP Restricted Area): This station monitors conditions downwind of the HUP CPF Restricted Area Boundary (when the HUP CPF is operating).
- AS-5 (Fowler Ranch): This station monitors the nearest downwind resident to the HUP CPF Restricted Area (when the HUP CPF is operating).

Monitoring at AS-4 and AS-5 was not conducted during the reporting period since the Highland CPF remains on standby status. Monitoring of downwind air stations will only resume if the Highland CPF becomes operational.

Table 2 shows the air particulate and radon data collected at these sites during the report period. Review of data collected during the report period shows that the concentrations of all parameters are significantly less than the 10 CFR 20, Appendix B.

Gamma radiation data for the report period are provided in Table 3. 10 CFR 20 Appendix B contains no Effluent Concentration Limit for gamma radiation for comparison. Gamma results for the report period show a slightly higher concentration for background monitoring station for the 4th quarter, but are still within normal range.

3.3 Water Sampling Data

3.3.1 *Groundwater and Surface Water Monitoring Stations*

During the report period, monitoring was completed at nine water wells (Stations GW-1, 2, 4, 9, 11, 13, 14, 15, and 20) and five stock ponds (Stations SW-3, 5, 6, 7, and 8) throughout the

permit area. Water samples are collected from the water wells and stock ponds on a quarterly basis for analysis of uranium and radium-226. Table 4 provides the analytical data for samples collected during the report period. A review of data collected during the report period shows that five stock ponds (Stations SW- 1, 2, 4, 9, and 10) remained dry during the report period and nine water wells (GW- 3, 5, 6, 8, 10, 12, 16, 17, and 18) did not run during the report period. A review of data collected from the nine water wells and five stock ponds show that the concentrations of uranium and radium-226 are well below the 10 CFR 20, Appendix B, Effluent Concentration Limits of $3.0E-07 \mu\text{Ci/mL}$ and $6.0E-08 \mu\text{Ci/mL}$, respectively.

3.4 Wastewater Land Application Facilities Monitoring

3.4.1 *Soil and Vegetation Sampling*

In accordance with the approved license application and the WDEQ permits for the Satellite No. 1 and Satellite No. 2 Wastewater Land Application Facilities, soil and vegetation sampling of the irrigation areas is conducted in late summer of each year. The soil and vegetation data are collected to monitor and evaluate any adverse effects to the irrigation areas. The 2008 soil and vegetation sampling at the irrigation areas was conducted in August 2008, and results are shown in Tables 5, 6, 7A and 7B.

3.4.2 *Irrigation Fluid*

PRI monitors the treated irrigation fluid that is disposed of at both irrigation facilities per the approved license application and the WDEQ Wastewater Land Application permits. Grab samples are collected at the irrigator pivot during each month of operation and analyzed for various parameters. As noted in Table 8, Irrigator 1 did not operate during the report period.

Irrigation fluid data collected at Satellite No. 2 is provided in Table 9. A review of the data indicates that the concentration of uranium in the monthly grab samples were slightly above the 10 CFR 20, Appendix B, Effluent Concentration Limit of $3.0 E-7 \mu\text{Ci/ml}$, but were lower than the estimate provided in the original license application for the facility ($1.4E-6 \mu\text{Ci/ml}$) The samples contained radium-226 concentrations well below the 10 CFR 20, Appendix B, Effluent Concentration Limit of $6.0E-08 \mu\text{Ci/ml}$ and above the estimate provided in the original license application for the facility ($3.0E-9 \mu\text{Ci/ml}$)

3.4.3 *Radium Treatment Systems*

PRI collects grab samples each month to ensure that the Radium-226 treatment systems are adequately treating wastewater from Satellites No. 2 and No. 3 prior to discharge into the Purge Storage Reservoir. No samples were collected from the Satellite No. 1 radium treatment system since it did not operate during the report period. The monthly radium-226 grab samples for Satellite No. 2 and No. 3 are collected at the discharge points of the radium treatment system at each facility. The results of this monitoring are included in Table 10A, and 10B. Review of the monitoring data shows that all radium-226 concentrations were below the 10 CFR 20, Appendix B, Effluent Concentration Limit of $6.0E-8 \mu\text{Ci/ml}$ (60 pCi/L) at both Satellite No. 2 and Satellite

No. 3 during the report period

3.4.4 *Soil Water*

PRI collects soil water samples at the irrigation areas in June of each year and analyzes them for various parameters, including uranium and radium-226. The 2008 sampling was not conducted until July 24, 2008, due to an error in scheduling. As shown in Table 11A and 11B, the relatively limited amount of irrigation resulted in insufficient soil water available to produce a sample at any of the sample locations for the Satellite No. 1 and Satellite No. 2 irrigation areas.

3.4.5 *Satellite No. 1 Purge Storage Reservoir Monitor Well*

A shallow monitor well, located southwest of the Satellite No. 1 Purge Storage Reservoir is monitored at least weekly for potential seepage from the reservoir. There was no evidence of seepage during the report period. PSR-1 was dry for the entire period and it is not anticipated that water will be diverted to PSR-1 in the near future. It is unlikely there will be any seepage from PSR-1 in the following report periods.

3.4.6 *Satellite No. 2 Purge Storage Reservoir Shallow Wells*

Water levels are measured on a quarterly basis and ground water samples are required on a semi-annual basis from the two shallow monitoring wells located adjacent to the Satellite No. 2 Purge Storage Reservoir (PSR-2). PRI conducts quarterly sampling of both wells. Shallow Wells No. 1 and No. 2 are located adjacent to the south and east sides of the reservoir, respectively. During the report period, monitoring was conducted on July 23 and December 10, 2008.

4.0 ANNUAL DOSE TO THE PUBLIC (2008)

10 CFR 20.1301 requires that each NRC licensee conduct their operations in such a manner that the total effective dose equivalent (TEDE) to members of the public does not exceed 0.1 rem (100 mrem) in a year, and that the dose from external sources in any unrestricted area does not exceed 0.002 rem (2 mrem) in any one hour.

Additionally, 10 CFR 20.1302 requires that each NRC licensee annually show compliance with the above described dose limits by demonstrating one of the following:

- 1) Show by actual measurement or calculation that the TEDE to the public does not exceed 100 mrem; or
- 2) Show that the annual average concentrations of radioactive effluents released at the restricted area boundary do not exceed the values in Table 2 of Appendix B to 10 CFR 20 and that the external dose to an individual continuously present in an unrestricted area would not exceed 2 mrem in an hour and 50 mrem in a year.

Table 13 compares the 2008 annual average concentrations of radioactive effluents from the Smith Ranch-Highland Uranium Project to the 10 CFR 20, Table 2 limits of Appendix B. The table also shows the calculated TEDE at unrestricted area sampling locations (Vollman-Nearest Downwind Residence) and a Restricted Area location (Fenceline) assuming a person was continuously in the area for the entire year. As shown in Table 13, all measured concentrations of radioactive effluents are less than the Table 2 limits of Appendix B, confirming compliance with 10 CFR 20.1302(b)(2)(i) and (ii). Additionally, the calculated TEDE for the two locations confirms compliance with 10 CFR 20.1302(b)(1).

5.0 SAFETY AND ENVIRONMENTAL EVALUATIONS

All safety and environmental evaluations made by the Safety and Environmental Review Panel (SERP) and resulting changed pages to the Operations Plan and Reclamation Plan of the approved license must be submitted on an annual basis. Summaries of the completed SERP evaluations are provided in Attachment B. During the period July 1 through December 31, 2008, PRI completed the following Safety and Environmental Evaluations:

Safety and Environmental Evaluation - Dated October 23, 2008 for EHS Management Replacement and addition of Assistant EHS Manager/RSO

Safety and Environmental Evaluation - Dated October 23, 2008 Mine Unit-9 Hydrologic Test Report

ATTACHMENT A
DATA TABLES 1-13

TABLE 1A
SATELLITE NO. 1 INJECTION RATES, RECOVERY RATES, INJECTION PRESSURES

MONTH	Injection Pressure (PSI)			Groundwater Sweep GPM	Radium Ponds GPM	RO Feed GPM	Injection GPM	RO Concentrate GPM	Purge Flow GPM
	RO #1	RO #2	RO #3						
Jul-08	0	0	0	0	0	0	0	0	0
Aug-08	0	0	0	0	0	0	0	0	0
Sep-08	0	0	0	0	0	0	0	0	0
Oct-08	0	0	0	0	0	0	0	0	0
Nov-08	0	0	0	0	0	0	0	0	0
Dec-08	0	0	0	0	0	0	0	0	0

TABLE 1B
AVERAGE INJECTION RATES (GPM)

MONTH	Satellite No. 2	Satellite No. 3	Central Processing Plant	Satellite SR-1	Satellite SR-2
Jul-08	2,050	2,540	3,287	3,124	
Aug-08	2,097	2,583	3,387	3,689	
Sep-08	2,152	2,638	2,822	3,768	
Oct-08	2,118	2,686	2,518	3,632	
Nov-08	2,097	2,843	2,495	3,599	
Dec-08	2,099	2,875	2,441	3,297	982

TABLE 1C
AVERAGE RECOVERY RATES (GPM)

MONTH	Satellite No. 2	Satellite No. 3	Central Processing Plant	Satellite SR-1	Satellite SR-2
Jul-08	2,069	2,589	3,322	3,157	
Aug-08	2,116	2,639	3,419	3,724	
Sep-08	2,171	2,692	2,849	3,808	
Oct-08	2,118	2,745	2,535	3,657	
Nov-08	2,097	2,903	2,512	3,624	
Dec-08	2,099	2,932	2,457	3,318	860

