Cameco Resources
Smith Ranch Highland Uranium Project
Permit 633
2013-2014 Annual Report

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I. TITLE CERTIFICATION

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

Craig Hiser **Mine Manager**

Print Name and Title of Principal Executive Officer or Authorized Agent

For Craig Hiser

Signature of Principal Executive Officer or Authorized Agent Date 7/17/14

II. MINE OPERATIONS

A. Operating Wellfields

1. *A map and well completion details table depicting the identification and location of all operating wellfields.*
2. *A map and well completion details table depicting the location of all wells including deep disposal wells installed in conjunction with the mining activity.*

A list of maps associated with the 2013-2014 Annual Report, Smith Ranch-Highland Mines, Cameco Resources (Cameco), Permit 633, can be found in the Table of Contents.

B. Water Balance/Hydrology

1. *The total quantity of recovery fluid injected and total quantity of recovery fluid extracted during the reporting period for each wellfield area, including a description of how these quantities were determined.*

Water balance data is located on Table II-B.1. These figures were determined by calculating the sum of the injection composite (IC) Mag Meters and the Bleed Mag Meters.

2. *An updated potentiometric surface map(s) for all aquifers that are or may be affected by the mining operation may be requested at the Administrator's discretion.*

Potentiometric surface maps have not been requested to be included in this report.

3. *Summarize the handling of the wastewater stream.*

A description of the handling of wastewater streams can be found in Permit 633, Operation Plan, Section 4.1.4. Information below details quantities disposed during the report period.

Deep Disposal Wells

Total gallons injected for deep disposal wells for the report period are represented in the following table:

Well Name	Total Gallons Injected
DDW#1	24,492,581
DDW#2	36,218,339
SRHUP #6	13,933,932
SRHUP #9	7,482,668
SRHUP #10	6,223,037
Morton 1-20	12,686,057
Vollman 33-27	11,929,128

During the report period, installation of the SRHUP #7 commenced but was not completed. Waste water injection wells SRHUP #7 and REY-1 were not operational during the report period.

Land Application

During the report period, Satellite No. 1 Land Application Facility (Irrigator #1) was not in operation. Historical fluid volumes are summarized in Table II-B.2. Total fluid volumes applied, during the report period at Satellite No. 2 Land Application Facility (Irrigator #2) are summarized in Table II-B.3.

C. Spills

1. *A summary of all reportable spills during the reporting period, including dates of occurrence, location, quantity, quality, extent of affected area shown on a map with GPS points and causes.*

There were a total of five (5) reportable spills during the report. A complete summary of reportable spills is contained in Table II-C.1.

D. Excursions

1. *Summarize all wells on or off excursion during the report period and include any existing excursion mitigation costs in the bond as a line item (reference line item in surety).*

During the report period, four (4) monitor wells were on excursion; Well CM-032 in Mine Unit C, Wells DM-003 and DM-004 in Mine Unit D, and Well KMO-007 in Mine Unit K.

Monitor Well CM-032, Mine Unit C

Monitor Well CM-032 was sampled August 6, 2013 resulting in an exceedance in two parameters of the Upper Control Limits (UCLs), alkalinity and conductivity. As required two (2) confirmation samples were collected. The first sample on August 7, 2013 did not indicate an excursion. However, the second sample collected on August 8, 2013 confirmed the excursion. Further examination of Monitor Well CM-032, as it related to site geologic and hydrologic characteristics, revealed that there is a zone of elevated hydraulic conductivity in the area between the well and the adjacent production zone potentially acting as a conduit for flow from the wellfield to the monitoring well location. Excursion control pumping was initiated and the well was deemed off excursion on November 26, 2013.

Monitor Well DM-003 and DM-004, Mine Unit D

Monitor Well DM-003 continues to remain on excursion since the initial sample date and excursion confirmation in November 2009. Cameco has communicated to Wyoming Department of Environmental Quality (WDEQ) - Land Quality Division (LQD) that the excursion at this well is likely a result of the underground working located beneath Mine Unit C, D and E. A treatment plan to clean up the underground working and mitigate the excursion at Well DM-003 was submitted to WDEQ-LQD during the previous report period. Installation of infrastructure needed to implement the plan began in May 2013 and was completed in September 2013. Initial start-up of the underground workings treatment plan commenced on November 6, 2013 and operated through December 5, 2013. At that time the treatment plan was suspended for further evaluation of the wells being used in the project.

Monitor Well DM-004 was sampled December 11, 2013 resulting in the exceedance of two UCL parameters, chloride and alkalinity. A confirmation sample followed on December 12, 2013, resulting in excursion status. This well is near Monitor Well DM-003 and is likely impacted by the underground workings. After confirmation of the excursion at Monitor Well DM-004 the WDEQ-LQD gave concurrence to again initiate flow for the underground workings treatment plan. Flow commenced on December 14, 2013 and has continued through the report period.

Monitor Well KMO-007, Mine Unit K

Monitor Well KMO-007 continues to remain on excursion since the initial sample date of March 8, 2013 due to the exceedance of two UCL parameters, alkalinity and conductivity. On August 28, 2013 investigation findings were presented and discussed with WDEQ-LQD. At that time it was acknowledged that the excursion at KMO-007 was atypical, isolated, not indicative of production fluid, and most likely the result of natural variability. Cameco and WDEQ-LQD agreed that continued monitoring of the well would be maintained without any corrective actions for the remainder of 2013. At the end of 2013 the excursion would be re-evaluated based on the following:

- If the parameter concentrations remained stable a UCL adjustment would be made.
- If the parameter concentrations gradually trend downward over time, weekly monitoring would continue, unless concentrations dropped below the UCL's, then regular compliance monitoring would resume.
- If the parameter concentrations trend up over time, further investigative actions would be needed with an updated Compliance Plan and Schedule provided to WDEQ-LQD.

On February 20, 2014 proposed UCL adjustments were presented to WDEQ-LQD. Water quality graphs for KMO-007 and adjacent wells KMO-006 and KMO-008, were presented to demonstrate that the concentration increase is isolated to KMO-007. A non-

significant revision (NSR), to adjust the UCL's, was being prepared by Cameco at the end of the report period with submission anticipated for May 2014.

For further detailed mitigation efforts for wells on excursion, reference the Monthly Excursion Status Reports and Quarterly Excursion Monitoring Report. Existing excursion mitigation costs for Monitor Wells DM-003 and DM-004 are included in the Mine Unit C groundwater Restoration estimate in the Highland Operation surety document (page 20) designated as C Haul Drifts.

E. Mechanical Integrity Testing For Existing Wells

1. Annual summary, i.e. total number of wells, passed, failed, abandoned, replaced.

During the report period, 1,672 wells were Mechanical Integrity Tested (MIT). Of those, 1,591 passed MIT and 81 failed MIT. One hundred (100) wells were plugged and zero (0) were replaced.

F. New Disturbances During Report Period

1. List the depth and volume of topsoil and subsoil salvaged and stockpiled. Show all stockpiles both long term and short term on a map. Include the topsoil pile identification number, and protection measures employed and show the location on a map.

For the purpose of long term topsoil piles, Cameco removes topsoil as described in Permit 633, Operation Plan, Section 3.2.1. Long term topsoil piles are tabulated in Table II-F.1 and are shown and labeled on Plates 1-1 through 1-15. Depths of topsoil removed range from 4 to 6 inches.

Short term topsoil piles for both wells and delineation holes can be correlated with their corresponding drill hole or well. Short term topsoil piles are located within 50 feet of the disturbance from which they were removed. On average, a short term topsoil pile has a volume of 3.3 yd^3, with depths removed ranging from 3 to 5 inches.

2. List the volume of subsoil removed and stockpiled. Include the location, subsoil stockpile identification number, and protection measures employed.

Subsoil piles can be correlated with the corresponding hole or well number and location. On average a delineation hole produces a subsoil pile with a volume of 17 yd^3 while a well will produce a subsoil pile of approximately 32 yd^3. Subsoil piles are located within 50 feet of the hole or well location.

3. *Describe New Buildings constructed, location, purpose, and square footage.*

During the report period, two (2) header houses were constructed in Mine Unit 3 (Header House 3-9 and 3-10) and three (3) header houses were constructed in Mine Unit 10 (Header House 10-1, 10-4 and 10-5). Header houses have an average footprint of 240 ft^2.

4. *Describe new ponds constructed including location, purpose, size, capacity, and disturbance acreage.*

No new ponds were constructed during the report period.

5. *New Roads and utilities such as pipelines and power lines shown on a map and total acres disturbed indicated. Other disturbances.*

All new roads and other disturbances, including their acreage disturbed are shown in Table II-F.2 and can be found on Plates 2 and 2-1 through 2-4.

G. New Wells, Wellfields Installed During the Reporting Period.

1. *A brief discussion of all new wells and wellfields installed during the reporting period. All new wells and wellfields should be located on the annual report map.*

During the report period, construction continued in three (3) mine units. One (1) Class I Deep Injection Well was installed.

Mine Unit 10

Cameco completed the drilling, construction and installation for wells in three (3) header houses networks in Mine Unit 10 (Header House 10-1, 10-4 and 10-5).

Mine Unit 7

Cameco has completed the drilling and well completions in Mine Unit 7. Construction is in the final phases with header house installation and preparation for operations to commence in 2014. This mine unit will contain seven (7) header houses.

Mine Unit 3 Extension

Cameco completed construction of Mine Unit 3 Extension with operation commencing at two (2) header houses (Header House 3-9 and 3-10).

Deep Injection Well SRHUP #7

Installation of the Class I Deep Injection Well SHRUP #7 was completed during the report period. Authorization to inject is expected during the next report period.

H. Report any stimulation activities for Class III Wells

1. Identify well ID, Type of stimulation and date.

Well stimulation activities are described in Permit 633, Operations Plan, Section 11.6 Well Stimulation (Work Over) Program. Well stimulation information is summarized in Table II-H.1.

I. Environmental monitoring

1. Summarize and interpret monitoring results for the reporting period for the following items: Groundwater (Tatum), Surface Water (Tatum), Wildlife (Include Monitoring as required by the Wyoming Game & Fish Dept or US Fish and Wildlife Service) (Dave Magee), Other (Weather Data and Possibly Air Monitoring) (Seth). Specifically, discuss any significant trends or anomalies. Include graphs, charts, and time plots to visually substantiate the summaries and interpretation.

Operational Monitoring

Excursion and restoration monitoring is described in Permit 633, Operations Plan, Section 8.0 Operational Hydrologic Monitoring Program.

During the report period, operational monitoring was conducted in Mine Units 2, 3, 9, 10, 15, F, H, I, J, K and K-North. Restoration progress sampling was conducted in Mine Units 1, 4, C, D and E. Monitoring results for all operational and restoration progress monitoring is submitted to LQD in Quarterly Excursion Monitoring Reports, which include discussion of any significant trends or anomalies. Wells on excursion are discussed in Section II.D above. Graphs, charts and time plots of these wells are provided in the Monthly Excursion Status Reports.

Ground Water

As part of the environmental monitoring program, the Nuclear Regulatory Commission (NRC) Source Material License requires sampling of operating domestic and stock wells located within 1 km (0.6 mile) of operating wellfields for natural uranium and radium 226. This data is submitted to the NRC in the Semi-Annual Effluent and Environmental Monitoring Reports and is available on the ADAMS database. The monitoring data collected during the report period shows compliance with all NRC requirements.

Surface Water

As part of the environmental monitoring program, the NRC Source Material License requires the sampling of Sage Creek, when stream flow is present, as well as numerous stock ponds that are located downstream of operating wellfields, once each quarter for natural uranium and radium 226. This data is submitted to the NRC in the Semi-Annual Effluent and Environmental Monitoring Reports and is available on the ADAMS

database. The monitoring data collected during the report period shows compliance with all NRC requirements.

Waste Disposal Wells

As part of Wyoming Department of Environmental Quality (WDEQ) – Water Quality Division (WQD) UIC Program deep disposal well data is submitted, in hard copy and in the GEM database, on a quarterly basis. Also, an annual report is submitted to the WDEQ-WQD summarizing the year's operation. The monitoring data collected during the report period shows compliance with all WDEQ-WQD requirements.

Meteorological Data

Annual meteorological data is collected from a weather station that can be found on Plate 1-8. The data is provided in Table II-I.1.

Wildlife Monitoring and Reporting

The Annual Wildlife Report is provided in Appendix C.

Land Application Monitoring

Land Application Fluid Monitoring

Collection of land application fluid was performed three (3) times from the Satellite 2 Irrigator. The results of the fluid quality are shown in Table II-I.2.

Soil Water

Collection of soil water samples has been unsuccessful. Cameco evaluated the operational integrity of the lysimeters at Irrigator #1 and 2 on June 29, 2009. A consultant recommended, based on the manufacturer's instructions, that Cameco attempt to prime the lysimeters in an effort to obtain adequate fluid for sampling. After priming, sampling of the lysimeters was attempted per the standard sampling method, however, insufficient water was present to collect and perform an analysis. The existing lysimeters at a depth of 4 feet, were determined to be non-functional and are anticipated to be replaced in May 2014.

In July of 2013, new lysimeters were installed at depths of 1.5, 3 and 6 feet below ground surface. The new lysimeters will be used to supplement the existing lysimeters at 4 feet and evaluate the viability of obtaining a soil water samples. Cameco will attempt to sample the soil waters at all lysimeters during the next reporting period. It should be noted that due to the soil conditions and lack of consistent moisture, the lysimeters may not yield enough soil water for a sample.

Soil/Vegetation Data

Satellite No. 1 and Satellite No. 2 Wastewater Land Application Facilities soil and vegetation sampling of the irrigation areas were conducted in August 2013. This data is collected to monitor and evaluate any adverse effects to the irrigation areas.

Vegetation data from the Satellite No. 1 and Satellite No. 2 Wastewater Land Application Facilities is provided in Tables II-I.3 and II-I.4, respectively. Comparison of data from the current report period with data from the previous report period shows increased uranium and radium-226 concentrations.

Background selenium concentrations together with the mean selenium concentration in the vegetation collected at Irrigator No. 1 and Irrigator No. 2 for the period of 1996 through 2013 is shown in Figures II-1 and II-2, respectively. A review of the selenium data in Figure II-1 shows that the mean selenium concentration at Irrigator No. 1 increased from the previous year. A review of the selenium data in Figure II-2 shows that the mean selenium concentration at Irrigator No. 2 also increased from the previous year. Another data point would be needed to further assess this potential anomaly.

Soil data from the Satellite No. 1 and Satellite No. 2 Wastewater Land Application Facilities are provided in Tables II-I.5 and II-I.6, respectively. Comparison of data from the report period to the previous report periods data shows a slight increase in the concentrations of uranium in the Satellite No.2 area; while radium concentrations showed little change. Uranium and radium concentrations are slightly elevated at the Satellite No. 1 area from the previous year. Background selenium concentrations together with the mean selenium concentration in the soil collected at Irrigator No. 1 and Irrigator No. 2 for the period of 1996 through 2013 is shown in Figures II-3 and II-4, respectively

Radium Treatment System (Selenium Treatment Plant)

Cameco collects grab samples each month to ensure that the radium-226 treatment system is adequately treating wastewater from Satellites No. 2 and No. 3 prior to discharge into Purge Storage Reservoir #2 (PSR-2). The monthly radium-226 grab samples for Satellite No. 2 and No. 3 are collected at the discharge point of the selenium treatment plant. Review of the monitoring data provided in Table II-I.7 shows that radium-226 concentrations were less than the 10 CFR 20, Appendix B, Effluent Concentration Limit of 6.00E-8 μCi/ml.

Satellite No. 2 Purge Storage Reservoir Shallow Wells

Shallow Wells No. 1 and No. 2 are located adjacent to the south and east sides of the reservoir, respectively. In addition, twelve (12) new monitoring wells were installed around the perimeter of PSR-2 for supplemental internal investigation regarding PSR-2. The wells are designated MW-1S through MW-12S. Monitoring of the wells was conducted in accordance with Purge Storage Reservoir No. 2 Shallow Groundwater Characterization Plan dated March 20, 2012. Within that plan it states that “sampling of

the currently installed and proposed wells will occur quarterly for a year". Samples were obtained starting in the first quarter 2012 and concluded in the fourth quarter 2013. Table II-I.8 contains the data for samples collected during the report period.

Impoundment Storage Ponds

The impoundment (storage) ponds are sampled semi-annually and analyzed for bicarbonate, calcium, chloride, sodium, sulfate, TDS, uranium, radium-226, and thorium-230. The East Pond was not in use during the report period. The results of water samples collected during the report period are provided in Table II-I.9.

J. Deviations or Unanticipated Events or Conditions

1. *Individually list and describe all deviations from the approved Mine Plan (do not include approved incidental boundary revisions (IBR) or non-significant revisions (NSRs) which were approved during the report period. These include but are not limited to the quantity of minerals removed, the number of acres affected, and the groundwater or waste water produced.*

Mine Unit 7

The current mine plan under Permit 633 was approved by the WDEQ-LQD, March 10, 2014 and references Attachment 1A under the Operation Plan, Section 1.5 Project Schedule. Attachment 1A shows Mine Unit 7 production beginning year 2012. Due to permitting delays, Mine Unit 7 is anticipated to enter production in 2014.

2. *List all unanticipated events or conditions and remedial actions taken during the report period. These could include the discovery of significant archaeological or paleontological importance, unanticipated subsidence, or faulting.*

SRHUP #7 Installation

The Bureau of Land Management (BLM) required a Class III Cultural Resource Survey and a visual contrast rating for the entire project due to the proximity of the Bozeman Trail. Initial surveys conducted prior to the 1980s were not acceptable. The installation of pipeline and power lines have been postponed until a survey is completed and approved.