TABLE 1D
INJECTION TRUNK LINE PRESSURES (PSI)

MONTH	Satellite No. 2	Satellite No. 3	Central Processing Plant	Satellite SR-1	Satellite SR-2
Jul-08	95	135	138	76	
Aug-08	105	143	146	86	
Sep-08	111	142	136	78	
Oct-08	103	143	148	90	
Nov-08	92	133	147	89	
Dec-08	103	116	162	91	125

TABLE 2
AIR SAMPLING DATA
ENVIRONMENTAL MONITORING SITES
3rd and 4th Quarters 2008

SAMPLE LOCATION	SAMPLE PERIOD	RADIONUCLIDE ($\mu\text{Ci}/\text{ml}$)	CONCENTRATION ($\mu\text{Ci}/\text{ml}$)	ERROR EST. +/- ($\mu\text{Ci}/\text{ml}$)	L.L.D. ($\mu\text{Ci}/\text{ml}$)	EFF. CONC. LIMIT ($\mu\text{Ci}/\text{ml}$)	% EFF. CONC. LIMIT %	
AS-1 DAVE'S WATER WELL Air Station Background Site	3rd Quarter	U-Nat	1.20E-16	N/A	1.00E-16	9.00E-14	0.1	
		Th-230	<1.00E-16	N/A	1.00E-16	3.00E-14	< 1.0	
		Ra-226	<1.00E-16	N/A	1.00E-16	9.00E-13	< 1.0	
		Pb-210	1.03E-14	2.88E-15	2.00E-15	6.00E-13	1.7	
		Rn-222			3.00E-10	1.00E-08	0.0	
	4th Quarter	U-Nat	<1.00E-16	N/A	1.00E-16	9.00E-14	< 1.0	
		Th-230	<1.00E-16	N/A	1.00E-16	3.00E-14	< 1.0	
		Ra-226	<1.00E-16	N/A	1.00E-16	9.00E-13	< 1.0	
		Pb-210	<2.00E-15	N/A	2.00E-15	6.00E-13	< 1.0	
		Rn-222	9.00E-10		3.00E-10	1.00E-08	9	
	AS-2 FENCE LINE Air Station Restricted Area Boundary	3rd Quarter	U-Nat	1.49E-16	N/A	1.00E-16	9.00E-14	0.2
			Th-230	1.97E-16	4.75E-17	1.00E-16	3.00E-14	0.7
			Ra-226	<1.00E-16	N/A	1.00E-16	9.00E-13	< 1.0
			Pb-210	1.43E-14	3.11E-15	2.00E-15	6.00E-13	2.4
Rn-222					3.00E-10	1.00E-08		
4th Quarter		U-Nat	<1.00E-16	N/A	1.00E-16	9.00E-14	< 1.0	
		Th-230	<1.00E-16	N/A	1.00E-16	3.00E-14	< 1.0	
		Ra-226	<1.00E-16	N/A	1.00E-16	9.00E-13	< 1.0	
		Pb-210	<2.00E-15	N/A	2.00E-15	6.00E-13	< 1.0	
		Rn-222	1.60E-09		3.00E-10	1.00E-08	16.0	
AS-3 VOLLMAN RANCH Air Station Downwind Nearest Residence		3rd Quarter	U-Nat	3.18E-16	N/A	1.00E-16	9.00E-14	0.4
			Th-230	1.44E-16	4.39E-17	1.00E-16	3.00E-14	< 1.0
			Ra-226	<1.00E-16	N/A	1.00E-16	9.00E-13	< 1.0
			Pb-210	7.42E-15	2.88E-15	2.00E-15	6.00E-13	1.2
	Rn-222				3.00E-10	1.00E-08	0.0	
	4th Quarter	U-Nat	<1.00E-16	N/A	1.00E-16	9.00E-14	< 1.0	
		Th-230	<1.00E-16	N/A	1.00E-16	3.00E-14	< 1.0	
		Ra-226	<1.00E-16	N/A	1.00E-16	9.00E-13	< 1.0	
		Pb-210	<2.00E-15	N/A	2.00E-15	6.00E-13	< 1.0	
		Rn-222	2.50E-09		3.00E-10	1.00E-08	25.0	
	AS-4 HUP RESTRICTED AREA		STANDBY	STATUS				
	AS-5 FOWLER RANCH		STANDBY	STATUS				

TABLE 3

**DIRECT RADIATION (GAMMA) MEASUREMENT DATA
ENVIRONMENTAL MONITORING SITES
3rd & 4th QUARTERS 2008**

SAMPLE LOCATION	SAMPLE PERIOD	EXPOSURE RATE (mR/qtr)
FENCE LINE		
Air Station	3rd Quarter	43
Restricted Area Boundary	4th Quarter	49
VOLLMAN'S RANCH		
Air Station	3rd Quarter	35
Downwind Nearest Residence	4th Quarter	47
DAVE'S WATER WELL		35
Air Station	3rd Quarter	
Background Site	4th Quarter	41
HUP RESTRICTED AREA	STANDBY STATUS	
FOWLER RANCH	STANDBY STATUS	
CONTROL	3rd Quarter	40
	4th Quarter	50

Background has not been deducted

TABLE 4
WATER SAMPLING DATA
ENVIRONMENTAL MONITORING SITES
3rd & 4th QUARTERS 2008

SAMPLE LOCATION	SAMPLE DATE	RADIONUCLIDE	CONCENTRATION (mg/L)	CONCENTRATION (pCi/L)	ERROR EST. +/- (pCi/L)	CONCENTRATION (µCi/ml)	EFF. CONC. LIMIT (µCi/ml)	% EFF. CONC. LIMIT
SW-1 Stock Pond Section 3 T35N, R74W	3rd Quarter	U-Nat Ra-226	Dry All Quarter				3.0E-07 6.0E-08	0.0 0.0
	4th Quarter	U-Nat Ra-226	Dry all Quarter				3.0E-07 6.0E-08	0.0 0.0
SW-2 Stock Pond Section 2 T35N, R74W	3rd Quarter	U-Nat Ra-226	Dry All Quarter				3.0E-07 6.0E-08	0.0 0.0
	4th Quarter	U-Nat Ra-226	Dry All Quarter				3.0E-07 6.0E-08	0.0 0.0
SW-3 Stock Pond Section 35 T36N, R74W	3rd Quarter	U-Nat Ra-226	0.126	0.52	1.70E-01	8.5E-08 2.2E-10	3.0E-07 6.0E-08	28.4 0.4
	4th Quarter	U-Nat Ra-226	Dry All Quarter				3.0E-07 6.0E-08	0.0 0.0
SW-4 Stock Pond Section 36 T36N, R74W	3rd Quarter	U-Nat Ra-226	Dry All Quarter				3.0E-07 6.0E-08	0.0 0.0
	4th Quarter	U-Nat Ra-226	Dry All Quarter				3.0E-07 6.0E-08	0.0 0.0
SW-5 Stock Pond Section 21 T36N, R73W	3rd Quarter	U-Nat Ra-226	0.001	ND	1.20E-01	6.8E-10 2.2E-10	3.0E-07 6.0E-08	0.2 0.4
	4th Quarter	U-Nat Ra-226	0.0005	0.30	1.30E-01	3.4E-10 2.2E-10	3.0E-07 6.0E-08	0.1 0.4
SW-6 Stock Pond Section 22 T36N, R73W	3rd Quarter	U-Nat Ra-226	0.0003	0.87	2.70E-01	2.0E-10 2.2E-10	3.0E-07 6.0E-08	0.1 0.4
	4th Quarter	U-Nat Ra-226	0.0004	0.18	1.00E-01	2.7E-10 2.2E-10	3.0E-07 6.0E-08	0.1 0.4

TABLE 4 (Continued)

SAMPLE LOCATION	SAMPLE DATE	RADIONUCLIDE	CONCENTRATION (mg/L)	CONCENTRATION (pCi/L)	ERROR EST. +/- (pCi/L)	CONCENTRATION (pCi/ml)	EFF. CONC. LIMIT (pCi/ml)	% EFF. CONC. LIMIT
SW-7 Stock Pond Section 22 T36N, R73W	3rd Quarter	U-Nat Ra-226	0.0009			6.1E-10	3.0E-07	0.2
				0.27	1.80E-01	2.2E-10	6.0E-08	0.4
	4th Quarter	U-Nat Ra-226	Dry All Quarter				3.0E-07 6.0E-08	0.0 0.0
SW-8 Stock Pond Section 18 T36N, R72W	3rd Quarter	U-Nat Ra-226	0.0008			5.4E-10	3.0E-07	0.2
				0.22	1.40E-01	2.2E-10	6.0E-08	0.4
	4th Quarter	U-Nat Ra-226	0.0031			2.1E-09	3.0E-07	0.7
				0.34	1.60E-01	2.2E-10	6.0E-08	0.4
SW-9 Stock Pond Section 18 T36N, R72W	3rd Quarter	U-Nat Ra-226	Dry All Quarter				3.0E-07 6.0E-08	0.0 0.0
	4th Quarter	U-Nat Ra-226	Dry All Quarter				3.0E-07 6.0E-08	0.0 0.0
SW-10 Stock Pond Section 19 T36N, R72W	3rd Quarter	U-Nat Ra-226	Dry All Quarter				3.0E-07 6.0E-08	0.0 0.0
	4th Quarter	U-Nat Ra-226	Dry All Quarter				3.0E-07 6.0E-08	0.0 0.0
GW-1 Windmill Section 1 T35N, R74W	3rd Quarter	U-Nat Ra-226	0.0243			1.6E-08	3.0E-07	5.5
				0.97	0.25	2.2E-10	6.0E-08	0.4
	4th Quarter	U-Nat Ra-226	Not Running This Quarter				3.0E-07 6.0E-08	0.0 0.0
GW-2 Water Well Section 35 T36N, R74W	3rd Quarter	U-Nat Ra-226	0.037			2.5E-08	3.0E-07	8.3
				0.44	1.60E-01	2.2E-10	6.0E-08	0.4
	4th Quarter	U-Nat Ra-226	0.0406			2.7E-08	3.0E-07	9.2
				0.80	1.80E-01	2.2E-10	6.0E-08	0.4
GW-3 Windmill Section 27 T36N, R74W	3rd Quarter	U-Nat Ra-226	Did Not Run This Quarter				3.0E-07 6.0E-08	0.0
	4th Quarter	U-Nat Ra-226	Did Not Run This Quarter				3.0E-07 6.0E-08	0.0

TABLE 4 (Continued)

SAMPLE LOCATION	SAMPLE DATE	RADIONUCLIDE	CONCENTRATION (mg/L)	CONCENTRATION (pCi/L)	ERROR EST. +/- (pCi/L)	CONCENTRATION (µCi/ml)	EFF. CONC. LIMIT (µCi/ml)	% EFF. CONC. LIMIT
GW-4 Windmill Section 23 T36N, R74W	3rd Quarter	U-Nat Ra-226	Did Not Run This Quarter				3.0E-07 6.0E-08	0.0
	4th Quarter	U-Nat Ra-226	0.0719	0.28	1.30E-01		3.0E-07 6.0E-08	0.0 0.0
GW-5 Windmill Section 30 T36N, R73W	3rd Quarter	U-Nat Ra-226	Did Not Run This Quarter				3.0E-07 6.0E-08	
	4th Quarter	U-Nat Ra-226	Did Not Run This Quarter				3.0E-07 6.0E-08	
GW-6 Windmill Section 28 T36N, R73W	3rd Quarter	U-Nat Ra-226	Did Not Run This Quarter				3.0E-07 6.0E-08	
	4th Quarter	U-Nat Ra-226	Did Not Run This Quarter				3.0E-07 6.0E-08	
GW-8 Windmill Section 23 T36N, R73W	3rd Quarter	U-Nat Ra-226	Did Not Run this Quarter				3.0E-07 6.0E-08	
	4th Quarter	U-Nat Ra-226	Did Not Run This Quarter				3.0E-07 6.0E-08	
GW-9 Windmill Section 14 T36N, R73W	3rd Quarter	U-Nat Ra-226	0.0012	0.09	1.10E-01	8.1E-10 9.0E-11	3.0E-07 6.0E-08	
	4th Quarter	U-Nat Ra-226	Did Not Run This Quarter				3.0E-07 6.0E-08	
GW-10 Water Well Section 14 T36N, R73W	3rd Quarter	U-Nat Ra-226	Did Not Run This Quarter				3.0E-07 6.0E-08	
	4th Quarter	U-Nat Ra-226	Did Not Run This Quarter				3.0E-07 6.0E-08	

TABLE 4 (Continued)

SAMPLE LOCATION	SAMPLE DATE	RADIONUCLIDE	CONCENTRATION (mg/L)	CONCENTRATION (pCi/L)	ERROR EST. +/- (pCi/L)	CONCENTRATION (µCi/ml)	EFF. CONC. LIMIT (µCi/ml)	% EFF. CONC. LIMIT
GW-11 Water Well Section 11 T36N, R73W	3rd Quarter	U-Nat Ra-226	0.0008	0.18		5.4E-10 1.8E-10	3.0E-07 6.0E-08	0.0
	4th Quarter	U-Nat Ra-226	0.0009	0.25	1.20E-01		3.0E-07 6.0E-08	
GW-12 Water Well Section 7 T36N, R72W	3rd Quarter	U-Nat Ra-226	Did Not Run This Quarter				3.0E-07 6.0E-08	0.0
	4th Quarter	U-Nat Ra-226	Did Not Run This Quarter				3.0E-07 6.0E-08	
GW-13 Water Well Section 9 T36N, R72W	3rd Quarter	U-Nat Ra-226	0.0035	0.71	1.80E-01		3.0E-07 6.0E-08	0.0 0.0
	4th Quarter	U-Nat Ra-226	0.147	1.10	2.10E-01		3.0E-07 6.0E-08	0.0 0.0
GW-14 Water Well Section 10 T36N, R72W	3rd Quarter	U-Nat Ra-226	0.0016	1.40	2.40E-01		3.0E-07 6.0E-08	0.0 0.0
	4th Quarter	U-Nat Ra-226	Did Not Run This Quarter				3.0E-07 6.0E-08	
GW-15 Water Well Section 15 T36N, R72W	3rd Quarter	U-Nat Ra-226	Did Not Run This Quarter				3.0E-07 6.0E-08	0.0 0.0
	4th Quarter	U-Nat Ra-226	0.0184	0.78	1.80E-01		3.0E-07 6.0E-08	0.0 0.0
GW-16 Water Well Section 11 T36N, R72W	3rd Quarter	U-Nat Ra-226	Did Not Run This Quarter				3.0E-07 6.0E-08	0.0 0.0
	4th Quarter	U-Nat Ra-226	Did Not Run This Quarter				3.0E-07 6.0E-08	0.0 0.0
GW-17 Water Well Section 8 T36N, R72W	3rd Quarter	U-Nat Ra-226	Did Not Run This Quarter				3.0E-07 6.0E-08	0.0
	4th Quarter	U-Nat Ra-226	Did Not Run This Quarter				3.0E-07 6.0E-08	0.0

TABLE 4 (Continued)

SAMPLE LOCATION	SAMPLE DATE	RADIONUCLIDE	CONCENTRATION (mg/L)	CONCENTRATION (pCi/L)	ERROR EST. +/- (pCi/L)	CONCENTRATION (µCi/ml)	EFF. CONC. LIMIT (µCi/ml)	% EFF. CONC. LIMIT
GW-18 Water Well Section 2 T36N, R72W	3rd Quarter	U-Nat Ra-226	Did Not Run This Quarter				3.0E-07	0.0
							6.0E-08	0.0
	4th Quarter	U-Nat Ra-226	Did Not Run This Quarter				3.0E-07	0.0
							6.0E-08	0.0
GW-20 Water Well Section 27 T36N, R73W	3rd Quarter	U-Nat Ra-226	ND	0.2	1.40E-01		3.0E-07	0.0
							6.0E-08	0.0
	4th Quarter	U-Nat Ra-226	ND	0.34	1.50E-01		3.0E-07	0.0
							6.0E-08	0.0