K. Projected Operations

1. *Discuss the projected mining operations and disturbances for the coming year. Specifically, identify any new wells or wellfield packages that will be submitted for approval or installation.*

Mine Unit 7

Cameco anticipates completing Mine Unit 7 during the next report period. This will allow start-up of all seven (7) header houses when regulatory approval is granted. No new acreage will be disturbed in Mine Unit 7 in the next reporting period.

Mine Unit 10 Extension

Cameco anticipates approximately 300 cased wells to be installed, supporting five (5) header houses, along with 35 monitor wells. All wells will be cased with 5 inch PVC to an average depth of 840 feet. A hydrologic test plan and report will be submitted during the upcoming report period. It is estimated that the acreage disturbed for this area will be approximately 26 acres.

Mine Unit 27

Mine Unit 27 will be the first mine unit in the Reynolds Ranch area to be installed. The mine unit will consist of approximately 565 wells in 11 header houses. All wells will be cased with 5 inch PVC to an average depth of 800 feet. Monitor wells were installed and hydrologic testing was completed in 2008 and 2009. The Hydrologic Test Report will be submitted during the next report period. It is estimated that the disturbance will be 50 acres.

Mine Unit J Extension

Cameco is planning to develop Mine Unit J Extension during the next report period. The proposed mine unit includes approximately 160 wells in three (3) header houses. All wells will be cased with 5 inch PVC to an average depth of 480 feet. It is anticipated that 25 monitor wells will be installed and a hydrologic test will be completed. It is estimated that the disturbance will be 20 acres.

2. *Provide the general location, number of holes, diameter, and average depth of drill holes in the next reporting period.*

Mine Unit 8

Cameco will continue delineation drilling in Mine Unit 8 that was initiated in the previous report period. It is estimated that the disturbance will be six (6) acres with approximately 200 holes drilled to an average depth of 800 feet.

Mine Unit 12

Cameco plans delineation drilling in proposed Mine Unit 12. This area is targeting a trend adjacent to Mine Units 9 and 10 in the southwest area of the permit. It is estimated that the disturbance will be eight (8) acres with approximately 300 holes drilled to an average depth of 700 feet.

Domsalla Lease Area

Cameco will be completing an exploration program west of satellite SAT-3. It is estimated that the disturbance will be eight (8) acres with approximately 300 holes drilled to an average depth of 800 feet.

Reynolds Ranch Delineation

Cameco plans to continue delineation drilling in the Reynolds Ranch area. Current plans are to further delineate proposed Mine Units 22, 23, 24 and 28. It is estimated that the disturbance will be ten (10) acres with approximately 400 holes drilled to an average depth of 900 feet.

III. RECLAMATION/RESTORATION ACTIVITIES

Identify any revised schedule or timetable of reclamation/restoration activities and estimate the numbers of acres to be affected during the next one (1) year reporting period. As required in §35-11-412 (iii)

See Appendix B for the Current Approved and Updated Mining and Restoration Schedule and Water Balance.

A. Groundwater Restoration Activities

1. Describe the progress of all restoration activities, including: identification of restored wellfields, identification of wellfields with restoration in progress, and wellfields where restoration is planned for the next reporting period.

Post Restoration

Mine Unit A

WDEQ-LQD approved Mine Unit A restoration plan as Change No. 55, in correspondence dated June 7, 2004. As a condition of the approved groundwater restoration the WDEQ-LQD required that a long-term monitoring (LTM) plan be developed to monitor down gradient of the mining zone. The LTM plan does not contain predicted attenuation values, but rather how the concentration of radium and redox sensitive elements will decrease over time as the restored groundwater moves toward and through the more reducing environment. LTM continued with no restoration actives completed during the report period. Refer to Table III-A.1, Long Term Monitoring Plan Data, for a summary of the sample results.

MP-4 and I-21 (Plate 1-1) are wells located and completed in the production zone. Samples from these wells are representative of restored groundwater. LTM-4 is a monitor well completed in the flare from the production zone. M-3 and M-4 are wells

completed in the 20-sand down gradient of Wells MP-4, I-21, and LTM-4. The most recent round of LTM data collected during the reporting period indicates natural attenuation is occurring. The predicted values of the ring monitor wells are Fe = <0.1 mg/L; Mn = 0.04 mg/L (~60-yrs); Se = <0.0001 mg/L; U-nat = <0.001 mg/L; and Ra = 8 pCi/L (~60-yrs).

The LTM Plan specifies that the duration of the monitoring plan will continue for five (5) to 15 years depending on the extent of the zone of flaring and the placement of the LTM Wells. The most recent monitoring results of the LTM Wells indicate that all parameters are relatively stable. Cameco will continue to sample the LTM Wells on a semi-annual schedule in accordance with the approved LTM Plan and will evaluate the need for continuation of the monitoring plan during the next report period.

Mine Unit B

WDEQ-LQD approved Mine Unit B groundwater restoration on March 31, 2008. During the report period no surface reclamation activities were conducted as Cameco continues to gather additional data for a revised Alternative Concentration Limit (ACL) submittal required by the NRC. Submittal of the revised ACL document is anticipated for 2015. Upon approval from NRC of Mine Unit B ACL submittal, surface reclamation will proceed with well plugging and abandonment, piping removal and seeding.

Active Restoration

Mine Unit C

Preparation of a restoration plan for Mine Unit C was initiated in April 2012. Submittal of the plan was made under cover letter dated June 21, 2012 under TFN 5 6/241. WDEQ-LQD comments, under cover letter dated January 3, 2013 have been received. Cameco prepared responses to WDEQ-LQD comments during the report period.

During the report period, Mine Unit C remained in active restoration. Figure III-1, Mine Unit C Concentrations vs. Time graphs, depict restoration progress in the four constituents (chloride, alkalinity, conductivity and uranium) for improving groundwater quality over time since 2011. The average restoration flow to reverse osmosis (RO) treatment during the report period was 177.0 gpm, totalling approximately 1.1 pore volumes. The average flow of permeate to re-injection in the mine unit was 128.8 gpm. These flows are anticipated to decline as water quality improves.

During the next report period, Cameco plans to continue traditional restoration methods using RO treatment and permeate re-injection. It is anticipated that up to 3 pore volumes will be needed to attain the restoration goal. The Restoration Schedule, Appendix B, illustrates Mine Unit C entering stability in 2015.

Mine Units D and D-Extension

Preparation of a restoration plan for Mine Unit D and D-Extension was prepared and submitted for WDEQ-LQD review on July 19, 2012. Review comments were received and a response is pending.

During the report period, Mine Unit D and D-Extension remained in active restoration. Figure III-2, Mine Unit D and D-Extension Concentrations vs. Time graphs, depict restoration progress in the four constituents (chloride, alkalinity, conductivity and uranium) for improving groundwater quality since 2011. The average restoration flow to RO treatment during the report period was 32.0 gpm, totalling approximately 0.5 pore volume. The average flow of permeate to re-injection in the mine unit was 13.9 gpm.

During the next report period, Cameco plans to continue traditional restoration methods using RO treatment and permeate re-injection. It is anticipated that 1 pore volume will be needed to attain the restoration goal. The Restoration Schedule, Appendix B, illustrates Mine Unit D and D-Extension entering stability in 2015.

Underground Mine Workings (effecting Mine Unit C and Mine Unit D)

It was determined in 1991 that production fluids from the 50-sand within Mine Unit C had entered the abandoned underground workings situated beneath the permitted zone. This was not unexpected, as raises and fan drilling at several locations connect these workings and the Mine Unit C production zone. The underground workings also extend to the 40-sand production zone in Mine Unit D. In November 1992, the WDEQ-LQD approved a permit revision to include the underground workings in the Mine Unit C production zone. Additional wells were installed to monitor the potential movement of production fluids within and surrounding the underground workings. Monitoring of these wells began in August 1997 and the results are included in the Quarterly Reports to WDEQ-LQD.

During the report period, installation of the infrastructure needed to implement a cleanup plan related to the underground workings and related long-term excursions (Monitor Wells DM-003 and DM-004) that impact groundwater quality in large portions of Mine Unit C and Mine Unit D was started in May 2013 and completed in September 2013. Based on WDEQ-LQD approval, the plan was implemented on November 6, 2013. Based on consultant modeling, the cleanup process will take between nine (9) months and one (1) year to complete.

During the next report period, Cameco will continue with the underground treatment process currently in progress while evaluating alternate methodologies.

Mine Unit E

Preparation of a restoration plan for Mine Unit E was prepared and submitted for WDEQ-LQD review on August 2, 2012. Review comments were received and a response is pending.

During the report period, Mine Unit E remained in active restoration. Figure III-3, Mine Unit E-South Concentrations vs. Time graphs depict restoration progress in the four constituents (chloride, alkalinity, conductivity and uranium) for improving groundwater quality since 2011. The average restoration flow in E-South to RO treatment during the report period was 142.0 gpm, totalling approximately 0.8 pore volume. The average flow of permeate to re-injection in the mine unit was 127.5 gpm. Header house refurbishments in Mine Unit E-North were completed in 2013. Groundwater from Mine Unit E-North was directed to Satellite-2, starting September 3, 2013, where the water was subjected to Ion Exchange (IX) only to reduce uranium concentrations as an initial phase of restoration.

During the next report period, Cameco plans to continue traditional restoration methods from the south portion of the mine unit using RO treatment and permeate re-injection. Groundwater from the north portion of the mine unit will undergo initial treatment through IX columns and a bicarbonate injection to reduce uranium concentrations before the traditional restoration methods are implemented. It is anticipated 6.5 pore volumes will be needed to attain the restoration goal. The Restoration Schedule, Appendix B, illustrates Mine Unit E entering stability in 2018.

Mine Unit 1

Preparation of a restoration plan for Mine Unit 1 was prepared and submitted for WDEQ-LQD review on October 30, 2012. Review comments were received and responded to, with a second round of comments dated March 28, 2014, responses pending.

During the report period, Mine Unit 1 remained in active restoration. Figure III-4. Mine Unit 1 Concentrations vs. Time graphs depict restoration progress in the four constituents (chloride, alkalinity, conductivity and uranium) for improving groundwater quality since 2010. The average restoration flow to RO treatment during the report period was 124.2 gpm, totalling approximately 1 pore volumes. The average flow of permeate to re-injection in the mine unit was 110.4 gpm.

Based on the improved groundwater quality as indicated by field monitoring and laboratory results, stability monitoring in Mine Unit 1 was initiated with the collection of groundwater samples from the mine unit MP-wells for Guideline 8 analysis on January 23, 2014. Based on the results of those samples, spot cleanup was continued at approximately six (6) patterns.

During the next report period, Cameco plans to prepare a Restoration Report to request concurrence for stability. Finalization of that document is anticipated for 2014.

Mine Unit 4/4A

Preparation of a restoration plan for Mine Unit 4/4A was prepared and submitted for WDEQ-LQD review on March 15, 2012 and approved on October 16, 2013.

During the report period, Mine Unit 4 remained in active restoration with Mine Unit 4A placed in restoration in May 2013. Figure III-5, Mine Unit 4/4A Concentrations vs. Time graphs depict restoration progress in the four constituents (chloride, alkalinity, conductivity and uranium) for improving groundwater quality since 2011. The average restoration flow to RO treatment during the report period was 182.2 gpm, totalling approximately 0.8 pore volume. The average flow of permeate to re-injection in the mine unit was 144.8 gpm. An average of 9.1 gpm of groundwater sweep was removed from Header Houses 4-7 and 4-9 during the report period.

During the next report period, Cameco plans to continue traditional restoration methods using RO treatment, permeate re-injection and groundwater sweep. It is anticipated that 7.3 pore volumes will be needed to attain the restoration goal. The Restoration Schedule, Appendix B, illustrates Mine Unit 4/4A entering stability in 2019.

Planned Restoration

Mine Unit H

During the next report period, Cameco plans to commence restoration in Mine Unit H upon WDEQ-LQD concurrence of the restoration plan. Mine Unit H will follow the restoration methods outlined in the Mine Unit H Restoration Plan, submitted to WDEQ-LQD on November 8, 2013. Review comments were received with responses to be submitted early in the next report period.

Mine Unit I

During the next report period, Cameco plans to submit the Mine Unit I Restoration Plan. Restoration activities will be initiated upon WDEQ-LQD concurrence of the restoration plan and will follow the restoration methods outlined in the Mine Unit I Restoration Plan.

Mine Unit 2

During the next report period, Cameco plans to submit the Mine Unit 2 Restoration Plan. Restoration activities will be initiated upon WDEQ-LQD concurrence of the restoration plan and will follow the restoration methods outlined in the Mine Unit 2 Restoration Plan.

Restoration Research Studies

During the next report period, Cameco plans to conduct restoration research activities in Mine Unit 4 and Mine Unit 7. Research activities will include bio-stimulation and natural attenuation. Research proposals will be reviewed with WDEQ-LQD prior to commencement of activities.

B. Well Plugging and Abandonment Reports

1. Report the total number of any wells abandoned during the report period. At a minimum, this report must include the well name, well spatial location, the depth and plugging technique. (Note: If all of the data mentioned above has been provided in the operator's quarterly monitoring reports then this data should be summarized in the Annual Report and reference made to those quarterly monitoring reports.)

During the report period, 100 wells were plugged and abandoned. All wells were plugged and subsequently abandoned (cut and buried) in accordance with regulations W.S. 35-11-404, WDEQ/LQD Rules and Regulations Chapter 11, Section 8, and Permit 633. Well names, well spatial locations and plugging depths are provided to LQD in the Quarterly Excursion Monitor Reports.

2. Well abandonment reports shall be made available to the LQD. Well abandonment reports for SEO permitted wells shall be made available to the SEO per LQD Chapter 11, Section 15 (e).

C. Surface Reclamation Activities Past and Present

1. For each affected area where reclamation activities occurred, describe, including, the number of acres, and locate on a map, the affected areas that were:

a. Contoured
b. Topsoiled and subsoiled (include the depth and amount of cubic yards used). A tabulation of soil stockpiles that documents new and depleted stockpile volumes should be maintained in the Annual Report.
c. Seeded with temporary seed mix (include the seed mix, number of Pure Live Seeds (pls) pounds used, and date seeded).
d. Seeded with permanent seed mix (include the seed mix, number of pls pounds used, and date seeded for each area).

The requested information can be found in Table III-C.1 and on Plates 2 and 2-1 through 2-4.

e. Tabulate historic acres and newly disturbed areas and all reclamation completed during the report period.

Historic acres and newly disturbed areas are included in Table III-C.1.

Planned Surface Reclamation

With the exception of any on-going reclamation involved with delineation drilling (see Planned Delineation above), Cameco plans to conduct reclamation of approximately three (3) acres associated with the Radium ponds, located south of the Satellite 1 irrigator.

D. Deviations or Unanticipated Events or Conditions

1. *Individually list and describe all deviations from the approved Reclamation/Restoration Plan during the report period which were not approved as a revision or a non-significant revision. The operator does not need to include approved revisions or non-significant revisions (NSRs). These include but are not limited to the quantity of pore volumes removed, the number of acres reclaimed, and waste water removed.*

Mine Unit 2

The Reclamation Plan approved by WDEQ-LQD, March 10, 2014, under Permit 633 references Attachment 1A, Section 2.1.10 – *Ground Water Restoration Schedule*. Attachment 1A shows Mine Unit 2 in groundwater sweep beginning year 2012. Due to permitting delays, Cameco anticipates Mine Unit 2 to enter groundwater restoration in 2014.

IV. DRILL HOLE REPORTING

All drilling activities occurring within the permit boundary will be covered by the mining permit and must be reported in the ISAR.

Information required to be reported in the ISAR for all drilling within the permit boundary is listed below. Drill hole reporting requirements are found in W.S. 35-11-404(d-e) and available from WDEQ-LQD website.

A. Maps

A USGS Quad or other contour map, of adequate detail depicting the following:

1. *Outline of the general area of activity*
2. *Location of any constructed access roads, temporary roads, and drill hole locations.*

Please see Plates 3-1 through 3-7.

B. A tabulated listing of the drill holes

Use the Abandoned Drill Site Report Form

Delineation drill holes are listed in Table IV-B.1. All holes are shown on Plates 3-1 through 3-7.

C. Description of the nature and extent of disturbances, and a description of the reclamation of those location indicated in (A) above.

Drill hole site preparation is defined in Permit 633, Section 5.2.1.

Proposed Mine Unit 10 Extension

Cameco completed a delineation program that was a continuation of several years of resource development and exploration. During the report period, 230 holes were drilled in this area and subsequently plugged, abandoned and seeded as per Permit 633, Section 5.2.2 Drill Hole Abandonment.

Proposed Mine Unit 8

Delineation has continued in this area with at least another year projected. This area covers portions of three (3) sections; Section 34, 35 and 36 of Township 36 North, Range 74 West. During the report period, 245 holes were drilled in this area and subsequently plugged, abandoned and seeded as per Permit 633, Section 5.2.2 Drill Hole Abandonment.

Proposed Mine Unit 12

Delineation began in proposed Mine Unit 12 during April of 2014 to follow a trend of the southwestern portion of the permit. During the report period, 12 holes were drilled in this area and subsequently plugged, abandoned and seeded as per Permit 633, Section 5.2.2 Drill Hole Abandonment.

Unplanned Delineation and Core Holes

Several other delineation holes are listed in Table IV B.1. These are unplanned delineation holes or cores that were obtained for research. A total of six (6) unplanned holes were drilled in Mine Unit 10 and 10 unplanned holes in Mine Unit 7. These holes have been plugged, abandoned, and seeded as per Permit 633, Section 5.2.2 Drill Hole Abandonment. One (1) core hole was drilled in Mine Unit 4 and subsequently plugged, abandoned and seeded. Two (2) core holes were drilled in Mine Unit B and await seeding.