TABLE 5
SATELLITE No. 1
LAND APPLICATION FACILITY (IRRIGATOR 1)
ANNUAL SOIL DATA
2008

SAMPLE ID	SAMPLE DATE	CONDUCTIVITY	Sat %	pH	POTASSIUM	CALCIUM	MAGNESIUM	SODIUM	SAR	ARSENIC	BARIUM	SELENIUM	URANIUM - NATURAL	BORON	RADIUM 226	TOTAL ERROR
		SAT. PASTE (mmhos/cm)		SAT. PASTE (std. Units)	SOLUBLE (mg/kg-dry)	SOLUBLE (meq/L)	SOLUBLE (meq/L)	SOLUBLE (meq/L)		ABDTPA (mg/kg-dry)	ABDTPA (mg/kg-dry)	ABDTPA (mg/kg-dry)	TOTAL (pCi/g-dry)	ABDTPA (mg/kg-dry)	(pCi/g-dry)	ESTIMATE± (pCi/g-dry)
S E Location 1 0-6"	8/21/08	0.32	48.7	6.7	5.86	1.25	0.61	1.48	1.54	0.062	1.4	0.334	5.0	0.29	11.0	
S E Location 1 6-12"	8/21/08	0.30	49.6	6.6	3.74	0.86	0.39	1.90	2.41	0.036	1.4	0.283	2.7	0.45	5.1	
S E Location 2 0-6"	8/21/08	0.50	71.8	7.0	6.52	2.45	1.10	1.92	1.44	0.045	3.2	0.670	9.9	0.49	3.1	
S E Location 2 6-12"	8/21/08	0.67	54.8	6.7	3.48	2.31	1.26	3.54	2.66	0.036	3.0	0.554	8.3	0.33	4.4	
S E Location 3 0-6"	8/21/08	0.93	55.6	6.9	6.70	3.22	1.70	4.86	3.11	0.020	2.6	0.644	2.3	0.42	3.5	
S E Location 3 6-12"	8/21/08	1.19	70.2	7.3	6.22	4.06	2.13	5.61	3.20	<.006	2.0	0.636	1.3	0.35	4.0	
S W Location 4 0-6"	8/21/08	0.67	66.8	6.9	12.80	4.13	2.00	2.99	1.72	0.056	2.9	0.936	16.1	0.40	4.1	
S W Location 4 6-12"	8/21/08	0.59	67.8	7.2	6.81	2.07	0.97	2.94	2.39	0.019	2.4	0.545	4.7	0.35	3.9	
S W Location 5 0-6"	8/21/08	0.67	60.5	7.1	6.04	2.16	1.10	3.77	2.96	0.015	2.3	0.462	3.2	0.37	2.8	
S W Location 5 6-12"	8/21/08	0.89	61.7	7.6	3.78	2.81	1.39	4.82	3.33	0.011	2.0	0.435	1.6	0.30	4.2	
S W Location 6 0-6"	8/21/08	0.50	66.3	7.6	5.67	2.26	0.91	2.02	1.61	0.016	2.3	0.356	9.7	0.31	3.7	
S W Location 6 6-12"	8/21/08	0.45	65.0	7.8	2.67	1.37	0.57	2.37	2.41	0.018	2.2	0.268	3.0	0.29	3.4	
S W Location 7 0-6"	8/21/08	0.55	63.4	7.8	5.40	1.92	0.80	3.40	2.92	0.028	2.4	0.453	7.1	0.36	3.0	
S W Location 7 6-12"	8/21/08	0.63	74.6	7.8	4.03	1.85	0.81	4.07	3.55	0.025	2.1	0.429	3.3	0.34	3.6	
N W Location 8 0-6"	8/21/08	1.13	60.7	7.9	16.50	5.97	2.64	3.62	1.75	0.047	1.9	0.702	11.8	0.43	4.0	
N W Location 8 6-12"	8/21/08	2.02	63.4	7.4	12.20	9.64	4.49	6.44	2.43	0.051	1.7	0.799	8.4	0.30	3.5	
N W Location 9 0-6"	8/21/08	0.75	66.9	7.6	9.02	2.70	1.21	3.17	2.27	0.044	2.6	0.349	4.5	0.29	3.5	
N W Location 9 6-12"	8/21/08	0.84	68.1	7.6	7.58	2.76	1.35	4.21	2.95	0.038	2.6	0.413	2.6	0.27	4.8	
N W Location 10 0-6"	8/21/08	0.79	63.4	7.8	9.52	2.92	1.41	4.13	2.81	0.031	2.6	0.470	5.1	0.79	4.7	
N W Location 10 6-12"	8/21/08	1.80	80.7	7.3	13.40	9.87	4.39	6.88	2.58	0.024	1.3	0.364	5.5	0.73	6.2	
N E Location 11 0-6"	8/21/08	0.44	65.4	7.4	5.98	1.25	0.61	2.09	2.17	0.032	1.6	0.355	11.1	0.58	4.6	
N E Location 11 6-12"	8/21/08	0.54	53.2	7.4	4.55	1.76	0.92	2.82	2.44	0.025	3.0	0.259	3.1	0.69	2.1	
N E Location 12 0-6"	8/21/08	1.48	74.7	7.2	11.90	7.01	3.55	5.70	2.48	0.021	2.1	0.126	6.4	0.66	2.8	
N E Location 12 6-12"	8/21/08	3.97	61.1	6.4	10.80	24.70	12.80	12.40	2.86	0.030	1.3	0.567	2.1	0.49	4.5	
N E Location 13 0-6"	8/21/08	0.96	61.1	6.2	9.35	3.89	1.80	3.41	2.03	0.029	3.0	0.286	6.4	0.44	4.7	
N E Location 13 6-12"	8/21/08	0.56	44.4	6.4	3.51	1.48	0.70	2.95	2.83	0.027	2.6	0.127	1.7	0.48	5.7	
N E Location 14 0-6"	8/21/08	0.51	49.9	6.1	5.91	1.85	0.89	2.30	1.97	0.055	3.2	0.205	3.0	0.54	6.9	
N E Location 14 6-12"	8/21/08	0.44	51.5	6.2	2.79	1.30	0.64	2.27	2.31	0.041	3.1	0.126	1.9	0.59	7.5	
Average		0.90	62.19	7.14	7.24	3.92	1.90	3.86	2.47	0.03	2.31	0.43	5.4	0.44	4.48	
Background 0-6"	8/21/08	0.60	66.9	6.9	4.40	1.47	1.26	1.85	1.59	0.085	3.2	0.085	1.7	0.33	3.8	
Background 6-12"	8/21/08	0.25	79.5	7.0	3.24	0.64	0.50	1.44	1.92	0.082	3.4	0.082	1.3	0.42	4.8	

TABLE 6
SATELLITE No. 2
LAND APPLICATION FACILITY (IRRIGATOR 2)
ANNUAL SOIL DATA
2008

SAMPLE ID	SAMPLE DATE	CONDUCTIVITY	Sat %	pH	POTASSIUM	CALCIUM	MAGNESIUM	SODIUM	SAR	ARSENIC	BARIUM	SELENIUM	URANIUM	BORON	RADIUM 226	TOTAL ERROR ESTIMATE± (pCi/g-dry)
		SAT. PASTE (mmhos/cm)		SAT. PASTE (std. Units)	SOLUBLE (mg/kg-dry)	SOLUBLE (meq/L)	SOLUBLE (meq/L)	SOLUBLE (meq/L)		ABDTPA (mg/kg-dry)	ABDTPA (mg/kg-dry)	ABDTPA (mg/kg-dry)	TOTAL (mg/kg)	ABDTPA (mg/kg-dry)	(pCi/g-dry)	
Location 1 0-6"	8/26/08	4.74	59.3	6.7	15.00	34.0	19.7	8.0	1.55	0.030	0.8	0.764	11.1	0.79	6.1	
Location 1 6-12"	8/26/08	5.15	67.5	7.1	7.08	31.5	18.9	13.8	2.76	0.007	0.7	0.533	2.1	0.51	6.5	
Location 2 0-6"	8/26/08	2.63	64.2	7.1	8.37	15.3	8.0	4.5	1.31	0.022	2.5	0.434	6.2	0.66	7.1	
Location 2 6-12"	8/26/08	2.32	66.1	7.6	5.08	12.8	7.5	5.0	1.59	0.032	2.1	0.352	2.5	0.53	2.7	
Location 3 0-6"	8/26/08	2.20	59.8	7.3	7.30	13.1	6.3	4.1	1.33	0.015	2.1	0.244	5.8	0.68	1.9	
Location 3 6-12"	8/26/08	3.72	64.5	7.6	6.55	27.6	11.8	7.5	1.70	0.009	1.1	0.423	2.3	0.40	3.9	
Location 4 0-6"	8/26/08	3.64	58.9	7.2	16.50	23.0	14.4	5.8	1.35	0.079	1.5	0.396	16.1	0.58	3.3	
Location 4 6-12"	8/26/08	4.21	52.8	7.3	7.87	28.8	17.6	7.6	1.58	0.042	0.7	0.292	5.3	0.41	2.2	
Location 5 0-6"	8/26/08	3.47	53.4	7.2	7.94	23.6	13.2	4.8	1.11	0.045	1.7	0.386	8.0	0.52	7.4	
Location 5 6-12"	8/26/08	3.55	63.3	7.2	4.73	24.7	13.3	5.9	1.35	0.014	1.0	0.365	5.9	0.34	1.5	
Location 6 0-6"	8/26/08	4.39	64.0	6.5	22.00	31.6	17.8	6.0	1.20	0.072	0.9	0.610	6.4	0.56	8.5	
Location 6 6-12"	8/26/08	4.87	68.1	7.0	12.10	32.8	18.8	10.3	2.03	0.046	0.8	0.564	1.6	0.43	2.7	
Location 7 0-6"	8/26/08	4.92	63.9	6.6	17.90	34.4	19.4	7.9	1.53	0.051	0.8	0.865	1.9	0.48	2.6	
Location 7 6-12"	8/26/08	4.55	68.7	6.4	6.88	34.6	15.4	11.6	2.33	0.004	1.0	0.707	1.6	0.43	2.4	
Location 8 0-6"	8/26/08	4.48	76.6	6.8	14.30	37.7	14.8	8.2	1.61	0.034	1.3	0.664	8.8	0.44	7.1	
Location 8 6-12"	8/26/08	4.53	57.5	7.1	6.48	36.1	11.9	11.7	2.40	0.016	1.0	0.814	3.1	0.36	3.0	
Location 9 0-6"	8/26/08	4.54	73.4	7.1	25.20	37.0	16.6	6.5	1.26	0.042	0.5	0.614	7.7	0.39	3.1	
Location 9 6-12"	8/26/08	3.83	78.4	7.1	22.30	31.5	13.2	7.9	1.67	0.063	0.6	0.396	4.4	0.24	4.6	
Location 10 0-6"	8/26/08	4.39	61.5	6.8	20.20	36.2	19.5	6.1	1.18	0.036	0.5	0.565	18.1	0.55	4.6	
Location 10 6-12"	8/26/08	4.12	61.8	6.8	7.06	31.8	19.9	6.5	1.28	0.019	0.6	0.371	5.4	0.32	4.5	
Location 11 0-6"	8/26/08	4.79	70.1	6.6	8.69	39.4	18.7	7.1	1.32	0.038	0.9	0.743	8.8	0.48	3.8	
Location 11 6-12"	8/26/08	3.38	63.7	6.6	5.04	27.0	11.7	8.0	1.81	0.024	0.8	0.365	2.3	0.32	4.4	
Location 12 0-6"	8/26/08	3.20	70.9	6.6	16.90	19.3	10.6	6.0	1.55	0.060	1.6	0.649	5.1	0.49	4.2	
Location 12 6-12"	8/26/08	3.60	75.1	7.0	7.69	27.6	13.4	8.6	1.91	0.020	1.1	0.443	1.6	0.40	5.0	
Location 13 0-6"	8/26/08	4.07	68.5	6.8	17.10	28.6	15.3	6.9	1.47	0.070	1.7	0.871	7.5	0.62	5.3	
Location 13 6-12"	8/26/08	3.68	70.3	7.2	7.08	26.0	15.3	8.7	1.92	0.015	1.1	0.413	1.4	0.38	3.9	
Location 14 0-6"	8/26/08	3.96	67.0	6.9	12.30	32.8	16.8	5.7	1.15	0.051	0.8	0.474	11.0	0.41	11.5	
Location 14 6-12"	8/26/08	4.24	64.2	6.9	6.33	32.2	18.1	8.6	1.72	0.035	0.6	0.449	2.6	0.51	3.7	
Location 15 0-6"	8/26/08	3.27	63.7	6.5	15.40	19.2	11.3	5.4	1.40	0.074	2.2	0.800	5.9	0.55	3.3	
Location 15 6-12"	8/26/08	2.71	74.8	6.6	9.77	16.4	10.8	6.4	1.75	0.018	1.2	0.394	1.9	0.70	4.4	
Location 16 0-6"	8/26/08	3.48	73.6	7.0	15.80	25.0	12.2	5.3	1.23	0.035	2.0	0.590	6.8	0.71	6.2	
Location 16 6-12"	8/26/08	3.84	77.4	7.4	8.46	32.2	14.1	7.9	1.65	0.035	1.1	0.271	2.7	0.57	4.2	
Average		3.89	66.21	6.96	11.61	28.24	14.57	7.32	1.59	0.04	1.17	0.53	5.68	0.49	4.55	
Background 0-6"	8/26/08	0.52	39.1	6.5	4.23	3.86	1.46	0.24	0.15	0.059	2.5	0.054	2.3	0.33	5.5	
Background 6-12"	8/26/08	0.59	55.5	7.1	4.29	4.08	2.01	0.66	0.38	0.072	1.6	0.024	2.9	0.42	5.1	

TABLE 7A
SATELLITE NO. 1
LAND APPLICATION FACILITY (IRRIGATOR #1)
ANNUAL VEGETATION DATA
2008

SAMPLE SITE SAMPLE DATE	8/21/2008	Quarter 1 (NW)	Quarter 2 (NE)	Quarter 3 (SE)	Quarter 4 (SW)	Background
TRACE METALS (mg/kg): SW3050 Dry Ash Extracted						
	Lower Limit of Detection					
Arsenic	0.05	ND	ND	ND	ND	ND
Barium	0.05	11.6	14.9	14.4	10.7	28.1
Boron	5	9	22	7	8	8
Selenium	0.05	7.5	13.6	11.7	13.3	1.1
RADIOMETRIC ($\mu\text{Ci/kg}$): SW3050 Dry Ash Extracted						
U-Nat		6.7E-05	2.2E-04	1.9E-04	1.3E-04	5.3E-05
U-Nat RL		2.0E-07	2.0E-07	2.0E-07	2.0E-07	2.0E-07
Ra226		6.7E-05	7.1E-05	5.6E-05	3.1E-05	8.0E-05
Ra226 ERR. EST. +/-		1.6E-05	1.3E-05	1.1E-05	1.3E-05	1.5E-05
Ra226 MDC		1.4E-05	1.0E-05	9.0E-06	1.3E-05	1.1E-05

TABLE 7B
SATELLITE NO. 2
LAND APPLICATION FACILITY (IRRIGATOR #2)
ANNUAL VEGETATION DATA
2008

SAMPLE SITE SAMPLE DATE	8/27/08	Quarter 1 (NW)	Quarter 2 (NE)	Quarter 3 (SE)	Quarter 4 (SW)	Background
TRACE METALS (mg/kg):						
SW3050 Dry Ash Extracted						
	Lower Limit of Detection					
Arsenic	0.05	ND	ND	ND	ND	0.6
Barium	0.05	14.3	14.0	15.7	11.0	12.4
Boron	5	21	27	20	18	6
Selenium	0.05	22.7	20.0	30.7	22.5	3.6
<hr/>						
RADIOMETRIC ($\mu\text{Ci/kg}$):						
SW3050 Dry Ash Extracted						
U-Nat		3.6E-03	3.4E-03	9.5E-03	5.3E-03	3.8E-04
U-Nat RL		2.0E-07	2.0E-07	2.0E-07	2.0E-07	2.0E-07
Ra226		5.7E-05	5.6E-05	8.1E-05	4.7E-05	2.3E-05
Ra226 ERR. EST. +/-		6.0E-06	6.5E-06	5.7E-06	5.5E-06	6.0E-06
Ra226 MDC		2.9E-06	3.4E-06	1.9E-06	2.9E-06	5.7E-06

**TABLE 8
SATELLITE NO. 1
LAND APPLICATION FACILITY (IRRIGATOR NO. 1)
MONTHLY IRRIGATION FLUID DATA
2008**

IRRIGATION CYCLE		<u>Jul-08</u>	<u>Aug-08</u>	<u>Sep-08</u>	<u>Oct-08</u>	<u>Nov-08</u>	<u>Dec-08</u>
VOLUME (AF)							
MAJOR IONS (mg/L)	Reporting Limit						
Calcium	1.0						
Magnesium	1.0	Irrigator	Irrigator	Irrigator	Irrigator	Irrigator	Irrigator
Sodium	1.0	Did	Did	Did	Did	Did	Did
Potassium	1.0	Not	Not	Not	Not	Not	Not
Bicarbonate	1.0	Operate	Operate	Operate	Operate	Operate	Operate
Sulfate	1.0						
Chloride	1.0						
NON-METALS							
TDS @ 180° C (mg/L)	10.0						
pH (standard units)	0.010						
SAR	0.01						
TRACE METALS (mg/L)							
Arsenic	0.001						
Barium	0.10						
Boron	0.10						
Selenium	0.001						
RADIOMETRIC							
U-nat (uCi/mL)	2.03E-10						
Ra-226 (uCi/mL)	2.00E-10						
Ra Err. Est. +/-							

TABLE 9
SATELLITE NO. 2
LAND APPLICATION FACILITY (IRRIGATOR NO. 2)
MONTHLY IRRIGATION FLUID DATA
2008

IRRIGATION CYCLE		<u>Jul-08</u>	<u>Aug-08</u>	<u>Sep-08</u>	<u>Oct-08</u>	<u>Nov-08</u>	<u>Dec-08</u>
VOLUME (AF)		31.51	32.57	26.84	11.64		
DATE SAMPLED		22-Jul	18-Aug	12-Sep	9-Oct		
MAJOR IONS (mg/L)		Reporting Limit					
Calcium	1.0	449	452	420	416	Irrigator	Irrigator
Magnesium	1.0	124	122	116	112	Did	Did
Sodium	1.0	94	100	94	95	Not	Not
Potassium	1.0	31	32	30	31	Operate	Operate
Bicarbonate	1.0	161	167	156	163		
Sulfate	1.0	780	944	847	804		
Chloride	1.0	594	589	596	0.2		
NON-METALS							
TDS @ 180° C (mg/L)	10.0	2340	2480	2460	2450		
pH (standard units)	0.010	7.84	7.99	7.8	7.95		
SAR	0.01	1.0	1.1	1.0	1.1		
TRACE METALS (mg/L)							
Arsenic	0.001	ND	0.005	0.005	ND		
Barium	0.1	0.1	0.1	ND	ND		
Boron	0.10	ND	0.10	ND	0.20		
Selenium	0.001	0.796	0.727	0.512	0.416		
RADIOMETRIC							
U-nat (uCi/mL)	2.03E-10	3.72E-07	3.43E-07	3.18E-07	3.50E-07		
Ra-226 (uCi/mL)	2.00E-10	1.1E-08	2.1E-06	2.3E-09	5.9E-09		
Ra Err. Est. +/-		1.0E-09	3.2E-07	3.1E-10	5.2E-10		

TABLE 10A
SATELLITE NO. 2
RADIUM TREATMENT SYSTEM DISCHARGE
MONTHLY RADIUM GRAB SAMPLES
2008

SAMPLE DATE		<u>Jul-08</u>	<u>Aug-08</u>	<u>Sep-08</u>	<u>Oct-08</u>	<u>Nov-08</u>	<u>Dec-08</u>
RADIOMETRIC	Reporting Limit						
Ra-226 (uCi/mL)	2.00E-10	1.90E-09	4.30E-09	7.50E-10	1.20E-09	2.20E-09	1.50E-08
Ra Err. Est. +/-		3.30E-10	4.60E-10	1.80E-10	2.20E-10	2.90E-10	8.50E-10
Eff. Con. Limit	6.00E-08						

TABLE 10B
SATELLITE NO. 3
RADIUM TREATMENT SYSTEM DISCHARGE
MONTHLY RADIUM GRAB SAMPLES
2008

SAMPLE DATE		<u>Jul-08</u>	<u>Aug-08</u>	<u>Sep-08</u>	<u>Oct-08</u>	<u>Nov-08</u>	<u>Dec-08</u>
RADIOMETRIC	Reporting Limit						
Ra-226 (uCi/mL)	2.00E-10	4.70E-10	3.40E-10	3.00E-11	6.80E-10	2.60E-08	9.80E-10
Ra Err. Est. +/-		2.10E-10	1.70E-10	1.00E-10	1.70E-10	8.70E-10	2.30E-10
Eff. Con. Limit	6.00E-08						