D. Tabulation of the Following:

1. Seed Mixture Used

2013 seed mix (#/pls):
Canby bluegrass 2
Basin wild rye 2
Prairie June grass 1.5
Slender wheat grass 2
Sand drop seed 3
Blue Grama 1.5
Linn Perennial rye 2
This seed mix was used from 5/1/13 to 4/7/14

2014 wheat grass mix (Pls#/ac):
Lender Wheatgrass 4.8 pls
Intermediate Wheatgrass 4.8 pls
Western Wheatgrass 6.4 pls @ $126 PER ACRE.
This seed mix was used from 4/7/14 to 4/30/2014

2. Method and date of seeding.
3. Location(s) where seed mixture was used.

Seeding locations correspond with drill hole locations. All drill hole areas were drill seeded.

V. RECLAMATION PERFORMANCE BOND ESTIMATE

A. Purpose Statement
The purpose of this section is to provide renewal reclamation performance bond calculations and to assess the adequacy of the current bond calculations and total dollar value. Applicable provisions of the Act include WS 35-11-417(c)(ii) and WS 35-11-411(a)(iii) and (d).

B. Most operators use a similar version of a spreadsheet that allows for efficient calculation of the bond estimate. It is recommended that the operator contact the LQD for sample formats successfully used by other operators to promote equality and consistency across the industry.

C. The bond estimate must be accompanied by a projected time schedule (Gantt chart) showing the completion schedule for each major reclamation operation/task.

D. The bond estimate must include an itemized accounting of all labor costs, including number and categories of personnel, salaries, and total hours required for the completion of the various reclamation tasks. A Gantt chart is suggested to display this information.

E. *All assumptions and backup calculations must be included to support the bond estimate in an annually consistent format.*

The surety estimate revision for 2014-2015 is included in Appendix A. The estimate is in two parts, Smith Ranch/Reynolds Ranch Operations and the Highland Operations. The combined revised total results in a surety estimate of $213,425,500 which is a decrease of $45,669,700 from the current approved amount of $259,095,200 accepted by the WDEQ-LQD under the approval of Form 1-UIC recorded as Permit Change No. 55, Amendment No. 2, dated March 10, 2014.

The current approved surety was a 2012-2013 revision submitted July 30, 2012 with the 2011-2012 Annual Reports for permits 603 & 633 and approved by the WDEQ-LQD on February 28, 2013. A revised 2013-2014 estimate was submitted with the 2012-2013 Annual Reports for permit 603 & 633 and resubmitted in September 2013 to the NRC and in October 2013 to the WDEQ-LQD for a combined total of $211,051,700. The NRC approved the estimate in a letter dated April 15, 2014. The WDEQ-LQD elected to not review the 2013-2014 estimate in a letter dated May 7, 2014 and keep the current amount of $259,095,200 until the 2014-2015 estimate would be reviewed.

Appendix A includes detailed descriptions and updates to the surety covering corrections from the previous estimates, updated unit costs, planned activities through the end of the next reporting period, and up-to-date information on restoration achievements. Primary cost differences from the current approved surety are related to adjustments with well and delineation drill hole abandonment, updated master costs and unit costs, and updated calculations throughout the documents based on proposed operations over the next reporting period.

TABLE II-B.1
FACILITY WATER BALANCE REPORT
2013-2014 ANNUAL REPORT PERMIT 633

Location	Recovery Volume (gallons)	Injection Volume (gallons)	Over Recovery Volume (gallons)	Average Production Rate (gpm)
CPP	1,033,926,500	1,024,934,334	8,992,166	1,967
Satellite SR1	1,916,329,368	1,903,449,477	12,879,891	3,646
Satellite SR2	1,522,201,107	1,509,949,955	12,251,152	2,896
Satellite #2	532,911,172	516,975,978	15,935,194	1,014
Satellite #3	2,523,773,193	2,491,809,752	31,963,441	4,802

By Wellfield		
Wellfield	**Injection**	**Recovery***
MU-2	91,516,183	92,431,344
MU-3	674,089,814	680,830,712
MU-15/15A	2,162,777,814	2,184,405,592
MU-9	375,883,484	379,642,318
MU-10	1,134,066,471	1,145,407,136
MU-H	115,881,223	117,040,035
MU-I	401,094,755	405,105,703
MU-J	77,095,758	77,866,716
MU-K	1,897,862,278	1,916,840,901
MU-F	548,815,158	554,303,310

*Calculated using 1% bleed

TABLE II-B.2
SATELLITE NO. 1 LAND APPLICATION FACILITY (Irrigator No. 1)
FLUID VOLUMES APPLIED
2013-2014 ANNUAL REPORT PERMIT 603

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

Mar 1-Mar 31, 1994	9.3	April – October 2006	0
Apr 1-Apr 30, 1994	10.7	April – October 2007	0
May 1-May 31, 1994	16.7	April - October 2008	0
Jun 1-Jul 1, 1994	2.3	April - October 2009	0
Jul 1-Aug 2, 1994	20.6	April - October 2010	0
Aug 2-Aug 31, 1994	21.5	April 2011	0
Sep 1-Sep 30, 1994	20.3	April 2012	0
Oct 1-Oct 27, 1994	2.6		0
		April 2013	
Nov 1-Nov 30, 1994	2.9	**TOTAL**	1153.3
Sep 6-Sep 27, 1995	8.7		
Oct 2-Oct 20, 1995	11.7		

TABLE II-B.3
SATELLITE NO. 2 LAND APPLICATION FACILITY (Irrigator No. 2)
FLUID VOLUMES APPLIED
2013-2014 ANNUAL REPORT PERMIT 603

Irrigation Cycle	Fluid Volumes Applied (AF)
Sep 1-Sep 23, 1995	32.2
Oct 6-Oct 30, 1995	22.7
Mar 20-Jun 30, 1996	35.7
May 14-Jul 2, 1996	36.1
Aug 1-Aug 28, 1996	28.1
Sep 10-Oct 15, 1996	16.2
Aug 21-Sep 19, 1997	60.2
June-December 1998	102.5
June-November 1999	130.4
April-June 2000	45.8
July-September 2000	67.6
May-September 2001	156.6
June-September 2002	80.7
June-October 2003	134.0
June-October 2004	28.1
June – October 2005	82.1
June – October 2006	117.9
June – October 2007	132.1
May - October 2008	123.6
May - October 2009	165.9
May-October 2010	57.3
May-October 2011	88.9
May-October 2012	89.4
June-August 2013	116.8
TOTAL	1950.9

TABLE II-C.1
WELLFIELD RELEASE SUMMARY
2013-2014 ANNUAL REPORT PERMIT 633

DATE	LOCATION	VOLUME (gal)	SURFACE AREA (FT^2)	CAUSE	Type of Fluid	Plate (Map)
5/3/2013	Mine Unit K (SW ¼ of the NW ¼, SE ¼ of the NW ¼, and SW ¼ of the NE ¼ in Section 30, T36N, R73W)	85,000	234,068	Trunkline failure	Injection	**1-8**
7/31/2013	Mine Unit F (SW ¼ and NW ¼ of Section 22, T36N, R73W)	1,048	20,683	Fitting failure on trunkline	Production	**1-5**
10/29/2013	Morton 120 Deep Disposal Well (SW ¼ and NW ¼ of Section 22, T36N, R73W)	120	901	Transformer pole broke due to ice accumulation	Transformer Mineral Oil	**1-2**
12/5/2013	Vollman Deep Disposal Well (NW ¼ of the SW ¼ in Section 27, T36N, R73W)	891	5,932	Tank overflow due to malfunction of level indicator.	Disposal Fluid	**1-6**
3/16/2014	Mine Unit I (NE ¼ of the SW ¼ in Section 24, T36N, R73W)	8,916	57,491	Hose not connected to well during pumping	Injection	**1-6**

TABLE II-F.1
TOPSOIL STOCKPILE SUMMARY
2013-2014 ANNUAL REPORT PERMIT 633

NOTE: In order to avoid duplicating numbers for the topsoil piles as a result of combining Permits 603 and 633, the historical topsoil piles that were under permit 603 will be designated with a 603 prefix. All topsoil piles created after this annual report period will follow in numerical order for Permit 633 and will not have a prefix.

Stockpile No.	Year/Date Stockpiled	Estimated Volume (yd3)	Amount Used (yd3)	Remaining	Source	Scheduled Reclamation Date	Reclamation Date	Area description
603-8	10/1/1993	100	0	100	F-Wellfield Oxygen Pad			
603-1	7/1/1987	3,000	0	3,000	Road to Satellite No. 1			
603-2	7/1/1987	6,000	0	6,000	Satellite No. 1 Pad and Road to Radium Ponds			
603-3	8/1/1987	45,000	0	45,000	PSR-1			
603-4(subsoil)	9/1/1987	50,000	0	50,000	PSR-1			
603-5	11/1/1988	700	0	700	Satellite No. 2 Pad & Road			
603-6	11/1/1988	450	0	450	Satellite No. 2 Road			
603-7	4/1/1991	100	0	100	D-Wellfield Oxygen Pad			
603-9	11/1/1995	0	0	0	Satellite No. 3 Road/Drill Water Ponds (moved to Stockpile No. 52 March 1998)			
603-10	11/1/1995	1,100	0	1,100	Satellite No. 3 Road			
603-11	11/1/1995	910	0	910	Satellite No. 3 Road			
603-12	11/1/1995	1,970	0	1,970	Satellite No. 3 Pond and Road			
603-13	Oct/Nov96	270	0	270	Road to Irrigator No. 1			
603-14	Oct/Nov96	350	0	350	C-Wellfield Access Road			
603-15	Oct/Nov96	600	0	600	C-Wellfield Access Road			
603-16	Oct/Nov96	50	0	50	C-Wellfield Access Road			
603-17	Oct/Nov96	720	0	720	C-Wellfield Access Road			
603-18	Oct/Nov96	0	0	0	C-Wellfield Access Road (Moved to pile #93 - Selenium Plant)			

603-19	Oct/Nov96	230	0	230	C-Wellfield Access Road			
603-20	Oct/Nov96	200	0	200	C-Wellfield Access Road			
603-21	Oct/Nov96	260	0	260	C-Wellfield Access Road			
603-22	Oct/Nov96	30	0	30	C-Wellfield Access Road			
603-23	Oct/Nov96	20	0	20	C-Wellfield Access Road			
603-24	Oct/Nov96	130	0	130	D-Wellfield Access Roads			
603-25	Oct/Nov96	520	0	520	D-Wellfield Access Roads			
603-26	Oct/Nov96	450	0	450	E-Wellfield Access Roads			
603-27	Oct/Nov96	560	0	560	E-Wellfield Access Roads			
603-28	Oct/Nov96	670	0	670	E-Wellfield Access Roads			
603-29	Oct/Nov96	320	0	320	E-Wellfield Access Roads			
603-30	Oct/Nov96	592	0	592	E-Wellfield Access Roads	Fall 2011	Fall 2011	(ADDED BELL HOLE TIE-IN SEDIMENT IN FALL OF 2010). Volume previously 480 (yd3); originally created Oct./Nov. 1996.
603-31	Oct/Nov96	520	0	520	E-Wellfield Access Roads			
603-32	Oct/Nov96	900	0	900	E-Wellfield Access Roads			
603-33	Oct/Nov96	370	0	370	E-Wellfield Access Roads			
603-34	Oct/Nov96	410	0	410	E-Wellfield Access Roads			
603-35	Oct/Nov96	550	0	550	F-Wellfield Access Roads			
603-36	Oct/Nov96	0	0	0	(moved to Stockpile No. 35 in February 1998)			
603-37	Oct/Nov96	210	0	210	(moved to Stockpile No. 35 in February 1998)			
603-38	Oct/Nov96	560	0	560	(enlarged November 1998)			
603-39	Oct/Nov96	220	0	220	(enlarged November 1998)			
603-40	Oct/Nov96	290	0	290	(enlarged November 1998)			
603-41	Oct/Nov96	110	0	110	(enlarged November 1998)			

603-42	Oct/Nov96	200	0	200	(enlarged November 1998)			
603-43	Oct/Nov96	340	0	340	(enlarged November 1998)			
603-44	Oct/Nov96	240	0	240	(enlarged November 1998)			
603-45	Oct/Nov96	200	0	200	(enlarged November 1998)			
603-46	Oct/Nov96	220	0	220	(enlarged November 1998)			
603-47	Oct/Nov96	420	0	420	(enlarged November 1998)			
603-48	6/1/1997	320	0	320	(enlarged November 1998)			
603-48A	6/1/1998	400	0	400	(enlarged November 1998)			
603-49	Oct/Nov 96	1,160	0	1,160	Drilling Fluid Storage Cell No. 1			
603-50	Oct/Nov 96	920	0	920	Drilling Fluid Storage Cell No. 1			
603-51	Oct/Nov 96	350	0	350	Road to Irrigator No. 2			
603-52	3/1/1998	700	0	700	Drilling Fluid Storage Cell No. 2			
603-53	4/1/1998	240	0	240	Drilling Fluid Storage Cell No. 3			
603-54	4/1/1998	300	0	300	Drilling Fluid Storage Cell No. 4			
603-55	11/1/1998	100	0	100	F-Wellfield Access Roads			
603-56	11/1/1998	400	0	400	F-Wellfield Access Roads			
603-57	11/1/1998	100	0	100	F-Wellfield Access Roads			
603-58	11/1/1998	150	0	150	F-Wellfield Access Roads			
603-59	11/1/1998	170	0	170	F-Wellfield Access Roads			
603-60	11/1/1998	280	0	280	F-Wellfield Access Roads			
603-61	11/1/1998	200	0	200	F-Wellfield Access Roads			
603-62	11/1/1998	580	0	580	H-Wellfield Access Roads			
603-63	11/1/1998	520	0	520	H-Wellfield Access Roads			
603-64	11/1/1998	350	0	350	H-Wellfield Access Roads			
603-65	11/1/1998	350	0	350	H-Wellfield Access Roads			

603-66	11/1/1998	710	0	710	H-Wellfield Access Roads			
603-67	11/1/1998	780	0	780	H-Wellfield Access Roads			
603-68	11/1/1998	780	0	780	H-Wellfield Access Roads			
603-69	11/1/1998	1,000	0	1,000	H-Wellfield Access Roads			
603-70	11/1/1999	60	0	60	H-Wellfield Access Roads			
603-71	1/1/2000	50	0	50	H-Wellfield Access Roads			
603-72	4/1/2000	50	0	50	H-Wellfield Access Roads			
603-73	5/1/2000	50	0	50	H-Wellfield Access Roads			
603-74	11/1/2000	200	0	200	H-Wellfield Access Road			
603-75	11/1/2000	75	0	75	H-Wellfield Access Road			
603-76	11/1/2000	80	0	80	H-Wellfield Access Road			
603-77	4/1/2001	60	0	60	H-Wellfield Access Road			
603-78	4/1/2001	50	0	50	F-Wellfield Access Road			
603-79	4/1/2001	40	0	40	F-Wellfield Access Road			
603-80	6/1/2001	50	0	50	D-Extension WF Access Rd			
603-81	6/1/2001	130	0	130	D-Extension WF Access Rd			
603-82	6/1/2001	350	0	350	D-Extension WF Access Rd			
603-83	4/1/2001	50	0	50	B-Wellfield Access Road			
603-84	4/1/2001	30	0	30	B-Wellfield Access Road			
603-85	4/1/2001	250	0	250	RO Unit No. 3 Pad			
603-86	9/1/2002	325	0	325	SR-HUP Connecting Road			
603-87	5/1/2005	50	0	50	Mine Unit-I Access Rd			
603-88	4/1/2006	80	0	80	Mine Unit-I Access Road			
603-89	4/1/2006	80	0	80	Mine Unit –I Access Road			
603-90	2/1/2006	50	0	50	Mine Unit-J Access Road			

603-91	2/1/2006	50	0	50	Mine Unit-J Access Road			
603-92	11/1/2009	6,755	0	6,755	Selenium Plant Installation	04-04-2011 to 04-08-2011	4) Reclamed on 05-05-2011 with "Soil Amendment Process" No.4 (reseeding topsoil piles)	15) RESEED STOCKPILE NO. 92 - SELENIUM PLANT INSTALLATION
603-93	11/1/2009	720	0	720	Enlarged pile #18 for Selenium Plant Installation	03-28-2011 to 04-01-2011	4) Reclamed on 05-05-2011 with "Soil Amendment Process" No.4 (reseeding topsoil piles).	14) RESEED STOCKPILE NO. 93 - ENLARGED PILE #18 FOR SELENIUM PLANT INSTALLATION
603-94	1/1/2010	204	0	204	DDW #9 road and pad	10-18-2010 to 10-20-2010	1) Reclamed on 10-20-2010 with "Soil Amendment Process" No.2 (Non-Tractor Accessible Area - Hydro-Seed). (2) "Soil Amendment Process" No. (Tractor Accessible Areas - Drill-Seed) Drill-Seed on 05-05-2011	12) RESEED STOCKPILE NO. 94 SOURCE: DDW #9 ROAD AND PAD. Volume previously 690 (yd3); originally created 1994.
603-95	2/1/2010	267	0	267	Driller staging pad by E-15 for restoration wells	03-21-2011 to 03-25-2011	4) Reclamed on 05-05-2011 with "Soil Amendment Process" No.4 (reseeding topsoil piles)	13) RESEED STOCKPILE NO. 95 - DRILLER STAGING PAD BY E-15 FOR RSTN WELLS
603-96	10/1/2010	600	0	600	Mine Unit K-North access road	Spring 2011	4) Reclamed on 05-05-2011 with "Soil Amendment Process" No.1 (reseeding topsoil piles)	13) RESEEDED STOCKPILE NO. 96 - Mine Unit K-North access road