TABLE 11A
SATELLITE NO. 1
LAND APPLICATION FACILITY (IRRIGATOR NO. 1)
ANNUAL SOIL WATER DATA
2008

SAMPLE SITE	2'	4'	6'
	NW¼	NW¼	NW¼
	NE¼	NE¼	NE¼
	SW¼	SW¼	SW¼
	SE¼	SE¼	SE¼
	Lysimeter Composite	Lysimeter Composite	Lysimeter Composite

SAMPLE DATE

MAJOR IONS (mg/L)	REP. LIMIT
Bicarbonate	1.0
Sulfate	1.0
Chloride	1.0

**INSUFFICIENT
 WATER FOR
 SAMPLING**

NON-METALS

Cond (umho/cm)	1.0
pH (standard units)	0.010

TRACE METALS (mg/L)

Boron	0.10
Selenium	0.001

RADIOMETRIC

U-nat: (mg/L)	0.0003
Ra-226: (pCi/L)	0.2
Ra Err. Est. +/-	
U-nat: (uCi/mL)	2.03E-10
Ra-226: (uCi/mL)	2.00E-10
Ra Err. Est. +/-	

**TABLE 11B
 SATELLITE NO. 2
 LAND APPLICATION FACILITY (IRRIGATOR NO. 2)
 ANNUAL SOIL WATER DATA
 2008**

SAMPLE SITE	2'	4'	6'
	NW¼	NW¼	NW¼
	NE¼	NE¼	NE¼
	SW¼	SW¼	SW¼
	SE¼	SE¼	SE¼
	Lysimeter Composite	Lysimeter Composite	Lysimeter Composite

SAMPLE DATE

MAJOR IONS (mg/L)	REP. LIMIT
Bicarbonate	1.0
Sulfate	1.0
Chloride	1.0

**INSUFFICIENT
 WATER FOR
 SAMPLING**

NON-METALS	
Cond (umho/cm)	1.0
pH (standard units)	0.010

TRACE METALS (mg/L)	
Boron	0.10
Selenium	0.001

RADIOMETRIC	
U-nat: (mg/L)	0.0003
Ra-226: (pCi/L)	0.2
Ra Err. Est. +/-	
U-nat: (uCi/mL)	2.03E-10
Ra-226: (uCi/mL)	2.00E-10
Ra Err. Est. +/-	

**TABLE 12
 SATELLITE NO. 2
 PURGE STORAGE RESERVOIR
 SHALLOW MONITORING WELLS
 WATER LEVEL AND WATER QUALITY DATA
 2008**

SAMPLE SITE	Shallow Well No. 1 (South)		Shallow Well No. 2 (East)		
	23-Jul-08	10-Dec-08	23-Jul-08	10-Dec-08	
WATER LEVEL (DTW)	13.2	13.2	7.5	10.5	
MAJOR IONS (mg/L)	Reporting Limit				
Bicarbonate	1.0	405	227	301	243
Sulfate	1.0	2480	2500	2320	2530
Chloride	1.0	314	198	384	326
NON-METALS					
Cond ($\mu\text{mho/cm}$)	1.0	4990	4440	5180	5190
pH (standard units)	0.01	7.53	7.95	7.19	7.19
TRACE METALS (mg/L)					
Barium	0.001	ND	ND	ND	ND
Selenium	0.0025	0.9340	2.0900	0.0630	0.0460
RADIOMETRIC					
U-nat ($\mu\text{Ci/mL}$)	6.77E-10	1.03E-06	2.22E-07	3.62E-08	2.59E-08
Ra-226 ($\mu\text{Ci/mL}$)	2.00E-10	1.40E-09	1.50E-09	5.20E-09	1.20E-09
Ra-226 Err. Est. +/- ($\mu\text{Ci/mL}$)		3.00E-10	2.30E-10	2.00E-10	2.10E-10

TABLE 13

2008 DOSE TO PUBLIC CALCULATIONS

<u>Monitoring Location/Parameter</u>	<u>Average Concentration/Annual Gamma Dose</u>	<u>Average Concentration/Annual Gamma Dose Above Background</u>	<u>10 CFR 20 App. B, Table 2 Values</u>	<u>Dose to the Public mrem/yr¹</u>
Dave's Water Well (Background)				
Uranium (µCi/ml)	1.08E-16		9.00E-14	
Thorium-230 (µCi/ml)	2.04E-16		2.00E-14	
Radium-226 (µCi/ml)	4.08E-16		9.00E-13	
Lead-210 (µCi/ml)	1.29E-14		6.00E-13	
Radon-222 (µCi/ml)	1.1E-09		1.00E-08	
Gamma (mrem/yr)	159		--	
TEDE (mrem/yr)				Background
Fenceline (Restricted Area Boundary)²				
Uranium (µCi/ml)	3.94E-16	2.86E-16	9.00E-14	0.16
Thorium-230 (µCi/ml)	2.45E-16	4.10E-17	2.00E-14	0.10
Radium-226 (µCi/ml)	7.62E-16	3.54E-16	9.00E-13	0.02
Lead-210 (µCi/ml)	9.16E-15	0	6.00E-13	0.00
Radon-222 (µCi/ml)	1.7E-09	6.00E-10	1.00E-08	3.00
Gamma (mrem/yr)	149	0	--	0
TEDE (mrem/yr)				3.28
Hollman (Nearest Downwind Residence)				
Uranium (µCi/ml)	3.89E-16	2.81E-16	9.00E-14	0.16
Thorium-230 (µCi/ml)	2.44E-16	4.00E-17	2.00E-14	0.10
Radium-226 (µCi/ml)	4.53E-16	4.50E-17	9.00E-13	0.00
Lead-210 (µCi/ml)	7.04E-15	0	6.00E-13	0.00
Radon-222 (µCi/ml)	1.10E-09	5.00E-11	1.00E-08	0.25
Gamma (mrem/yr)	169	1.00E+01	--	10.00
TEDE (mrem/yr)				10.51

Notes:

TEDE
<
1

Total Effective Dose Equivalent (mrem/yr)

One or more of the Lower Limits of Detection (LLD) used to determine average concentration.

Dose from radionuclides (mrem/yr) = $\frac{\text{Avg concentration above background in } \mu\text{Ci/ml}}{10 \text{ CFR } 20 \text{ AppB, Table 2 value in } \mu\text{Ci/ml}} * 50 \text{ mrem}$

ATTACHMENT B

**SAFETY AND ENVIRONMENTAL
EVALUATIONS COMPLETED IN 2008**

Inter-Company Memorandum

Date: October 23, 2008
To: Tom Cannon, John McCarthy, Krista Wenzel, and S. P. Collings
From: Dawn Kolkman - Environmental Coordinator
Re: Safety and Environmental Review Panel (SERP): EHS Management Replacement and the addition of Assistant EHS Manager /RSO
cc:

A. INTRODUCTION

Starting in November of 2008, the position of Environmental Health and Safety Assistant Manager and RSO will be added to the Organizational Reporting Structure (Figure 9-1 of NRC License condition SUA-1548). At this time John McCarthy will be assuming the position.

The SERP reviewed this change in relation to the qualifications described in the current License Application. The results of the SERP review are presented in the following sections.

B. SAFETY AND ENVIRONMENTAL REVIEW PANEL (SERP)

NRC License condition 9.4d of SUA-1548 requires that any changes, test or experiments made under the Performance Based License Condition be evaluated by a SERP consisting of at least three individuals. One member must have management expertise and have the financial and management responsibility for approving changes. The second member must have operational and/or construction expertise and have responsibility for implementing any operational changes. The third member must be the Radiation Safety Officer (RSO), or equivalent, with the responsibility of assuring that the proposed activities will conform to radiation safety and environmental requirements. Individuals selected to perform this SERP review include:

T. Cannon- General Manager Operations
J. McCarthy- Environmental, Health, and Safety Manager /RSO
D. Kolkman- Environmental Coordinator

C. EVALUATION OF PROPOSED CHANGE/TEST

The SERP met on October 24, 2008 to review the change to the License Application. Work experience which includes industrial process/production experience and industrial process/production management.

The SERP evaluated the temporary change in management against the conditions stated in the License Condition 9.4b as shown in the table below. The SERP concluded that these changes satisfied those conditions.

LICENSE REQUIREMENT	YES	NO	N/A
Does the proposed change, test, and/or experiment conflict with the ALARA principle?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Does the proposed change, test, and/or experiment conflict with PRI's ability to meet all applicable regulations including NRC, WDEQ, and EPA?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Is there degradation in the essential safety or environmental commitments in the license application, or provided in the approved reclamation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Does the proposed change, test, and/or experiment conflict with any requirement specifically stated in the source material license?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Is the proposed change, test, and/or experiment not consistent with the conclusions of actions analyzed in the facilities Environmental Assessment (EA) or supplemental EAs?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Result in any increase in the frequency of occurrence of an accident previously evaluated in the license application (as updated).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Result in any increase in the likelihood of occurrence of a malfunction of a structure, system, or component (SSC) important to safety previously evaluated in the license application (as updated).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Result in any increase in the consequences of an accident previously evaluated in the license application (as updated).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Result in any increase in the consequences of a malfunction of an SSC previously evaluated in the license application (as updated).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Create a possibility for an accident of a different type than previously evaluated in the application (as updated).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Create a possibility for a malfunction of an SSC with a different result than previously evaluated in the license application (as updated).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Result in the departure from the method of evaluation described in the license application (as updated) used in establishing the final safety evaluation report or the environmental assessment (EA) or technical evaluation reports (TERs) or other analysis and evaluations. SSC means any SSC which has been referenced in a NRC staff SER, TER, EA, or environmental impact statement (EIS) and all supplements and amendments.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

D. CONCLUSIONS

The SERP concluded that the addition of Environmental Health and Safety Assistant would not require a License Amendment and does not conflict with any other regulatory requirement. Also, this change will not result in the degradation of any essential safety or environmental commitments in the License Application, Environmental Assessments, or current operating procedures.

Signature: [Signature] Date: 10/27/08

Signature: [Signature] Date: 10/29/08

Signature: Dennis Kalkman EHS Coordinator Date: 10/29/08

Signature: _____ Date: _____



CAMECO RESOURCES
*Smith Ranch-Highland
Operation*

Inter-Office Memo

To: Tom Cannon & John McCarthy

From: Dawn Kolkmar

Date: October 23, 2008

Cc:

Subject: ORC/SERP Mine Unit 9 Hydrologic Test Report

A. INTRODUCTION

In accordance with the NRC requirements, the Hydrologic Test Document, baseline water quality data, and monitoring well Upper Control Limits (UCLs) must be reviewed by a Safety and Environmental Review Panel (SERP) prior to Wellfield startup to ensure that the results of the hydrologic testing and the planned mining activities are consistent with technical requirements and do not conflict with any requirement stated in the NRC License. In addition to review of the above information, the SERP conducts an Operations/Technical Review, Environmental/Radiation Safety/Industrial Safety review, and a Compliance review for a new Wellfield prior to start-up.

A SERP was convened on 10/23/08 to perform the reviews described above for the start-up of the Wellfield. The 9-Wellfield is currently under development and injector and production operations are nearly ready for start-up at Headframe 2, 3, and 4. Preoperational hydrologic testing and baseline water quality data have been completed and submitted to the WDEI-2007. The results of the SERP review are presented in the following sections.

B. SAFETY AND ENVIRONMENTAL REVIEW PANEL (SERP)

NRC License condition 9.4c of SUA-1548 requires that any changes, test, or experiments made under the Performance Based License Condition be evaluated by a SERP consisting of at least three individuals. One member must have management expertise and have the financial and management responsibility for approving changes. The second member must have operational and/or construction expertise and have responsibility for implementing any operational changes. The third member must be the Radiation Safety Officer (RSO), or equivalent, CRSC, with the responsibility of assuring that the proposed activities will conform to radiation safety and environmental requirements. Members selected to perform this SERP review include

SERP Member	TITLE
<p>Mr. [Name]</p> <p>Mr. [Name]</p> <p>Mr. [Name]</p>	<p>Mr. [Name]</p> <p>Mr. [Name]</p> <p>Mr. [Name]</p>

C. EVALUATION OF PROPOSED CHANGE TEST

Operations Technical Review

The test results were reviewed and compared with the requirements stated in NRC License S. A-1548, Docket No. 40-8964, Chapter 5, 5.1.3 "Mine Unit Hydrological Test Document". As stated in 5.1.3 a Safety and Environmental Review Panel is to ensure that the document contains the eight listed items.

- P. 1-1 1. A description of the proposed mine unit (location, extent, etc.)
- Fig. 1-2 2. A map(s) showing the proposed production patterns and locations of all monitor wells.
- Fig. 2-1 to 2-7 3. Geologic cross-sections and cross-section location maps.
- Fig. 2-8 4. Isopach maps of the Production Zone sand, overlying confining unit and underlying confining unit.
- Chp. 3-4 5. Discussion of how the hydrologic test was performed, including well completion reports.
- Chp. 4 6. Discussion of the results and conclusions of the hydrologic test including pump test raw data, drawdown match curves, potentiometric surface maps, water level graphs, drawdown maps and when appropriate, directional transmissivity data and graphs.
- Chp. 5 7. Sufficient information to show that wells in the monitor well ring are in adequate communication with the production pattern.
- N/A 8. Any other information pertinent to the area tested will be included and discussed.

Environmental/Safety Review

It was determined that there is no increased environmental or safety risk from start-up of the S-Wellfield and current wellfield start-up procedures are adequate (see attached Risk Assessment).

Compliance Review

The SERP evaluated the start-up of S-Wellfield against the conditions stated in the License Condition 5.1-a shown in the table below. The SERP concludes that the start-up of S-Wellfield satisfies these conditions.

SERP Evaluation Checklist

NRC LICENSE REQUIREMENT	YES	NO	N/A
Does the proposed change, test, and/or experiment conflict with the ALARA principle?			
Does the proposed change, test, and/or experiment conflict with the Company's ability to meet all applicable NRC regulations?			
Is there degradation in the essential safety or environmental commitments in the license application, or provided in the approved reclamation plan?			
Does the proposed change, test, and/or experiment conflict with any requirement specifically stated in the source material license?			
Is the proposed change, test, and/or experiment not consistent with the conclusions of actions analyzed in the facilities Final Safety Evaluation Report (FSER)?			
Is the proposed change, test, and/or experiment not consistent with the conclusions of actions analyzed in the facilities Environmental Assessment (EA) or supplemental EAs?			
Does the proposed change, test, and/or experiment result in any increase in the frequency of occurrence of an accident previously evaluated in the license application (as updated)?			
Does the proposed change, test, and/or experiment result in any increase in the likelihood of occurrence of a malfunction of a structure, system, or component (SSC) important to safety previously evaluated in the license application (as updated)?			
Does the proposed change, test, and/or experiment result in any increase in the consequences of an accident previously evaluated in the license application (as updated)?			
Does the proposed change, test, and/or experiment result in any increase in the consequences of a malfunction of an SSC previously evaluated in the license application (as updated)?			
Does the proposed change, test, and/or experiment create a possibility for an accident of a different type than previously evaluated in the application (as updated)?			
Does the proposed change, test, and/or experiment create a possibility for a malfunction of an SSC with a different result than previously evaluated in the license application (as updated)?			
Does the proposed change, test, and/or experiment result in the departure from the method of evaluation described in the license application (as updated) used in establishing the final safety evaluation report or the environmental assessment (EA) or technical evaluation report (TER) or other analysis and evaluations? (SSC means any SSC which has been referenced in a NRC staff SER, TER, EA, or environmental impact statement (EIS) and all supplements and amendments.)			

B. CONCLUSIONS

The ORC SERF concluded the document "Mine Unit C Hydrologic Test Report" did contain all of the information listed in the eight point questionnaire.