603-97	4/1/2011	343	0	343	Mine Unit K-North DAM Topsoil pile	Spring 2011	4) Reclamed on 05-05-2011 with "Soil Amendment Process" No.1 (reseeding topsoil piles)	13) RESEEDED STOCKPILE NO. 97 - Mine Unit K-North DAM Topsoil pile
603-98	5/1/2010	301	0	301	Vollman 33-27 DDW Topsoil Pile	Spring 2011	4) Reclamed on 05-05-2011 with "Soil Amendment Process" No.1 (reseeding topsoil piles)	13) RESEEDED STOCKPILE NO. 98 - Vollman 33-27 DDW Topsoil Pile
603-99	4/1/2013	906	0	906	Header House F -47 acess road			
TOTAL		144,228	0	144,228				

633								
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**	**1,345**	**0**	**688**			**Seeded in the Fall of 2010 with "Soil Amendment Process" No.1 (Tractor Accessible Area - Stubble Drill Seeding).**	**MOVED AND EXPANDED IN MINE UNIT K-NORTH IN 2010, Volume previously 688 (yd3); originally created 2002.**
26	2002	689	0	689				
27	2002	567	0	567				
28	**2010**	**3,097**	**0**	**1,155**			**Seeded in the Fall of 2010 with "Soil Amendment Process" No.1 (Tractor Accessible Area - Stubble Drill Seeding).**	**Topsoil pile expanded in Fall of 2010 due to the expansion of the SR2 road. Volume previously 1,155 (yd3); originally created 2004.**
29	2004	731	0	731				
30	**2010**	**969**	**0**	**575**			**Seeded in the Fall of 2010 with "Soil Amendment Process" No.1 (Tractor Accessible Area - Stubble Drill Seeding).**	**Topsoil pile expanded in Fall of 2010 due to the expansion of the SR2 road. Volume previously 575 (yd3); originally created 2005.**
31	2005	575	0	575				
32	2005	2,281	0	2,281				
33	2006	494	0	494				
34	2006	696	0	696				
35	2006	1,070	0	1070				
36	2006	1,607	0	1607				
37	2006	1,035	0	1035				
38	2006	749	0	749				
39	2006	1,485	0	1485				
40	2006	1,210	0	1210				

41	**2010**	**1,765**	**0**	**1,476.00**		**01-21-2011 to 01-24-2011**	**Reclamed on 03-02-2011 with "Soil Amendment Process" No.1 (Tractor Accessible Area - Stubble Drill Seeding).**	**9) RESEED STOCKPILE NO. 41 - SR2. Volume previously 1,476 (yd3); originally created 2006.**
42	2008	125	0	125				been added to for ddw - recalc volume
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				
59	2009	40	0	40		03-14-2011 to 03-18-2011 (5-Days)	Reclamed on 03-09-2011 with "Soil Amendment Process" No.1 (Tractor Accessible Area - Stubble Drill Seeding).	11) RESEED STOCKPILE NO. 59 - MINE UNIT 15; Mine unit 15 (HH 15-17 area); pond laydown area.
60	2009	154	0	154		03-07-2011 to 03-11-2011 (5-Days)	Reclamed on 03-03-2011 with "Soil Amendment Process" No.1 (Tractor Accessible Area - Stubble Drill Seeding).	10) RESEED STOCKPILE NO. 60 - SR2 & Mine Unit 10; SR2 water well on hill.

61	2009	75	0	75		02-21-2011 to 02-25-2011 (5-Days)	Reclamed on 03-03-2011 with "Soil Amendment Process" No.1 (Tractor Accessible Area - Stubble Drill Seeding).	8) RESEED STOCKPILE NO. 61 - MU9, HH 9-3; 9-3 door.
62	2009	106	0	106		02-14-2011 to 02-18-2011 (5-Days)	Reclamed on 02-22-2011 with "Soil Amendment Process" No.2 (Non-Tractor Accessible Area - Hydro-Seed).	7) RESEED STOCKPILE NO. 62 - Mine Unit 9, HH 9-1 Area; next to road going from 9-2 from staging area.
63	2009	73	0	73		01-17-2011 to 01-21-2011 (5-Days)	Reclamed on 03-11-2011 with "Soil Amendment Process" No.1 (Tractor Accessible Area - Stubble Drill Seeding).	3) RESEED STOCKPILE NO. 63 - MU9, HH 9-12; along main road b/w 9-12 and 9-13.
64	2009	184	0	184		01-24-2011 to 01-28-2011 (5-Days)	Reclamed on 03-11-2011 with "Soil Amendment Process" No.1 (Tractor Accessible Area - Stubble Drill Seeding).	4) RESEED STOCKPILE NO. 64 - MU9, HH 9-12; along main roady b/w 9-11 and 9-12 border.
65	2009	56	0	56		01-31-2011 to 02-04-2011 (5-Days)	Reclamed on 03-14-2011 with "Soil Amendment Process" No.1 (Tractor Accessible Area - Stubble Drill Seeding).	5) RESEED STOCKPILE NO. 65 - MU9, HH 9-11; along main road as turning into headerhouse 9-11.

66	2009	17	0	17		02-07-2011 to 02-11-2011 (5-Days)	Reclamed on 03-09-2011 with "Soil Amendment Process" No.1 (Tractor Accessible Area - Stubble Drill Seeding).	6) RESEED STOCKPILE NO. 66 - Mine Unit 9, HH 9-8; outside door of HH 9-8.
67	2009	88	0	88		10/6/2010	Reclamed on 10-06-2010 with "Soil Amendment Process" No.2 (Non-Tractor Accessible Area - Hydro-Seed).	1) RESEED STOCKPILE NO. 67 - MINE UNIT K; WF K-9; COMPLETED RESEEDING WITH HYDRO-SEEDER ON 10/06/2010.
68	2010	1,142	0	2248		10/27/2010	Reclamed on 10-27-2010 with "Soil Amendment Process" No.2 (Non-Tractor Accessible Area - Hydro-Seed).	2) SRHUP NO.10 DDW; COMPLETED RESEEDING WITH HYDRO-SEEDER ON 10/27/2010 (INCLUDING ACCESS ROAD & STAGING PAD).
69	2010	2,136	0			10/27/2010	Reclamed on 10-27-2010 with "Soil Amendment Process" No.2 (Non-Tractor Accessible Area - Hydro-Seed).	CREATED 2010, (2) SRHUP NO.6 DDW; COMPLETED RESEEDING WITH HYDRO-SEEDER ON 10/27/2010.
70	2010	570	0			10/27/2010	Reclamed on 10-27-2010 with "Soil Amendment Process" No.2 (Non-Tractor Accessible Area - Hydro-Seed).	CREATED 2010, (2) SRHUP NO.10 DDW; COMPLETED RESEEDING WITH HYDRO-SEEDER ON 10/27/2010.
71	2010	942	0			10/1/2010	Reclamed on 10-27-2010 with "Soil Amendment Process" No.2 (Non-Tractor Accessible Area - Hydro-Seed).	CPP BONEYARD TOPSOIL PILE - CREATED FOR PROPOSED CONSTRUCTION SHOP. CREATED 2010, (2) COMPLETED RESEEDING WITH HYDRO-SEEDER ON 10/2010.

72	2010	72	0			10/1/2010	Reclamed on 10-27-2010 with "Soil Amendment Process" No.2 (Non-Tractor Accessible Area - Hydro-Seed).	MINE UNIT 15A; NEW TOPSOIL PILE #72 (ADDED 2011)
73	2010	579	0			10/1/2010	Reclamed on 10-27-2010 with "Soil Amendment Process" No.2 (Non-Tractor Accessible Area - Hydro-Seed).	MINE UNIT 15A; NEW TOPSOIL PILE #73 (ADDED 2011)
74	2010	286	0			10/1/2010	Reclamed on 10-27-2010 with "Soil Amendment Process" No.2 (Non-Tractor Accessible Area - Hydro-Seed).	MINE UNIT 15A; NEW TOPSOIL PILE #74 (ADDED 2011)
75	2011	191	0					Mine Unit 10 eastern access rd. top soil is spread at the top of the barrow ditches on both sides
76	2012	155	0					Mine Unit 10 western access rd.
77	2011	1035	0					Mine unit K north access rd. K12-13
78	2012	374	0					Mine unit K north access rd. K14-15
79	2012	725	0					Mine unit K north access rd. K12-16
80	2012	821	0					Mine Unit 7 access rd. mu3 booster
81	2012	353	0					Mine Unit 10 access rd. (10-7, 10-8)
82	2012	547	0					Mine Unit 10 access rd. (10-6)
83	2013	491	0					Mine Unit 10 access rd. (10-9)
84	2013	677	0					Mine Unit 10 access rd. (10-10, 10-11)
85	2013	600	0					3-9&10
86	2013	2,619	0					srhup 7 rd (East)
87	2013	1,599	0					srhup 7 rd (west)
88	2009	13,939	0					Reynolds Ranch DDW pad

89	2009	6,534	0					Reynolds ranch access Road
90	2009	11,326	0					Reynolds ranch staging area
Total		285,425	13,550					

TABLE II-F.2
ACREAGE AFFECTED SUMMARY
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Area	Year	Acreage
Central Plant/Office Area; prior to	Prior to 1987	25
Radium Settling Basins	1987-88	3
Irrigator No. 1	1988	55
Purge Storage Reservoir, Sat 1	1987-88	9
Topsoil Pile No. 3 and Subsoil No. 4		5
Satellite No. 1	1987-88	1
Satellite No. 1 Access Road	1987-88	18
A/B-Wellfield	1987-89	50
A/B-Wellfield Roads	1996, 2001	7
Exxon R & D Site		1
Satellite No. 2	1988-89	2
Satellite No. 2 Access Road	1988-89	1
C-Wellfield	1988-90	50
C-Wellfield Roads	1996	7
Waste Water Pipeline	1988-89	11
D-Wellfield	1990-91	14
D-Wellfield Roads	1996	2
E-Wellfield	1990-95	44
E-Wellfield Roads	1996	8
F-Wellfield	1992-99	134
F-Wellfield Roads	1996-98, 2001	12
PSR Pumpback System	1994-95	1
Purge Storage Reservoir; Sat 2	1994-95	40
Irrigator No. 2;	1995	116
Satellite No. 3 and Topsoil Pile;	1995-96	3
Satellite No. 3 Access Road and Topsoil	1995-96	8
H-Wellfield (in production)	1998-2001	61
H-Wellfield Roads	1998-2001	8
Waste Disposal Well No. 2 and Access Road		3
D-Extension Wellfield (in production)	2001	10
D-Extension Wellfield Roads	2001	2

TABLE II-F.2
ACREAGE AFFECTED SUMMARY
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Area	Year	Acreage
SR-HUP Connecting Road and Topsoil	2002	7
Mine Unit-I Monitor Well Installation	2005	<1
Mine Unit-I	2006	20
Mine Unit-I Roads	2006	2
Mine Unit-I Pipeline Corridor	2006	2
Mine Unit-J Delineation Drilling, Monitor	2007	10
Mine Unit-J Access Road and Staging Area	2007	0.8
Mine Unit-J Wellfield Area	2007	37.2
Mine Unit F-Drill Ponds	2008	8
Mine Unit H-Drill Ponds	2008	7
Selenium Treatment Facility	2009	0.7
SRHUP Deep Disposal well Pad and Access	2010	2.74
Vollman 31-27 DDW Pipe		2.7
Vollman Powerline		0.5
Mine Unit I to Water-Well Powerline		0.6
Mine E Laydown Area		0.46
Mine Unit F HH 47 access rd.	2013	1.7
All Lines Above Previously Permit 603		
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

TABLE II-F.2
ACREAGE AFFECTED SUMMARY
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Area	Year	Acreage
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
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

TABLE II-F.2
ACREAGE AFFECTED SUMMARY
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Area	Year	Acreage
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
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

TABLE II-F.2
ACREAGE AFFECTED SUMMARY
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Area	Year	Acreage
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-	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 area, Mine Unit 9	2008	5
Satellite SR-2	2008	15
Topsoil Pile #52	2009	0.05
Topsoil Pile #53	2009	0.04

TABLE II-F.2
ACREAGE AFFECTED SUMMARY
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Area	Year	Acreage
Topsoil Pile #54	2009	0.07
Topsoil Pile #55	2009	0.11
Topsoil Pile #56	2009	0.07
Topsoil Pile #57	2009	0.05
Topsoil Pile #58	2009	0.06
Topsoil Pile #59	2009	0.01
Topsoil Pile #60	2009	0.11
Topsoil Pile #61	2009	0.04
Topsoil Pile #62	2009	0.08
Topsoil Pile #63	2009	0.05
Topsoil Pile #64	2009	0.03
Topsoil Pile #65	2009	0.03
Topsoil Pile #66	2009	0.02
Topsoil Pile #67	2010	0.06
Topsoil Pile #68	2010	0.4
Topsoil Pile #69	2010	0.356
Topsoil Pile #70	2010	0.142
Topsoil Pile #71	2010	0.182
Topsoil Pile #72	2011	0.021
Topsoil Pile #73	2011	0.079
Topsoil Pile #74	2010	0.079
Mine Unit 2	2010	2
Mine Unit 9 Wellfield Development	2010	47.5
SHRUP #6 Deep disposal well and pad	2010	3
SHRUP #10 Deep disposal well, pad and access road	2010	3
Water supply well and storage tanks, pad and access road	2010	0.33
Mine Unit 15A Wellfield development (headerhouses 19-23)	2010	33
Mine Unit 10 Development	2010/2011/2012/2013	36.25
Mine Unit K-N Development	2010/2011/2012	48
Mine Unit 4 Staging Area	2010/2011	0.48
SHRUP #10 Access Rd. and Pipe	2010/2011	2.3
Mine Unit 10 eastern access rd. top soil #75 is spread at the top of the barrow ditches on both sides	2011	1.5
Mine Unit 10 western access rd.	2012/2013	3.69

TABLE II-F.2
ACREAGE AFFECTED SUMMARY
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Area	Year	Acreage
Topsoil Pile #76	2012	0.1
Topsoil Pile #77	2011	0.1
Topsoil Pile #78	2012	0.1
Topsoil Pile #79	2012	0.1
Topsoil Pile #80	2012	0.1
Topsoil Pile #81	2012	0.1
Topsoil Pile #82	2012	0.1
Topsoil Pile #83	2013	0.1
Topsoil Pile #84	2013	0.1
Mine Unit 7 rd	2012	1.43
Mine Unit 10 HH 6 access rd.	2013	1.3
DDW 7 location and DDW 7 Access rd	2013	6.51
MU 3 HH 3-9&10 access rd.	2013	0.78
Mine Unit 10 HH 7 access rd.	2013	1.3
Mine Unit 10 HH 8 access rd.	2013	1.1
Mine Unit 10 HH 9 access rd.	2013	1.7
Mine Unit 10 HH 10 access rd.	2013	0.8
Mine Unit 10 HH 11 access rd.	2013	1.5
Topsoil Pile #85	2013	0.1
Topsoil Pile #86	2013	0.5
Topsoil Pile #87	2013	0.4
Topsoil Pile #88	previously off permit 2009	0.32
Topsoil Pile #89	previously off permit 2009	0.15
Topsoil Pile #90	previously off permit 2009	0.26
Reynolds Ranch staging area and Well site	previously off permit 2009	1.07
Reynolds Ranch access road	previously off permit 2009	1.4
Unreclaimed Areas	---	1471.58
Areas Previously Reclaimed	---	21.88
Total Acres	---	1449.70

(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 II-H.1
Stimulation of Class III Wells 2013-2014 Annual Report

Well #	Date	HH	Comments:
10I-225	5/1/2013	10-6	Swabbed
10I-235	5/1/2013	10-6	Swabbed
10I-182	5/2/2013	10-6	Swabbed
10I-233	5/2/2013	10-6	Swabbed
KI-447	5/3/2013	K-13	Swabbed
KI-501	5/3/2013	K-15	Swabbed
KI-512	5/3/2013	K-15	Swabbed
KI-358	5/6/2013	K-11	Swabbed
KI-413	5/6/2013	K-13	Swabbed
KI-442	5/6/2013	K-13	Swabbed
10I-229	5/7/2013	10-6	Swabbed
10I-231	5/7/2013	10-6	Swabbed
KI-494	5/7/2013	K-16	Swabbed
KI-514	5/7/2013	K-15	Swabbed
KI-497	5/8/2013	K-15	Swabbed
KI-511	5/8/2013	K-15	Swabbed
10I-306	5/9/2013	10-8	Swabbed
10I-308	5/9/2013	10-8	Swabbed
KI-446	5/9/2013	K-15	Swabbed
KI-502	5/9/2013	K-15	Swabbed
KI-508	5/9/2013	K-15	Swabbed
10I-253	5/14/2013	10-8	Swabbed
10I-275	5/14/2013	10-8	Swabbed
10I-284	5/14/2013	10-8	Swabbed
15I-0809	5/14/2013	15-23	Swabbed
15I-0819	5/14/2013	15-23	Swabbed
KI-328	5/14/2013	K-15	Swabbed
KI-496	5/14/2013	K-15	Swabbed
10I-855	5/15/2013	15-21	Swabbed
10I-237	5/15/2013	10-7	Swabbed
10I-259	5/15/2013	10-7	Swabbed
15I-0753	5/15/2013	15-20	Swabbed
15I-0777	5/15/2013	15-22	Swabbed
KI-322	5/15/2013	K-10	Swabbed
KI-322	5/15/2013	K-10	Swabbed
KI-329	5/15/2013	K-10	Swabbed
KI-363	5/15/2013	K-11	Swabbed
KI-398	5/15/2013	K-12	Swabbed
KI-363	5/16/2013	K-11	Swabbed
KI-370	5/16/2013	K-11	Swabbed
KI-380	5/16/2013	K-12	Swabbed
KI-383	5/16/2013	K-12	Swabbed
KI-413	5/20/2013	K-13	Swabbed

Table II-H.1

Stimulation of Class III Wells 2013-2014 Annual Report

KI-422	5/20/2013	K-13	Swabbed
KI-480	5/24/2013	K-14	Swabbed
KI-481	5/24/2013	K-14	Swabbed
KI-485	5/24/2013	K-14	Swabbed
10I-376	5/28/2013	10-10	Swabbed
KI-395	5/28/2013	K-12	Swabbed
KI-413	5/28/2013	K-13	Swabbed
KI-472	5/28/2013	K-14	Swabbed
KI-462	5/29/2013	K-14	Swabbed
KI-488	5/29/2013	K-14	Swabbed
KI-489	5/29/2013	K-14	Swabbed
KI-496	5/29/2013	K-15	Swabbed
KI-517	5/29/2013	K-16	Swabbed
KI-138	5/30/2013	K-4	Swabbed
KI-190	5/30/2013	K-6	Swabbed
KI-371	5/30/2013	K-11	Swabbed
2P-054	5/31/2013	2-4	Swabbed
KI-132	5/31/2013	K-4	Swabbed
KI-181	5/31/2013	K-6	Swabbed
KI-476	5/31/2013	K-14	Swabbed
KI-477	5/31/2013	K-14	Swabbed
10I-338	6/3/2013	10-10	Swabbed
10I-376	6/3/2013	10-10	Swabbed
10I-177	6/4/2013	10-6	Swabbed
10I-225	6/4/2013	10-6	Swabbed
10I-229	6/4/2013	10-6	Swabbed
10I-253	6/4/2013	10-7	Swabbed
FI-0570	6/8/2013	F-19	Swabbed
FI-0575	6/8/2013	F-19	Swabbed
FI-0580	6/8/2013	F-19	Swabbed
FI-0586	6/8/2013	F-19	Swabbed
10I-213	6/11/2013	10-11	Swabbed
10I-251	6/11/2013	10-7	Swabbed
15I-0002	6/11/2013	15-1	Swabbed
15I-0007	6/11/2013	15-1	Swabbed
15I-0056	6/11/2013	15-2	Swabbed
15I-0058	6/11/2013	15-2	Swabbed
15I-0729	6/11/2013	15-20	Swabbed
15I-0753	6/11/2013	15-20	Swabbed
10I-383	6/12/2013	10-10	Swabbed
10I-394	6/12/2013	10-10	Swabbed
15I-0401	6/12/2013	15-12	Swabbed
15I-0403	6/12/2013	15-12	Swabbed
15I-0603	6/12/2013	15-14	Swabbed
15I-0777	6/13/2013	15-22	Swabbed
15I-0795	6/13/2013	15-22	Swabbed
15I-0797	6/13/2013	15-22	Swabbed

Table II-H.1

Stimulation of Class III Wells 2013-2014 Annual Report

15I-0809	6/13/2013	15-23	Swabbed
KI-323	6/13/2013	K-16	Swabbed
KI-336	6/13/2013	K-16	Swabbed
KI-480	6/13/2013	K-14	Swabbed
15I-0848	6/14/2013	15-21	Swabbed
15I-0857	6/14/2013	15-21	Swabbed
15I-0870	6/14/2013	15-21	Swabbed
KI-0389	6/14/2013	K-12	Swabbed
KI-0413	6/14/2013	K-13	Swabbed
KI-0418	6/14/2013	K-13	Swabbed
10I-244	6/18/2013	10-7	Swabbed
10I-250	6/18/2013	10-7	Swabbed
15I-0777	6/18/2013	15-22	Swabbed
15I-0795	6/18/2013	15-22	Swabbed
15I-0809	6/18/2013	15-23	Swabbed
10I-171	6/19/2013	10-6	Swabbed
10I-225	6/19/2013	10-6	Swabbed
10I-251	6/19/2013	10-6	Swabbed
15I-0743	6/19/2013	15-20	Swabbed
15I-0746	6/19/2013	15-20	Swabbed
15I-0848	6/19/2013	15-21	Swabbed
15I-0851	6/19/2013	15-21	Swabbed
15I-0646	6/20/2013	15-18	Swabbed
15I-0652	6/20/2013	15-18	Swabbed
15I-0656	6/20/2013	15-18	Swabbed
15I-0719	6/20/2013	15-20	Swabbed
KI-423	6/20/2013	K-13	Swabbed
KI-440	6/20/2013	K-13	Swabbed
KI-463	6/20/2013	K-14	Swabbed
KI-513	6/21/2013	K-15	Swabbed
KI-514	6/21/2013	K-15	Swabbed
KI-520	6/21/2013	K-16	Swabbed
KI-530	6/21/2013	K-16	Swabbed
15I-0555	6/25/2013	15-16	Swabbed
15I-0556	6/25/2013	15-16	Swabbed
15I-0576	6/25/2013	15-16	Swabbed
15I-0577	6/25/2013	15-16	Swabbed
KI-446	6/25/2013	K-14	Swabbed
KI-472	6/25/2013	K-14	Swabbed
KI-489	6/25/2013	K-14	Swabbed
15I-0554	6/26/2013	15-16	Swabbed
15I-0563	6/26/2013	15-16	Swabbed
15I-0564	6/26/2013	15-16	Swabbed
15I-0566	6/26/2013	15-16	Swabbed
15I-0568	6/26/2013	15-16	Swabbed
15I-0573	6/26/2013	15-16	Swabbed
15I-0586	6/26/2013	15-16	Swabbed

Table II-H.1

Stimulation of Class III Wells 2013-2014 Annual Report

KI-491	6/26/2013	K-15	Swabbed
KI-496	6/26/2013	K-15	Swabbed
KI-497	6/26/2013	K-15	Swabbed
15I-0558	6/27/2013	15-16	Swabbed
15I-0569	6/27/2013	15-16	Swabbed
KI-410	6/27/2013	K-14	Swabbed
KI-501	6/27/2013	K-15	Swabbed
10I-320	6/28/2013	10-9	Swabbed
10I-388	6/28/2013	10-9	Swabbed
10I-353	7/1/2013	10-9	Swabbed
10I-213	7/16/2013	10-11	Swabbed
10I-409	7/16/2013	10-11	Swabbed
10I-247	7/17/2013	10-7	Swabbed
10I-262	7/17/2013	10-7	Swabbed
10I-264	7/17/2013	10-7	Swabbed
10I-251	7/18/2013	10-7	Swabbed
10I-337	7/18/2013	10-7	Swabbed
10I-283	7/23/2013	10-8	Swabbed
10I-286	7/23/2013	10-8	Swabbed
FI-1417	7/26/2013	F-47	Swabbed
FI-1424	7/26/2013	F-47	Swabbed
KI-517	7/26/2013	K-16	Swabbed
FI-1390	7/29/2013	F-47	Swabbed
10I-176	7/30/2013	10-6	Swabbed
10I-224	7/30/2013	10-6	Swabbed
FI-1388	7/30/2013	F-47	Swabbed
FI-1393	7/30/2013	F-47	Swabbed
FI-1400	7/30/2013	F-47	Swabbed
FI-1413	7/30/2013	F-47	Swabbed
10I-225	7/31/2013	10-6	Swabbed
10I-235	7/31/2013	10-6	Swabbed
15I-0583	7/31/2013	15-16	Swabbed
15I-0584	7/31/2013	15-16	Swabbed
FI-1392	7/31/2013	F-47	Swabbed
FI-1395	7/31/2013	F-47	Swabbed
FI-1404	7/31/2013	F-47	Swabbed
FI-1426	7/31/2013	F-47	Swabbed
10I-181	8/6/2013	10-6	Swabbed
10I-182	8/6/2013	10-6	Swabbed
10I-240	8/6/2013	10-6	Swabbed
10I-220	8/7/2013	10-6	Swabbed
10I-230	8/7/2013	10-6	Swabbed
10I-235	8/7/2013	10-6	Swabbed
15I-0813	8/7/2013	F-47	Swabbed
FI-1387	8/7/2013	F-47	Swabbed
FI-1416	8/7/2013	F-47	Swabbed
9I-033	8/8/2013	9-1	Swabbed

Table II-H.1

Stimulation of Class III Wells 2013-2014 Annual Report

9I-034	8/8/2013	9-1	Swabbed
10I-404	8/14/2013	10-11	Swabbed
10I-409	8/14/2013	10-11	Swabbed
10I-213	8/15/2013	10-11	Swabbed
10I-361	8/15/2013	10-10	Swabbed
10I-392	8/20/2013	10-10	Swabbed
15I-0813	8/20/2013	15-23	Swabbed
15I-0809	8/21/2013	15-23	Swabbed
3P-160	8/21/2013	3-6	Swabbed
3P-223	8/21/2013	3-6	Swabbed
3I-137B	8/22/2013	3-5	Swabbed
3I-139	8/22/2013	3-5	Swabbed
15I-0338	8/31/2013	15-9	Swabbed
15I-0667	8/31/2013	15-18	Swabbed
3I-160	8/31/2013	3-6	Swabbed
3I-269	8/31/2013	3-5	Swabbed
FI-1389	8/31/2013	F-47	Swabbed
FI-1396	8/31/2013	F-47	Swabbed
FI-1397	8/31/2013	F-47	Swabbed
15I-0643	9/3/2013	15-18	Swabbed
15I-0735	9/3/2013	15-20	Swabbed
15I-0777	9/3/2013	15-22	Swabbed
15I-0529	9/4/2013	15-15	Swabbed
15I-0565	9/4/2013	15-16	Swabbed
15I-0567	9/4/2013	15-15	Swabbed
10I-409	9/5/2013	10-11	Swabbed
10I-411	9/5/2013	10-11	Swabbed
10I-358	9/10/2013	10-10	Swabbed
10I-400	9/10/2013	10-11	Swabbed
10I-403	9/10/2013	10-11	Swabbed
10I-213	9/11/2013	10-11	Swabbed
10I-418	9/11/2013	10-11	Swabbed
10I-320	9/12/2013	10-9	Swabbed
10I-323	9/12/2013	10-9	Swabbed
10I-406	9/12/2013	10-11	Swabbed
10I-313	9/18/2013	10-9	Swabbed
10I-314	9/18/2013	10-9	Swabbed
10I-284	9/19/2013	10-8	Swabbed
10I-287	9/19/2013	10-8	Swabbed
KI-519	9/19/2013	K-16	Swabbed
KI-520	9/19/2013	K-16	Swabbed
10I-251	9/24/2013	10-7	Swabbed
10I-305	9/24/2013	10-8	Swabbed
10I-409	9/25/2013	10-11	Swabbed
10I-438	9/25/2013	10-11	Swabbed
10I-213	9/26/2013	10-11	Swabbed
10I-430	9/26/2013	10-11	Swabbed

Table II-H.1

Stimulation of Class III Wells 2013-2014 Annual Report

10I-182	10/17/2013	10-6	Swabbed
10I-235	10/17/2013	10-6	Swabbed
10I-225	10/21/2013	10-6	Swabbed
10I-224	10/22/2013	10-6	Swabbed
10I-229	10/22/2013	10-6	Swabbed
10I-230	10/22/2013	10-6	Swabbed
10I-231	10/22/2013	10-6	Swabbed
10I-178	10/23/2013	10-6	Swabbed
10I-182	10/23/2013	10-6	Swabbed
10I-221	10/23/2013	10-6	Swabbed
10I-232	10/23/2013	10-6	Swabbed
10I-237	10/23/2013	10-7	Swabbed
10I-272	10/23/2013	10-7	Swabbed
10I-213	10/24/2013	10-11	Swabbed
10I-430	10/24/2013	10-11	Swabbed
10I-358	10/25/2013	10-10	Swabbed
10I-361	10/25/2013	10-10	Swabbed
10I-364	10/25/2013	10-10	Swabbed
10I-287	10/28/2013	10-8	Swabbed
10I-284	10/30/2013	10-8	Swabbed
10I-285	10/30/2013	10-8	Swabbed
10I-290	10/31/2013	10-8	Swabbed
10I-327	10/31/2013	10-9	Swabbed
10I-354	10/31/2013	10-9	Swabbed
10I-250	11/4/2013	10-7	Swabbed
10I-336	11/4/2013	10-7	Swabbed
10I-338	11/5/2013	10-7	Swabbed
10I-359	11/5/2013	10-10	Swabbed
KI-531	11/5/2013	K-16	Swabbed
KI-537	11/5/2013	K-16	Swabbed
KI-539	11/5/2013	K-16	Swabbed
10I-399	11/6/2013	10-10	Swabbed
10I-405	11/6/2013	10-11	Swabbed
KI-472	11/6/2013	K-14	Swabbed
KI-479	11/6/2013	K-14	Swabbed
KI-534	11/6/2013	K-16	Swabbed
10I-320	11/7/2013	10-9	Swabbed
10I-353	11/7/2013	10-9	Swabbed
KI-462	11/7/2013	K-14	Swabbed
KI-468	11/7/2013	K-14	Swabbed
KI-476	11/7/2013	K-14	Swabbed
KI-517	11/8/2013	K-16	Swabbed
KI-524	11/8/2013	K-16	Swabbed
15I-524	11/11/2013	15-14	Swabbed
15I-528	11/11/2013	15-14	Swabbed
15I-530	11/11/2013	15-15	Swabbed
15I-0622	11/12/2013	15-17	Swabbed

Table II-H.1

Stimulation of Class III Wells 2013-2014 Annual Report

15I-0623	11/12/2013	15-17	Swabbed
15I-0612	11/13/2013	15-17	Swabbed
3I-139	11/13/2013	3-5	Swabbed
3I-149	11/13/2013	3-5	Swabbed
3I-170	11/13/2013	3-5	Swabbed
KI-181	11/13/2013	K-6	Swabbed
KI-189	11/13/2013	K-6	Swabbed
KI-489	11/13/2013	K-14	Swabbed
FI-0524	11/14/2013	F-18	Swabbed
FI-1418	11/14/2013	F-47	Swabbed
FI-1423	11/14/2013	F-47	Swabbed
3I-154	11/18/2013	3-5	Swabbed
3I-155	11/18/2013	3-5	Swabbed
FI-0528A	11/18/2013	F-18	Swabbed
FI-0534A	11/18/2013	F-18	Swabbed
FI-0546	11/18/2013	F-18	Swabbed
15I-0663	11/19/2013	15-18	Swabbed
2I-246	11/19/2013	2-2	Swabbed
3I-286	11/19/2013	3-9	Swabbed
3I-286	11/26/2013	3-9	Swabbed
KI-445	12/12/2013	K-15	Swabbed
KI-491	12/12/2013	K-15	Swabbed
KI-490	12/13/2013	K-15	Swabbed
KI-501	12/13/2013	K-15	Swabbed
KI-502	12/13/2013	K-15	Swabbed
7I-213	12/16/2013	7-4	Swabbed
KI-506	12/16/2013	K-15	Swabbed
KI-507	12/16/2013	K-15	Swabbed
KI-488	12/30/2013	K-14	Swabbed
KI-489	12/30/2013	K-14	Swabbed
KI-460	12/31/2013	K-14	Swabbed
KI-485	12/31/2013	K-14	Swabbed
KI-511	12/31/2013	K-15	Swabbed
KI-512	12/31/2013	K-15	Swabbed
KI-466	1/2/2014	K-14	Swabbed
KI-500	1/2/2014	K-15	Swabbed
KI-508	1/2/2014	K-15	Swabbed
KI-472	1/3/2014	K-14	Swabbed
KI-477	1/3/2014	K-14	Swabbed
KI-519	1/7/2014	K-16	Swabbed
KI-520	1/7/2014	K-16	Swabbed
KI-322	1/9/2014	K-10	Swabbed
KI-326	1/9/2014	K-10	Swabbed
KI-319	1/10/2014	K-10	Swabbed
KI-355	1/10/2014	K-11	Swabbed
KI-352	1/13/2014	K-11	Swabbed
KI-363	1/13/2014	K-11	Swabbed

Table II-H.1

Stimulation of Class III Wells 2013-2014 Annual Report

KI-359	1/14/2014	K-11	Swabbed
KI-398	1/14/2014	K-12	Swabbed
KI-318	1/15/2014	K-10	Swabbed
KI-333	1/15/2014	K-10	Swabbed
KI-392	1/15/2014	K-12	Swabbed
KI-333	1/17/2014	K-10	Swabbed
15I-0231	1/21/2014	15-20	Swabbed
KI-437	1/21/2014	K-13	Swabbed
KI-441	1/21/2014	K-13	Swabbed
DP-023	1/22/2014	D-2&3	Swabbed
15I-0730	1/23/2014	15-20	Swabbed
15I-0749	1/23/2014	15-20	Swabbed
15I-0753	1/23/2014	15-20	Swabbed
KI-466	1/23/2014	K-14	Swabbed
KI-481	1/23/2014	K-14	Swabbed
15I-0848	1/24/2014	15-21	Swabbed
3I-287	1/24/2014	3-9	Swabbed
15I-0853	1/27/2014	15-21	Swabbed
15I-0854	1/27/2014	15-21	Swabbed
KI-318	2/11/2014	K-10	Swabbed
KI-319	2/11/2014	K-10	Swabbed
KI-517	2/11/2014	K-16	Swabbed
KI-521	2/11/2014	K-16	Swabbed
KI-466	2/12/2014	K-14	Swabbed
10I-285	2/18/2014	10-8	Swabbed
10I-286	2/19/2014	10-8	Swabbed
10I-320	2/20/2014	10-9	Swabbed
10I-321	2/21/2014	10-9	Swabbed
10I-322	2/24/2014	10-9	Swabbed
7I-138	2/24/2014	7-3	Swabbed
7I-171	2/24/2014	7-3	Swabbed
7I-246	2/24/2014	7-3	Swabbed
10I-322	2/27/2014	10-9	Swabbed
10I-323	3/5/2014	10-9	Swabbed
10I-279	3/11/2014	10-8	Swabbed
10I-287	3/11/2014	10-8	Swabbed
10I-316	3/11/2014	10-9	Swabbed
10I-331	3/25/2014	10-9	Swabbed
10I-236	3/26/2014	10-9	Swabbed
10I-276	3/26/2014	10-8	Swabbed
10I-282	3/26/2014	10-8	Swabbed
10I-344	3/26/2014	10-9	Swabbed
10I-345	3/26/2014	10-9	Swabbed
10I-290	4/1/2014	10-8	Swabbed
10I-291	4/1/2014	10-8	Swabbed
10I-349	4/4/2014	10-9	Swabbed
10I-347	4/7/2014	10-9	Swabbed