SERF Member Signatory Approvals

Signature: _____ Date: _____

L. ATTACHEMENTS (if any)

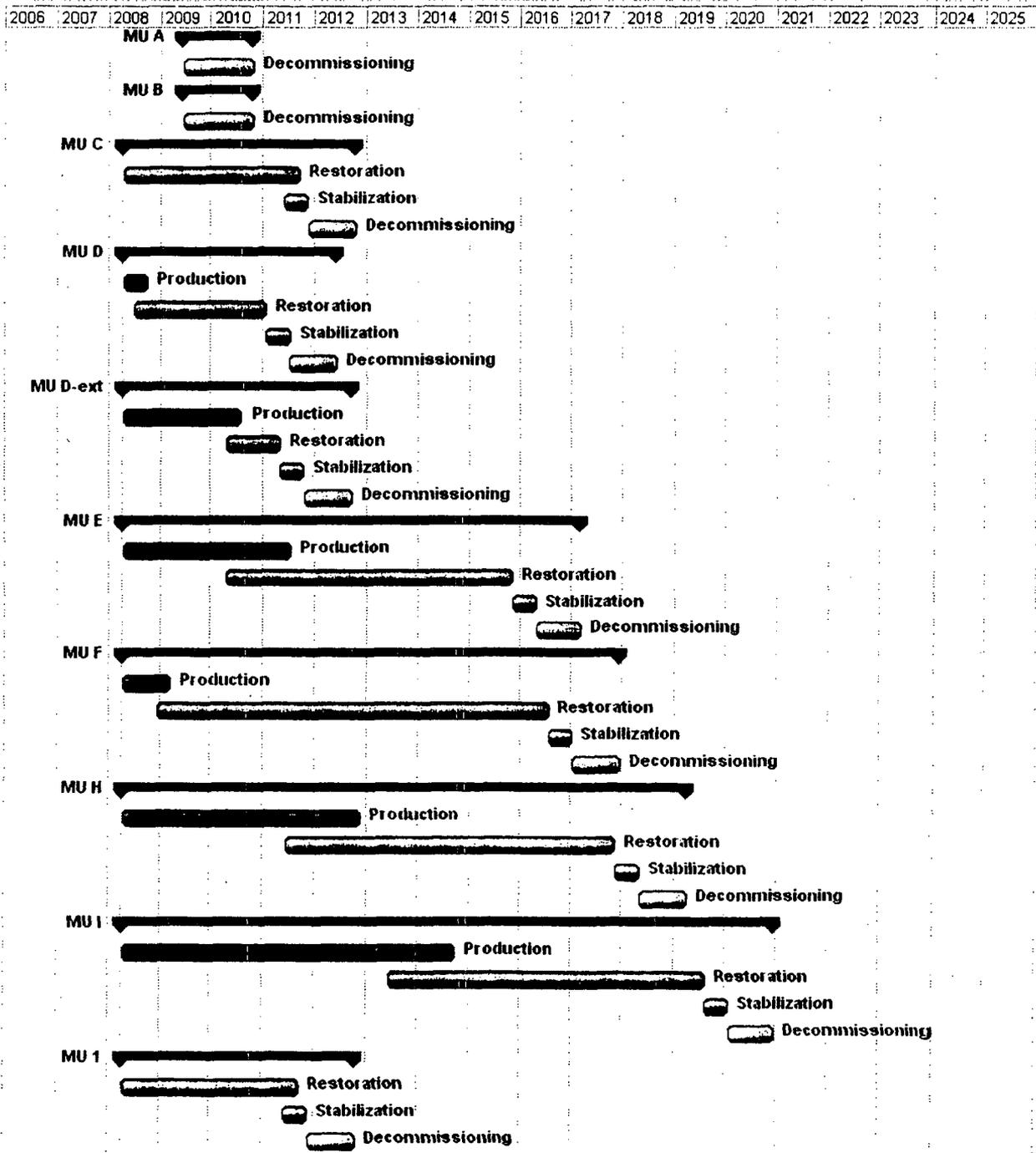
ANNUAL REPORT – PERMIT 633

June 18, 2008 through June 17, 2009

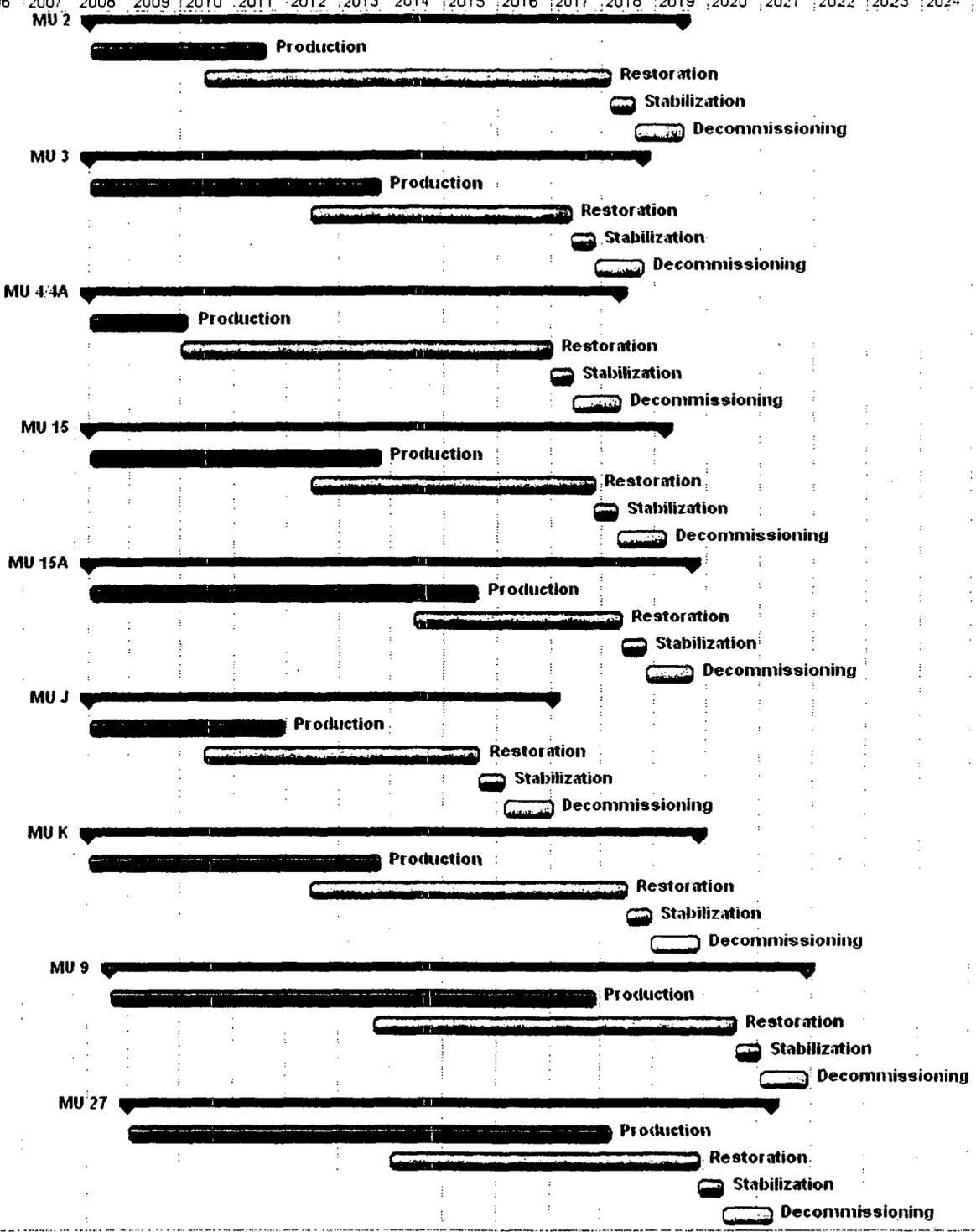
Appendix B

Mining Operations Plan

Figure 7 - Mine Unit Operations Schedule



2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025



ANNUAL REPORT – PERMIT 633

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Appendix C

Delineation Drilling

TABLE 10-1
DELINEATION DRILLING REPORT
2008-2009 ANNUAL REPORT PERMIT 633

HOLE ID	DEPTH	DRILL DATE	SEC	TWNSHP	RANGE	EASTING	NORTHING	SURFACE OWNERSHIP
MU 15A								
11-1199	640	6/9/2008	11	T35N	R74W	354854	855733	Smith Land Company
11-1200	560	6/11/2008	11	T35N	R74W	354603	856505	Smith Land Company
11-1201	600	2/25/2009	11	T35N	R74W	354940	855846	Smith Land Company
11-1202	600	2/27/2009	11	T35N	R74W	354935	855846	Smith Land Company
MU 9								
17-936	910	7/8/2008	17	T35N	R74W	339630	854750	Smith Land Company
17-939	700	9/25/2008	17	T35N	R74W	338660	854013	Smith Land Company
17-940	950	2/5/2009	17	T35N	R74W	338345	853970	Smith Land Company
17-961	910	2/23/2009	17	T35N	R74W	339962	854758	Smith Land Company
18-853	960	10/1/2008	18	T35N	R74W	338141	853311	Smith Land Company
18-856	950	10/3/2008	18	T35N	R74W	337870	853440	Smith Land Company
18-857	950	10/6/2008	18	T35N	R74W	337870	853446	Smith Land Company
18-858	950	10/8/2008	18	T35N	R74W	337988	853243	Smith Land Company
18-859	960	10/16/2008	18	T35N	R74W	338150	853384	Smith Land Company
18-860	950	10/23/2008	18	T35N	R74W	337982	853310	Smith Land Company
18-861	960	10/24/2008	18	T35N	R74W	337762	852958	Smith Land Company
18-863	960	10/27/2008	18	T35N	R74W	337772	852958	Smith Land Company
18-865	940	10/31/2008	18	T35N	R74W	337442	852666	Smith Land Company
18-866	940	10/31/2008	18	T35N	R74W	337710	853066	Smith Land Company
18-867	940	11/3/2008	18	T35N	R74W	337734	853187	Smith Land Company
18-868	920	11/13/2008	18	T35N	R74W	337227	852619	Smith Land Company
18-870	920	3/4/2009	18	T35N	R74W	336581	852352	Smith Land Company
18-875	960	3/19/2009	18	T35N	R74W	335445	851715	Magee Revocable Trust
18-876	920	4/1/2009	18	T35N	R74W	336517	852342	Smith Land Company
18-877	960	4/21/2009	18	T35N	R74W	335450	851645	Magee Revocable Trust
18-878	960	4/23/2009	18	T35N	R74W	335333	851517	Magee Revocable Trust
18-879	970	4/30/2009	18	T35N	R74W	335160	851655	Magee Revocable Trust
18-880	940	5/15/2009	18	T35N	R74W	335030	851388	Magee Revocable Trust
8-347	300	7/1/2008	8	T35N	R74W	340265	855136	Smith Land Company
MU 10								
16-365	980	3/13/2009	16	T35N	R74W	343650	853550	State of Wyoming
16-366	980	3/17/2009	16	T35N	R74W	343800	853500	State of Wyoming
16-368	960	3/17/2009	16	T35N	R74W	343900	853100	State of Wyoming
16-370	1000	3/18/2009	16	T35N	R74W	344150	852950	State of Wyoming
16-373	1000	4/1/2009	16	T35N	R74W	344250	852650	State of Wyoming
16-375	1000	4/1/2009	16	T35N	R74W	344200	852850	State of Wyoming
17-952	1000	3/13/2009	17	T35N	R74W	343200	853500	Smith Land Company
17-953	980	3/3/2009	17	T35N	R74W	342750	853500	Smith Land Company
17-954	980	3/11/2009	17	T35N	R74W	342550	853450	Smith Land Company
17-955	980	3/3/2009	17	T35N	R74W	342750	853700	Smith Land Company
17-956	980	2/27/2009	17	T35N	R74W	342400	853700	Smith Land Company
17-958	1020	3/11/2009	17	T35N	R74W	343300	853700	Smith Land Company
17-960	980	3/4/2009	17	T35N	R74W	343200	853500	Smith Land Company
17-962	980	3/5/2009	17	T35N	R74W	342397	853704	Smith Land Company

The 7 Drawings specifically referenced in the Index Sheet have been processed into ADAMS.

These drawings can be accessed by within the ADAMS package or by performing a search on the Document/Report Number.

D-01 through D-07