Table II-H.1

Stimulation of Class III Wells 2013-2014 Annual Report

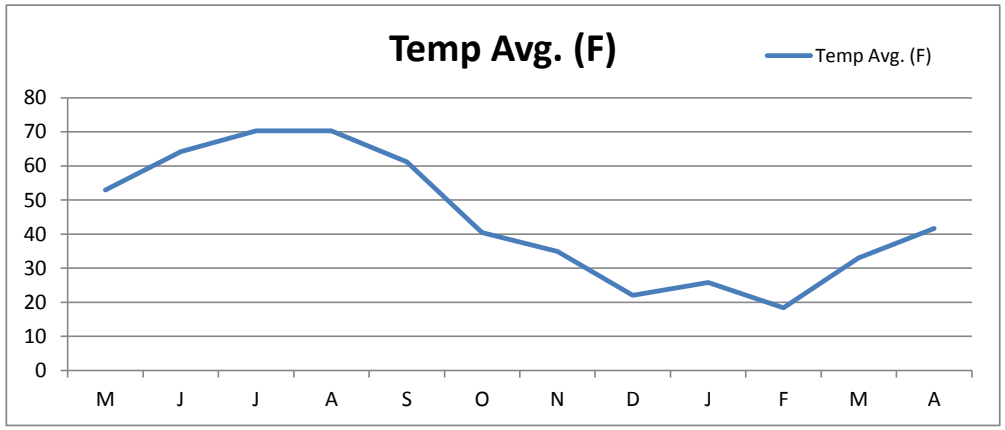
10I-442	4/7/2014	10-9	Swabbed
10i-290	4/9/2014	10-8	Swabbed
10I-292	4/9/2014	10-8	Swabbed
10I-349	4/29/2014	10-9	Swabbed
10I-224	4/30/2014	10-6	Swabbed
10I-235	4/30/2014	10-6	Swabbed
10I-284	4/30/2014	10-8	Swabbed
10I-440	4/30/2014	10-9	Swabbed

Table II-I.1
Meteorological Data
2013-2014 Annual Reports

Date	Temp Avg. (F)	Rain Daily Avg.	Rain Fall Total (in)
May-13	52.95	0.04	1.34
Jun-13	64.26	0.04	1.06
Jul-13	70.32	0.12	3.81
Aug-13	70.3	0.07	2.24
Sep-13	61.21	0.04	1.22
Oct-13	40.45	0.02	0.55
Nov-13	34.91	0.00	0.05
Dec-13	22.01	0.01	0.15
Jan-14	25.76	0.01	0.18
Feb-14	18.39	0.00	0.11
Mar-14	33.06	0.01	0.33
Apr-14	41.65	0.02	0.64
		Total Rainfall Rpt. Period	**11.68**

Date	Wind Speed Avg. (mph)	Wind Angle Avg.	Wind Direction Avg.
May-13	13.26	209.40	South West
Jun-13	12.00	190.78	South
Jul-13	9.97	152.87	South East
Aug-13	8.76	187.97	South
Sep-13	11.11	201.36	South
Oct-13	13.06	242.81	South West
Nov-13	11.83	244.94	South West
Dec-13	14.98	249.26	West
Jan-14	15.76	261.42	West
Feb-14	13.57	222.87	South West
Mar-14	15.15	240.92	South West
Apr-14	14.90	235.73	South West

Table II-I.1
Meteorological Data
2013-2014 Annual Reports



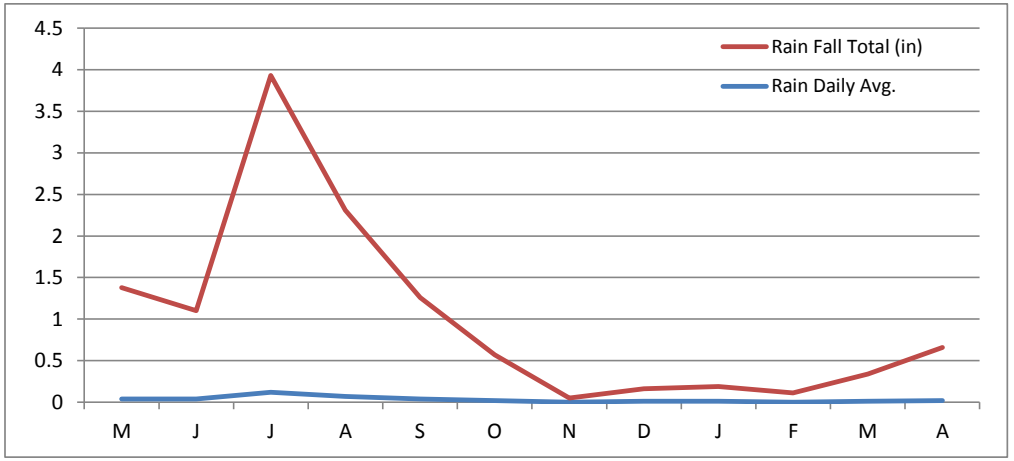


TABLE II-I.2

SATELLITE NO. 2 LAND APPLICATION FACILITY (IRRIGATOR NO. 2)
2013-2014 ANNUAL REPORT PERMIT 603

IRRIGATION CYCLE		May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14
VOLUME (AF)			31.7	40.00	45.10								
DATE SAMPLED			30-Jun-13	01-Jul-13	28-Aug-13								
MAJOR IONS (mg/L)	REP. LIMIT												
Ca	1.0		272	278	259								
Ca (meq/L)			13.6	13.9	12.9								
Mg	1.0		130	133	134								
Mg (meq/L)			10.8	11.1	11.1								
Na	1.0		91	93	95								
Na (meq/L)			3.94	4.05	4.12								
K	1.0		29.0	30	31.0								
HCO_3	1.0		243	233	186								
SO_4	1.0		882	860	889								
Cl	1.0		246	241	266								
NON-METALS													
TDS @ 180^o C (mg/L)	10.0		2000	2020	2080								
pH (standard units)	0.010		7.96	7.82	8.07								
SAR	0.01		1.1	1.1	1.20								
TRACE METALS (mg/L)													
As	0.001		0.001	0.001	0.002								
Ba	0.1		ND	ND	ND								
B	0.10		0.20	0.2	0.20								
Se	0.001		0.007	0.007	0.003								
RADIOMETRIC													
U-nat (mg/L)	0.0003		0.215	0.214	0.167								
Ra-226 (pCi/L)	0.2		4.1	2.1	1.2								
Ra Err. Est. +/- (pCi/L)			0.4	0.3	0.24								
U-nat (uCi/mL)	2.03E-10		1.50E-04	1.40E-04	1.10E-04								
Ra-226 (uCi/mL)	2.00E-10		2.80E-03	1.40E-03	8.10E-04								
Ra Err. Est. +/-			2.70E-04	2.00E-04	1.60E-02								

TABLE II-I.3

SATELLITE NO. 1
LAND APPLICATION FACILITY (IRRIGATOR #1)
ANNUAL VEGETATION DATA
2013-2014 ANNUAL REPORT PERMIT 603

SAMPLE SITE **SAMPLE DATE**		**Quarter 1 (NW)** **28-Aug-13**	**Quarter 2 (NE)** **28-Aug-13**	**Quarter 3 (SE)** **28-Aug-13**	**Quarter 4 (SW)** **28-Aug-13**	**Background** **29-Aug-13**
TRACE METALS (mg/kg): SW6020 Dry Ash Extracted	Lower Limit of Detection					
Arsenic	0.05	ND	ND	ND	ND	ND
Barium	0.05	42.90	57.50	74.50	69.00	42.20
Boron	5	19.6	27.5	16.4	19.7	20.8
Selenium	0.05	72.20	86.00	48.50	41.20	2.20
RADIOMETRIC (µCi/kg): E903.0						
U-Nat		2.7E-03	2.8E-03	1.0E-03	1.1E-03	5.2E-05
U-Nat RL		2.7E-03	2.9E-03	1.0E-03	1.1E-03	5.2E-05
Ra226		1.0E-05	1.3E-05	1.1E-05	1.0E-05	1.3E-05
Ra226 ERR. EST. +/-		1.0E-06	1.1E-06	9.5E-07	8.9E-07	1.7E-06
Ra226 MDC		5.0E-07	4.2E-07	4.2E-07	3.8E-07	1.0E-06

TABLE II-I.4

SATELLITE NO. 2
LAND APPLICATION FACILITY (IRRIGATOR #2)
ANNUAL VEGETATION DATA
2013-2014 ANNUAL REPORT PERMIT 603

SAMPLE SITE **SAMPLE DATE**		**Quarter 1 (NW)** **28-Aug-13**	**Quarter 2 (NE)** **28-Aug-13**	**Quarter 3 (SE)** **28-Aug-13**	**Quarter 4 (SW)** **28-Aug-13**	**Background** **29-Aug-13**
TRACE METALS (mg/kg): SW6020 Dry Ash Extracted	Lower Limit of Detection					
Arsenic	0.05	ND	ND	ND	ND	ND
Barium	0.05	15.30	12.10	12.40	21.00	40.40
Boron	5	18.6	20.1	17.6	24.5	16.4
Selenium	0.05	3.8	10.70	23.20	38.50	1.10
RADIOMETRIC (µCi/kg): E903.0						
U-Nat		6.0E-03	6.0E-03	3.2E-03	3.0E-03	7.0E-06
U-Nat RL		6.0E-03	5.9E-03	3.3E-03	3.0E-03	7.4E-06
Ra226		4.4E-05	2.1E-05	1.9E-05	2.3E-05	6.4E-06
Ra226 ERR. EST. +/-		2.1E-06	1.8E-06	1.4E-06	1.7E-06	2.2E-06
Ra226 MDC		5.3E-07	7.0E-07	4.8E-07	6.2E-07	2.3E-06

TABLE II-I.5

LAND APPLICATION FACILITY (IRRIGATOR 1)

ANNUAL SOIL DATA

2013-2014 ANNUAL REPORT PERMIT 603

SAMPLE ID	SAMPLE DATE	Sat %	CONDUCTIVIT (mmhos/cm)	pH SAT. PASTE (std. Units)	CALCIUM SOLUBLE (meq/L)	MAGNESIUM SOLUBLE (meq/L)	SODIUM SOLUBLE (meq/L)	SAR	BARIUM ABDTPA (mg/kg-dry)	POTASSIUM SOLUBLE (mg/kg-dry)	BORON CACL2 (mg/kg-dry)	ARSENIC ABDTPA (mg/kg-dry)	SELENIUM ABDTPA (mg/kg-dry)	Uranium mg/kg	RADIUM 226 (µCi/g-dry)	TOTAL ERROR ESTIMATE± (pCi/g-dry)	URANIUM - NATURAL TOTAL (µCi/g-dry)
S.E. Location 1 0-6"	8/28/2013	38.0	0.42	6.8	1.83	0.9	1.35	1.2	50	5.1	0.6	0.040	0.07	24.8	7.0E-01	0.06	1.68E-05
S.E. Location 1 6-12"	8/28/2013	32.2	0.45	6.8	1.18	0.6	2.56	2.7	38	3.4	0.4	0.027	0.04	1.6	5.0E-01	0.05	1.08E-06
S.E. Location 2 0-6"	8/28/2013	59.0	0.74	6.4	2.88	1.4	2.50	1.7	71	11.4	1.0	0.063	0.17	39.4	1.2E+00	0.08	2.67E-05
S.E. Location 2 6-12"	8/28/2013	62.8	0.65	6.7	1.36	0.8	3.86	3.7	70	5.3	0.9	0.045	0.07	1.7	1.0E+00	0.07	1.15E-06
S.E. Location 3 0-6"	8/28/2013	64.9	0.74	7.0	3.87	1.7	2.63	1.6	70	12.7	0.8	0.053	0.18	75.6	1.5E+00	0.08	5.12E-05
S.E. Location 3 6-12"	8/28/2013	66.1	0.72	7.8	2.09	1.0	3.95	3.2	67	4.4	0.7	0.024	0.32	3.1	1.1E+00	0.07	2.10E-06
S.W. Location 4 0-6"	8/28/2013	66.2	0.50	7.0	2.03	0.9	2.23	1.8	72	9.9	1.6	0.042	0.17	47.8	1.1E+00	0.07	3.24E-05
S.W. Location 4 6-12"	8/28/2013	66.9	2.34	7.5	13.60	5.9	8.57	2.7	29	7.5	1.1	0.030	0.46	58.5	1.1E+00	0.07	3.96E-05
S.W. Location 5 0-6"	8/28/2013	53.5	0.35	6.1	1.03	0.6	2.00	2.2	99	6.3	0.9	0.079	0.08	45.8	9.0E-01	0.06	3.10E-05
S.W. Location 5 6-12"	8/28/2013	58.9	0.53	6.4	1.17	0.6	3.19	3.4	98	4.9	0.9	0.060	0.06	2.9	9.0E-01	0.06	1.96E-06
S.W. Location 6 0-6"	8/28/2013	60.6	0.50	6.4	1.69	0.9	2.21	2.0	50	9.1	1.1	0.075	0.19	58.1	9.0E-01	0.07	3.93E-05
S.W. Location 6 6-12"	8/28/2013	73.8	0.91	7.2	2.98	1.7	4.63	3.0	51	5.5	1.2	0.050	0.22	13.6	1.0E+00	0.07	9.21E-06
S.W. Location 7 0-6"	8/28/2013	49.0	0.48	6.2	1.84	0.9	1.67	1.4	40	11.5	0.8	0.069	0.09	2.2	7.0E-01	0.06	1.49E-06
S.W. Location 7 6-12"	8/28/2013	68.6	0.84	6.7	2.16	1.4	4.10	3.1	66	5.7	1.0	0.052	0.05	2.4	1.2E+00	0.07	1.62E-06
N.W. Location 8 0-6"	8/28/2013	56.1	0.51	6.4	1.36	0.8	2.45	2.3	83	4.1	0.9	0.057	0.07	35.0	1.3E+00	0.08	2.37E-05
N.W. Location 8 6-12"	8/28/2013	56.9	1.09	6.9	3.12	2.3	4.40	2.7	53	2.2	0.9	0.039	0.04	1.5	9.0E-01	0.06	1.02E-06
N.W. Location 9 0-6"	8/28/2013	63.4	0.58	7.0	2.79	1.3	2.39	1.7	73	8.0	1.1	0.057	0.11	53.2	1.1E+00	0.07	3.60E-05
N.W. Location 9 6-12"	8/28/2013	62.1	0.62	7.4	2.02	1.1	3.48	2.8	64	3.5	1.0	0.040	0.16	1.5	9.0E-01	0.06	1.02E-06
N.W. Location 10 0-6"	8/28/2013	56.9	0.48	6.8	2.20	1.1	1.58	1.2	64	11.4	1.3	0.063	0.19	51.4	1.0E+00	0.07	3.48E-05
N.W. Location 10 6-12"	8/28/2013	58.8	0.51	6.7	1.09	0.6	3.23	3.5	97	4.3	1.1	0.058	0.08	2.8	8.0E-01	0.06	1.90E-06
N.E. Location 11 0-6"	8/28/2013	62.9	0.64	6.3	2.89	1.5	2.48	1.7	78	10.8	0.5	0.054	0.25	41.6	1.2E+00	0.08	2.82E-05
N.E. Location 11 6-12"	8/28/2013	56.0	0.71	6.9	2.65	1.3	3.56	2.5	64	5.0	0.5	0.048	0.37	7.9	1.2E+00	0.08	5.35E-06
N.E Location 12 0-6"	8/28/2013	55.0	0.72	6.2	3.42	1.7	2.61	1.6	74	10.2	0.5	0.054	0.30	79.2	1.3E+00	0.08	5.36E-05
N.E. Location 12 6-12"	8/28/2013	59.6	0.56	6.7	1.57	0.9	3.41	3.1	82	3.0	0.4	0.049	0.22	2.1	1.4E+00	0.08	1.42E-06
N.E. Location 13 0-6"	8/28/2013	62.1	0.50	6.2	2.20	1.2	2.18	1.7	79	7.2	0.6	0.056	0.25	70.8	1.6E+00	0.09	4.79E-05
N.E. Location 13 6-12"	8/28/2013	57.4	0.87	7.1	3.13	1.6	4.51	2.9	67	4.8	0.3	0.045	0.41	4.4	1.1E+00	0.07	2.98E-06
N.E. Location 14 0-6"	8/28/2013	62.4	0.76	6.0	3.70	1.8	2.48	1.5	68	15.6	0.8	0.063	0.63	4.8	1.7E+00	0.09	3.25E-06
N.E. Location 14 6-12"	8/28/2013	60.7	0.77	7.1	2.91	1.5	3.73	2.5	81	7.5	0.4	0.044	0.34	5.3	1.4E+00	0.08	3.59E-06
Average 0-6"		57.86	0.57	6.49	2.41	1.19	2.20	1.69	69.36	9.52	0.89	0.06	0.20	44.98	1.2E+00	0.07	3.05E-05
Average 6-12"		60.06	0.83	6.99	2.93	1.52	4.08	2.99	66.21	4.79	0.77	0.04	0.20	7.81	1.0E+00	0.07	5.29E-06
Background 0-6"	8/28/2013	53.9	0.32	6.3	1.60	1.1	0.82	0.7	73	3.9	0.4	0.056	0.05	1.4	1.6E+00	0.09	9.48E-07
Background 6-12"	8/28/2013	54.1	0.48	7.5	1.92	1.3	2.20	1.7	72	2.0	0.4	0.032	<0.02	1.4	1.3E+00	0.08	9.48E-07

TABLE II-I.6

LAND APPLICATION FACILITY (IRRIGATOR 2)

ANNUAL SOIL DATA

2013-2014 ANNUAL REPORT PERMIT 603

SAMPLE ID	SAMPLE DATE	Sat %	CONDUCTIVIT (mmhos/cm)	pH SAT. PASTE (std. Units)	CALCIUM SOLUBLE (meq/L)	MAGNESIUM SOLUBLE (meq/L)	SODIUM SOLUBLE (meq/L)	SAR	BARIUM ABDTPA (mg/kg-dry)	POTASSIUM SOLUBLE (mg/kg-dry)	BORON CACL2 (mg/kg-dry)	ARSENIC ABDTPA (mg/kg-dry)	SELENIUM ABDTPA (mg/kg-dry)	Uranium mg/kg	RADIUM 226 (µCi/g-dry)	TOTAL ERROR ESTIMATE± (pCi/g-dry)	NIUM - NATURAL TOTAL (µCi/g-dry)
Location 1 0-6"	8/28/2013	67.3	3.97	6.6	30.0	15.5	7.11	1.5	10	20.2	0.5	0.056	0.11	21.4	1.3E+00	0.08	1.45E-05
Location 1 6-12"	8/28/2013	58.0	5.56	6.8	36.1	22.5	11.10	2.1	9	6.4	0.3	0.048	0.29	2.3	1.0E+00	0.07	1.56E-06
Location 2 0-6"	8/28/2013	66.4	3.63	7.0	29.3	14.1	5.54	1.2	10	24.0	0.9	0.049	0.10	13.8	1.5E+00	0.08	9.34E-06
Location 2 6-12"	8/28/2013	62.4	4.40	7.3	30.7	19.2	9.32	1.9	9	8.5	0.6	0.033	0.16	4.0	1.5E+00	0.09	2.71E-06
Location 3 0-6"	8/28/2013	75.4	3.89	7.1	29.5	14.5	7.00	1.5	16	35.4	1.3	0.035	0.18	15.5	1.3E+00	0.08	1.05E-05
Location 3 6-12"	8/28/2013	71.8	4.64	6.9	32.6	17.4	9.52	1.9	8	18.5	0.5	0.030	0.18	3.1	1.2E+00	0.08	2.10E-06
Location 4 0-6"	8/28/2013	68.5	3.82	7.2	29.1	15.9	6.71	1.4	18	28.7	1.2	0.044	0.10	14.9	1.2E+00	0.08	1.01E-05
Location 4 6-12"	8/28/2013	65.6	4.33	7.2	31.4	18.6	8.21	1.6	8	7.1	0.3	0.035	0.18	2.4	1.4E+00	0.08	1.62E-06
Location 5 0-6"	8/28/2013	67.3	4.13	7.2	31.8	17.1	7.85	1.6	13	33.8	1.2	0.047	0.13	10.5	1.0E+00	0.07	7.11E-06
Location 5 6-12"	8/28/2013	66.0	4.46	6.6	29.5	19.0	9.52	1.9	8	7.9	0.3	0.044	0.16	10.4	1.3E+00	0.08	7.04E-06
Location 6 0-6"	8/28/2013	53.0	2.19	6.9	14.0	7.9	3.33	1.0	18	18.8	1.4	0.012	0.10	13.3	7.0E-01	0.06	9.00E-06
Location 6 6-12"	8/28/2013	64.0	3.54	6.1	25.7	15.7	7.36	1.6	8	9.5	0.8	0.010	0.10	6.3	1.1E+00	0.07	4.27E-06
Location 7 0-6"	8/28/2013	72.2	3.57	7.0	27.6	14.1	6.61	1.4	7	33.7	1.5	0.009	0.09	12.8	1.3E+00	0.08	8.67E-06
Location 7 6-12"	8/28/2013	68.5	3.79	7.2	28.1	15.6	7.86	1.7	7	11.9	0.8	0.007	0.10	5.9	1.3E+00	0.08	3.99E-06
Location 8 0-6"	8/28/2013	50.6	4.65	6.4	34.9	20.6	7.59	1.4	12	29.0	1.6	0.013	0.16	11.4	8.0E-01	0.07	7.72E-06
Location 8 6-12"	8/28/2013	53.0	4.73	5.8	31.8	19.1	8.63	1.7	6	18.4	1.2	0.012	0.14	8.6	1.1E+00	0.08	5.82E-06
Location 9 0-6"	8/28/2013	72.5	3.24	6.7	23.6	13.9	4.37	1.0	18	25.1	1.6	0.011	0.11	13.9	1.0E+00	0.08	9.41E-06
Location 9 6-12"	8/28/2013	71.6	3.20	6.6	20.9	13.8	6.27	1.5	13	7.3	0.6	0.009	0.12	16.6	1.3E+00	0.09	1.12E-05
Location 10 0-6"	8/28/2013	63.0	3.14	7.0	24.4	12.8	4.00	0.9	19	24.9	1.5	0.010	0.08	10.2	1.1E+00	0.08	6.91E-06
Location 10 6-12"	8/28/2013	49.4	3.38	7.2	26.3	12.2	6.85	1.6	7	9.1	0.9	0.006	0.06	4.9	6.0E-01	0.06	3.32E-06
Location 11 0-6"	8/28/2013	72.5	3.26	7.1	24.5	13.0	4.43	1.0	21	32.1	1.6	0.006	0.11	8.0	1.1E+00	0.08	5.42E-06
Location 11 6-12"	8/28/2013	36.6	3.45	7.3	26.8	12.8	6.26	1.4	15	13.7	0.9	0.004	0.12	6.7	9.0E-01	0.08	4.54E-06
Location 12 0-6"	8/28/2013	60.7	3.03	6.8	22.3	10.8	4.75	1.2	16	21.7	1.2	0.010	0.09	11.8	9.0E-01	0.07	7.99E-06
Location 12 6-12"	8/28/2013	69.0	3.70	7.0	27.5	15.7	6.43	1.4	7	10.6	0.5	0.006	0.10	6.3	1.4E+00	0.10	4.27E-06
Location 13 0-6"	8/28/2013	70.4	3.47	6.8	25.4	14.7	5.43	1.2	13	24.9	1.2	0.009	0.14	8.0	1.1E+00	0.10	5.42E-06
Location 13 6-12"	8/28/2013	69.3	3.72	7.3	26.9	14.8	6.64	1.5	9	8.5	0.7	<0.002	0.32	6.0	1.1E+00	0.10	4.06E-06
Location 14 0-6"	8/28/2013	63.7	3.82	6.7	29.9	15.9	6.19	1.3	9	24.5	1.0	0.005	0.50	14.0	1.0E+00	0.10	9.48E-06
Location 14 6-12"	8/28/2013	57.8	3.18	6.9	25.7	12.2	5.20	1.2	10	8.0	0.6	0.005	0.26	5.4	1.1E+00	0.10	3.66E-06
Location 15 0-6"	8/28/2013	64.8	3.77	6.7	30.6	15.5	5.50	1.1	8	21.6	0.8	0.004	0.84	12.9	1.3E+00	0.10	8.73E-06
Location 15 6-12"	8/28/2013	63.3	3.88	7.1	29.8	16.3	6.68	1.4	10	7.0	0.4	<0.002	0.78	3.8	1.2E+00	0.10	2.57E-06
Location 16 0-6"	8/28/2013	52.1	3.68	6.7	28.9	16.0	5.36	1.1	9	22.8	1.0	0.004	0.45	6.8	9.0E-01	0.07	4.60E-06
Location 16 6-12"	8/28/2013	62.0	2.46	6.9	16.4	8.3	4.68	1.3	19	8.8	0.7	0.003	0.56	12.6	1.1E+00	0.07	8.53E-06
Average 0-6"		65.03	3.58	6.87	27.24	14.52	5.74	1.24	13.56	26.33	1.22	0.02	0.21	12.45	1.1E+00	0.08	8.43E-06
Average 6-12"		61.77	3.90	6.89	27.89	15.83	7.53	1.61	9.56	10.08	0.63	0.02	0.23	6.58	1.2E+00	0.08	4.46E-06
Background 0-6"	8/28/2013	47.2	0.39	6.6	3.17	0.9	0.10	<0.1	65	3.5	0.5	0.007	0.03	1.4	8.0E-01	0.06	9.48E-07
Background 6-12"	8/28/2013	45.9	0.42	7.2	3.41	0.9	0.16	0.1	67	2.1	0.4	0.004	<0.02	1.6	1.1E+00	0.07	1.08E-06

TABLE II-I.7

SELENIUM PLANT
RADIUM TREATMENT SYSTEM DISCHARGE
MONTHLY RADIUM GRAB SAMPLES
2013-2014

SAMPLE DATE	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14
RADIOMETRIC										
Ra-226 (µCi/mL)	2.80E-09	2.20E-09	6.50E-10	3.30E-10	8.70E-09	2.20E-09	1.10E-09	6.10E-09	1.40E-09	1.5E-08
Ra Err. Est.+/-	3.50E-10	3.60E-10	1.90E-10	1.50E-10	6.00E-10	3.10E-10	2.30E-10	5.30E-10	1.80E-10	7.6E-10

TABLE II-I.8
SATELLITE NO. 2 PURGE STORAGE RESERVOIR
SHALLOW MONITORING WELLS
QUARTERLY WATER LEVEL DATA
SEMI-ANNUAL WATER QUALITY DATA
2013-2014 ANNUAL REPORT PERMIT 603

SAMPLE SITE		Shallow Well No. 1 (South)		Shallow Well No. 2 (East)		MW-1S (West)		MW-2S (North)		MW-3S (South)		MW-4S (East)		MW-5S	
SAMPLE DATE	Date	8/9/13	11/24/13	8/8/13	11/24/13	8/12/13	11/19/13	8/8/13	11/19/13	8/9/13	11/20/13	8/8/13	11/24/13	8/7/13	11/19/13
WATER LEVEL (DTW)	Laboratory Reporting														
MAJOR IONS (mg/L)	Limit														
Bicarbonate	1.0	293	366	329	431	400	381	387	388	524	493	521	521	226	253
Sulfate	1.0	2140	1940	2340	2290	1980	1930	249	272	1070	1050	1630	1700	1680	1580
Chloride	1.0	413	505	411	483	315	312	59	63	328	317	146	153	446	351
NON-METALS															
Cond (µmho/cm)	1.0	4800	4750	5170	5400	4410	4600	1190	1190	3190	3070	3870	3880	4120	3640
pH (standard units)	0.01	7.76	7.57	7.32	7.36	7.31	7.23	7.64	7.37	7.5	7.36	7.13	7.04	7.30	7.31
TRACE METALS (mg/L)															
Barium	0.001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	0.0025	2.490	1.880	0.008	0.008	2.17	2.3	0.001	ND	0.22	0.25	1.27	1.24	0.678	0.630
RADIOMETRIC															
U-nat (mg/L)	0.001	0.393	0.395	0.0599	0.104	0.0576	0.0514	0.001	0.0008	1.03	0.943	0.226	0.277	0.109	0.123
Ra-226 (pCi/L)	0.2	1.3	2.2	1.4	6	0.64	3.3	1.2	1.1	0.36	1.5	1.7	4.2	1.2	1.4
Ra-226 Err. Est. +/- (pCi/L)		0.23	0.3	0.23	0.46	0.18	0.32	0.23	0.2	0.15	0.24	0.26	0.4	0.23	0.22
U-nat (µCi/mL)	6.77E-10	3.93E-10	3.95E-10	5.99E-11	1.04E-10	5.76E-11	5.14E-11	1.00E-12	8.00E-13	1.03E-09	9.43E-10	2.26E-10	2.24E-10	1.09E-10	1.23E-10
Ra-226 (µCi/mL)	2.00E-10	1.30E-09	2.20E-09	1.40E-09	6.00E-09	6.40E-10	3.30E-09	1.20E-09	1.10E-09	3.60E-10	1.50E-09	1.70E-09	4.20E-09	1.20E-09	1.40E-09
Ra-226 Err. Est. +/- (µCi/mL)		2.30E-10	3.00E-10	2.30E-10	4.60E-10	1.80E-10	3.20E-10	2.30E-10	2.00E-10	1.50E-10	2.40E-10	2.60E-10	4.00E-10	2.30E-10	2.20E-10

SAMPLE SITE		MW-6S		MW-7S		MW-8S		MW-9S		MW-10S		MW-11S		MS-12S	
SAMPLE DATE	Date	8/12/13	11/20/13	8/6/13	11/20/13	8/7/13	11/22/13	8/6/13	11/18/13	8/6/13	11/18/13	8/7/13	11/24/13	8/9/13	11/20/13
WATER LEVEL (DTW)	Laboratory Reporting														
MAJOR IONS (mg/L)	Limit														
Bicarbonate	1.0	292	293	369	373	402	413	355	358	293	291	388	380	298	303
Sulfate	1.0	1300	1390	998	1020	1330	1290	878	859	521	516	573	595	1290	354

Chloride	1.0	231	253	363	338	345	395	8	9	12	13	290	302	513	519
NON-METALS															
Cond (µmho/cm)	1.0	3130	3160	2970	2910	3520	3480	1900	1910	1400	1400	2360	2360	3930	3890
pH (standard units)	0.01	7.06	7.02	7.13	7.25	7.03	7.06	7	7.23	7.76	7.84	7.16	7.26	7.52	7.46
TRACE METALS (mg/L)															
Barium	0.001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	0.0025	0.003	0.002	0.012	0.009	0.141	0.101	ND	0.002	ND	ND	0.030	0.046	0.645	0.750
RADIOMETRIC															
U-nat (mg/L)	0.001	0.0008	0.0009	0.361	0.380	0.212	0.196	0.0577	0.059	0.0004	0.0008	0.0589	0.0882	1.1	1.180
Ra-226 (pCi/L)	0.2	2	21	3.1	3.1	3.8	2.9	2.9	1.8	0.83	0.68	1.2	6	1.7	3.9
Ra-226 Err. Est. +/- (pCi/L)		0.29	0.86	0.45	0.34	0.39	0.33	0.43	0.24	0.26	0.17	0.23	0.48	0.27	0.38
U-nat (µCi/mL)	6.77E-10	8.00E-13	9.00E-13	3.61E-10	3.80E-10	2.12E-10	1.96E-10	5.77E-11	5.90E-11	4.00E-13	8.00E-13	5.89E-11	8.82E-11	1.10E-09	1.18E-09
Ra-226 (µCi/mL)	2.00E-10	2.00E-09	2.10E-08	3.10E-09	3.10E-09	3.80E-09	2.90E-09	2.90E-09	1.80E-09	8.30E-10	6.80E-10	1.20E-09	6.00E-09	1.70E-09	3.90E-09
Ra-226 Err. Est. +/- (µCi/mL)		2.90E-10	8.60E-10	4.50E-10	3.40E-10	3.90E-10	3.30E-10	4.30E-10	2.40E-10	2.60E-10	1.70E-10	2.30E-10	4.80E-10	2.70E-10	3.80E-10

Table II-I.9
SEMI-ANNUAL SAMPLING OF IMPOUNDMENT (EVAPORATION PONDS)
2013-2014 ANNUAL REPORT PERMIT 633

Parameter	East Impoundment (Evaporation) Pond Pond not in Use	West Impoundment (Evaporation) Pond 11/15/2013	West Impoundment (Evaporation) Pond 5/13/2014
Bicarbonate (mg/L)	N/A	468	101
Calcium (mg/L)	N/A	602	372
Chloride (mg/L)	N/A	2450	424
Sodium (mg/L)	N/A	685	460
Sulfate (mg/L)	N/A	662	1620
TDS (mg/L)	N/A	6240	3040
Uranium (mg/L)	N/A	91	20.1
Radium-226 (pCi/L)	N/A	229	11
Thorium-230 (pCi/L)	N/A	0.1	0.08

TABLE III-A.1
LONG TERM MONITORING PLAN DATA (MINE UNIT A)
2013-2014 ANNUAL REPORT PERMIT 603

WELL ID	DATE	Cl	TDS	ALK	pH	Fe	Mn	Se	U nat	Ra 226	Water Level
2005											
MP-4	5/10/2005	16	485	287	6.75	0.71	0.6	0.188	11.9	3580	5049.5
I-21	5/10/2005	18	585	397	7.14	0.04	0.41	0.001	4.65	750	5048.6
LTM-4	5/10/2005	25	515	298	7.64	<0.03	0.06	<0.001	0.018	28.3	5050.6
M-3	5/10/2005	2	326	171	7.87	0.07	0.03	<0.001	0.0151	9	5048.1
M-4	5/10/2005	3	335	174	7.82	0.07	0.04	<0.001	0.0144	6.8	5042.2
2006											
MP-4	4/13/2006	19	472	305	6.99	0.34	0.56	0.191	13.2	1340	
I-21	4/13/2006	18	574	430	7.46	ND	0.4	0.003	3.53	571	
LTM-4	4/13/2006	23	480	312	7.68	ND	0.08	0.002	0.014	22	
M-3	4/13/2006	6	324	182	8.07	0.04	0.03	ND	0.0148	3.5	
M-4	4/13/2006	5	328	182	7.86	ND	0.04	0.002	0.0235	2.7	
MP-4	9/20/2006	18	496	286	6.94	0.33	0.56	0.196	13.4	3260	
I-21	9/20/2006	17	580	414	7.4	ND	0.42	0.004	1.64	480	
LTM-4	9/20/2006	21	490	297	7.63	ND	0.09	ND	0.013	23.7	
M-3	9/20/2006	4	324	174	8.01	ND	0.03	ND	0.0158	6.9	
M-4	9/20/2006	5	336	175	7.01	ND	0.04	0.001	0.02	6.2	
2007											
MP-4	5/11/2007	18	502	294	6.92	0.07	0.52	0.198	13.1	3440	
I-21	5/11/2007	17	602	442	7.54	0.04	0.42	0.013	1.63	585	
LTM-4	5/11/2007	21	498	312	7.67	ND	0.09	ND	0.0188	35	
M-3	5/11/2007	2	330	182	7.96	ND	0.03	ND	0.0162	7.6	
M-4	5/11/2007	3	336	184	7.94	ND	0.03	ND	0.0149	7.7	
MP-4	10/25/2007	17	498	372	7	0.48	0.49	0.194	13.5	3240	
I-21	10/25/2007	16	579	556	7.57	ND	0.4	ND	1.29	475	
LTM-4	10/25/2007	21	484	391	7.69	ND	0.08	ND	0.0129	24.1	
M-3	10/25/2007	2	311	226	7.97	ND	0.03	ND	0.016	9.3	
M-4	10/25/2007	4	333	230	7.99	ND	0.04	ND	0.0275	20	
2008											
MP-4	5/15/2008	16	509	290	6.71	0.66	0.59	0.19	11.8	3830	5029.3*
I-21	5/15/2008	16	607	439	7.33	ND	0.48	0.004	1.69	629	5052
LTM-4	5/15/2008	21	494	314	7.6	0.03	0.08	ND	0.0159	28.2	5053.6
M-3	5/15/2008	2	322	175	8	0.07	0.03	ND	0.0233	9.2	5052.3
M-4	5/15/2008	4	334	178	7.53	0.05	0.03	ND	0.0127	7.2	5052
MP-4	10/6/2008	18	488	289	6.92	0.33	0.54	0.202	14.7	3380	5054
I-21	10/6/2008	17	569	436	7.42	ND	0.45	0.021	2.04	579	5052.8
LTM-4	10/6/2008	19	473	321	7.57	ND	0.1	ND	0.0137	27	5054.56
M-3	10/6/2008	3	303	175	7.89	0.08	0.02	ND	0.0131	8	5051.9
M-4	10/6/2008	4	313	177	7.87	ND	0.03	ND	0.0134	6.8	5052.82

*Value checked, but may not be correct

WELL ID	DATE	Cl	TDS	ALK	pH	Fe	Mn	Se	U nat	Ra 226	Water Level
2009											
MP-4	5/18/2009	18	502	299	6.92	0.43	0.55	0.208	14.60	3140	5054.5
I-21	5/18/2009	14	587	449	7.29	ND	0.42	0.005	0.7520	441	5055.6
LTM-4	5/18/2009	18	503	325	7.4	ND	0.09	ND	0.0177	30	5057.8
M-3	5/18/2009	2	326	180	7.82	ND	0.03	ND	0.0130	7.7	5052.9
M-4	5/18/2009	3	318	183	7.81	ND	0.03	ND	0.0117	5.2	5054.4
MP-4	11/4/2009	18	502	315	8.18	0.26	0.53	0.202	14.800	3460	5055.6
I-21	11/4/2009	15	578	468	8.21	ND	0.45	0.002	0.9800	552	5053.9
LTM-4	11/4/2009	19	481	351	8.21	ND	0.10	ND	0.0169	25	5055.6
M-3	11/4/2009	3	299	189	8.27	ND	0.03	ND	0.0148	7.9	5053.4
M-4	11/4/2009	4	308	190	8.3	ND	0.03	ND	0.0130	5.7	5054.8
2010											
MP-4	5/19/2010	19	537	315	6.78	0.51	0.52	0.194	15.7	3690	5052.13
I-21	5/19/2010	16	618	472	7.39	ND	0.43	0.003	1	502	5056
LTM-4	5/19/2010	20	518	352	7.42	ND	0.1	ND	0.0191	27	5058.36
M-3	5/19/2010	3	327	187	7.76	ND	0.03	ND	0.0149	8.1	5054.4
M-4	5/19/2010	4	333	190	7.8	ND	0.03	ND	0.014	5.5	5050.42
2011											
MP-4	11/16/2011	18	515	314	7.78	0.72	0.6	0.204	15.7	3340	5053.33
I-21	11/16/2011	16	607	458	7.77	0.05	0.49	ND	0.663	511	5056.6
LTM-4	11/16/2011	20	518	352	7.42	ND	0.1	ND	0.0191	27	5058.36
M-3	11/16/2011	3	327	187	7.76	ND	0.03	ND	0.0149	8.1	5054.4
M-4	11/16/2011	4	333	190	7.8	ND	0.03	ND	0.014	5.5	5050.42
2012											
MP-4	5/14/2012	19	554	303	6.65	0.65	0.591	0.216	17.3	3140	5052.1
I-21	5/14/2012	18	586	389	7.05	0.17	0.782	0.001	2.13	676	5056
LTM-4	5/14/2012	20	531	361	7.41	ND	0.011	ND	0.0227	28	5057.86
M-3	5/14/2012	3	327	181	7.92	ND	0.03	ND	0.013	9.8	5055.9
M-4	5/14/2012	4	342	183	7.81	ND	0.03	ND	0.014	7.2	5055.12
2013											
MP-4	5/15/2013	20	551	322	6.72	0.56	0.611	0.201	18.9	3610	5052.1
I-21	5/14/2013	17	599	445	7.13	ND	0.698	ND	1.26	720	5056
LTM-4	5/14/2013	20	521	371	7.33	ND	0.118	ND	0.027	41	5057.86
M-3	5/14/2013	3	318	184	7.9	ND	0.032	ND	0.0137	9.3	5055.9
M-4	5/14/2013	4	334	197	7.78	ND	0.038	ND	0.0149	7.6	5055.12
2013											
MP-4	11/19/2013	23	514	318	6.6	1.12	0.588	0.109	18	3410	5052.9
I-21	11/19/2013	12	517	336	7.1	0.06	0.428	0.002	5.4	583	5052.4
LTM-4	11/19/2013	22	528	401	7.3	0.08	0.126	ND	0.0236	31	5055.06
M-3	11/19/2013	3	306	186	7.82	0.57	0.035	ND	0.0133	7.9	5053.3
M-4	11/19/2013	5	314	190	7.81	ND	0.044	ND	0.0134	6	5051.42

Water levels are mean sea level elevations in feet.

TABLE III-C.1 INTERIM RECLAMATION
2013-2014 ANNUAL REPORT PERMIT 633

	MINE UNIT/LOCATION	TYPE OF DISTURBANCE (ROAD, WELLFIELD, SPILL AREA, ETC.)	RECLAMATION TYPE (INTERIM OR PERMANENT)	AREA SQ FT	MINE ACRES	TOPSOIL APPLICATION (YES/NO)	TOPSOIL APPLICATION DEPTH (INCHES = ")	TYPE OF SEED	SEEDING DATES	SEEDING PROCEDURE	RATE OF SEED APPLICATION	TYPE & RATE OF FERTILIZER	TYPE & RATE OF MULCH APPLIED	ACRES RECLAIMED IN 2010-11 BY MINE UNIT
MINE UNIT 9 RECLAMATION PERMIT 633	MINE UNIT 9 HH 9-1 7.70Acres.	WELLFIELD	INTERIM	335,412.00	7.70	NO	N/A	2014 wheat grass MIX: Pls#/ac: Lender Wheatgrass 4.8 pls Intermediate Wheatgrass 4.8 pls Western Wheatgrass 6.4 pls @ $126 PER ACRE.	APRIL 2ND QUARTER 2014	1.b) THE SOIL AMENDMENT PROCESS SUMMARY FOR TRACTOR ACCESSIBLE AREAS INCLUDE:o CONTOUR AREA TO ORIGINAL STATE. o DISC DISTURBED AREA o DRILL-SEED CAMECO APPROVED 2013 Wh MIX & 1 ANNUAL CROP (OATS). (10-14 PLS LBS PER ACRE = 17-20 GROSS LBS). 11 Pls#/ac @ $106 per acre.	16 Pls#/ac			
										MINE UNIT 9 RECLAMATION TOTAL:				**7.70**
MINE UNIT 10 - 633 PERMIT	MU 10 Header Houses 10-6, ,7, 8,9,10, 11, 75.57 Acres	WELLFIELD	INTERIM	3,291,829.20	75.57	NO	N/A	2013 seed mix:#/pls Canby bluegrass 2 , basin wild rye 2, prairie June grass 1.5, slender wheat grass 2, sand drop seed 3, blue Grama 1.5, Linn Perennial rye 2.	MAY 2ND QUARTER 2013	1.b) THE SOIL AMENDMENT PROCESS SUMMARY FOR TRACTOR ACCESSIBLE AREAS INCLUDE:o CONTOUR AREA TO ORIGINAL STATE. o DISC DISTURBED AREA o DRILL-SEED CAMECO APPROVED 2013 SEED MIX & 1 ANNUAL CROP (OATS). (11-17 PLS LBS PER ACRE = 17-21 GROSS LBS). 15 Pls#/ac @ $131 per acre.	15 Pls#/ac	0	0	
	MU 10 Header Houses 10-1, 10-4, 10-5, 37.98 Acres	WELLFIELD	INTERIM	1,654,408.80	37.98	NO	N/A	2013 seed mix:#/pls Canby bluegrass 2 , basin wild rye 2, prairie June grass 1.5, slender wheat grass 2, sand drop seed 3, blue Grama 1.5, Linn Perennial rye 2.	APRIL 2ND QUARTER 2014	1.b) THE SOIL AMENDMENT PROCESS SUMMARY FOR TRACTOR ACCESSIBLE AREAS INCLUDE:o CONTOUR AREA TO ORIGINAL STATE. o DISC DISTURBED AREA o DRILL-SEED CAMECO APPROVED 2013 SEED MIX & 1 ANNUAL CROP (OATS). (11-17 PLS LBS PER ACRE = 17-21 GROSS LBS). 15 Pls#/ac @ $131 per acre.	15 Pls#/ac	0	0	
	touch up non vegetated areas MU 10 Header Houses 10-6, ,7, 8,9,10, 11, 32.43 Acres	WELLFIELD	INTERIM	1,413,957.60	32.46	NO	N/A	2013 seed mix:#/pls Canby bluegrass 2 , basin wild rye 2, prairie June grass 1.5, slender wheat grass 2, sand drop seed 3, blue Grama 1.5, Linn Perennial rye 2.	APRIL 2ND QUARTER 2014	1.b) THE SOIL AMENDMENT PROCESS SUMMARY FOR TRACTOR ACCESSIBLE AREAS INCLUDE:o CONTOUR AREA TO ORIGINAL STATE. o DISC DISTURBED AREA o DRILL-SEED CAMECO APPROVED 2013 SEED MIX & 1 ANNUAL CROP (OATS). (11-17 PLS LBS PER ACRE = 17-21 GROSS LBS). 15 Pls#/ac @ $131 per acre.	15 Pls#/ac	0	0	
														146.01
Facility area permit #633	BONE YARD AREA	FACILITY	INTERIM	124,939.50	2.87	NO	N/A	2012 SEED MIX: Pls#/ac: Canby Bluegrass - 2, Linn Perennial Rye - 3, Prairie June Grass - 2, Blue Grama - 1, Sideoats Grama - 1, Little Bluestem - 1, Idho fescue - 1. Total = 11Pls#/ac, Bulk 15Lbs per acre bag 1 @ $126 PER ACRE.	MAY 2ND QUARTER 2012	1.b) THE SOIL AMENDMENT PROCESS SUMMARY FOR TRACTOR ACCESSIBLE AREAS INCLUDE:o CONTOUR AREA TO ORIGINAL STATE. o DISC DISTURBED AREA o SPREAD APPROPRIATE FERTILIZER IN DISCED AREA - (18-46-0 Fertilizer) 200LBS PER ACRE o DRILL-SEED CAMECO APPROVED 2010C SEED MIX & 1 ANNUAL CROP (OATS). (10-14 PLS LBS PER ACRE = 17-20 GROSS LBS). 11 Pls#/ac @ $126 per acre.	11 Pls#/ac		1000lbs of STRAW MULCH SPREAD AND CRIMPED PER ACRE	
														2.87
- 633 PERMIT	MINE UNIT 3 HH 3-9 & 10	WELLFIELD	INTERIM	610,275.60	14.01	NO	N/A	2013 seed mix:#/pls Canby bluegrass 2 , basin wild rye 2, prairie June grass 1.5, slender wheat grass 2, sand drop seed 3, blue Grama 1.5, Linn Perennial rye 2.	JUNE 2ND QUARTER 2013	1.a) THE SOIL AMENDMENT PROCESS SUMMARY FOR TRACTOR ACCESSIBLE AREAS INCLUDE:o CONTOUR AREA TO ORIGINAL STATE. o DISC DISTURBED AREA o DRILL-SEED CAMECO APPROVED 20120SEED MIX & 1 ANNUAL CROP (OATS). (10-14 PLS LBS PER ACRE = 17-20 GROSS LBS). o BROADCAST STRAW OVER SEEDED AREA WITH HAYBUSTER UNIT. 15 Pls#/ac @ $352.50 per acre.	15 Pls#/ac		1000lbs of STRAW MULCH SPREAD AND CRIMPED PER ACRE	

TABLE III-C.1 INTERIM RECLAMATION
2013-2014 ANNUAL REPORT PERMIT 633

	MINE UNIT/LOCATION	TYPE OF DISTURBANCE (ROAD, WELLFIELD, SPILL AREA, ETC.)	RECLAMATION TYPE (INTERIM OR PERMANENT)	AREA SQ FT	MINE ACRES	TOPSOIL APPLICATION (YES/NO)	TOPSOIL APPLICATION DEPTH (INCHES = ")	TYPE OF SEED	SEEDING DATES	SEEDING PROCEDURE	RATE OF SEED APPLICATION	TYPE & RATE OF FERTILIZER	TYPE & RATE OF MULCH APPLIED	ACRES RECLAIMED IN 2010-11 BY MINE UNIT
MINE UNIT 3	MU 3 HH 3-9 & 10 pipe lines	WELLFIELD	INTERIM	53,982.00	1.24	NO	N/A	2013 seed mix:#/pls Canby bluegrass 2 , basin wild rye 2, prairie June grass 1.5, slender wheat grass 2, sand drop seed 3, blue Grama 1.5, Linn Perennial rye 2.	JUNE 2ND QUARTER 2013	1.a) THE SOIL AMENDMENT PROCESS SUMMARY FOR TRACTOR ACCESSIBLE AREAS INCLUDE:o CONTOUR AREA TO ORIGINAL STATE. o DISC DISTURBED AREA o DRILL-SEED CAMECO APPROVED 20120SEED MIX & 1 ANNUAL CROP (OATS). (10-14 PLS LBS PER ACRE = 17-20 GROSS LBS). o BROADCAST STRAW OVER SEEDED AREA WITH HAYBUSTER UNIT. 15 Pls#/ac @ $352.50 per acre.	15 Pls#/ac		1000lbs of STRAW MULCH SPREAD AND CRIMPED PER ACRE	
													MINE UNIT 3 RECLAMATION TOTAL:	15.25
													633 PERMIT RECLAMATION TOTAL:	171.83

Key

MU-7 Unplanned
MU-10 Unplanned
MU-4 Core hole for Jim Clay
MU-B 2 Core Holes for Jim Clay
MU-10 Ext Delineation
MU-8 Delination
MU-12 Delin

Land Status Key (Surface Ownership)
1= Private
2 = State
3= Federal

Table IV-B.1
Delineation Holes Drilled 2013-2014 Annual Report Period

Long Name	DRILL DATE	ATE ABANDONI	TWN	RNG	QQ Section	NORTH	EAST	COUNTY	LAND STATUS	STAKED TD	ARTESIAN FLOW GPM	HOW SURFACE CAPPED
3574-16-602	8/5/2013	9/25/2013	35N	74W	NE/SW 16	851800	345950	Converse	2	1050	0	Concrete Cap
3574-16-603	8/2/2013	9/30/2013	35N	74W	NE/SW 16	851770	345758	Converse	2	1050	0	Concrete Cap
3574-16-604	8/1/2013	9/25/2013	35N	74W	NE/SW 16	851646	345588	Converse	2	1000	0	Concrete Cap
3574-16-605	8/6/2013	9/25/2013	35N	74W	NE/SW 16	851552	345751	Converse	2	1000	0	Concrete Cap
3574-16-606	8/8/2013	9/26/2013	35N	74W	NE/SW 16	851493	346071	Converse	2	1000	0	Concrete Cap
3574-16-607	8/9/2013	9/26/2013	35N	74W	NE/SW 16	851438	345956	Converse	2	990	0	Concrete Cap
3574-16-608	7/30/2013	10/23/2013	35N	74W	NE/SW 16	851343	345849	Converse	2	990	0	Concrete Cap
3574-16-609	7/24/2013	10/1/2013	35N	74W	NE/SW 16	851244	345651	Converse	2	990	0	Concrete Cap
3574-16-610	7/31/2013	9/26/2013	35N	74W	NE/SW 16	851246	346042	Converse	2	990	0	Concrete Cap
3574-16-611	7/29/2013	10/3/2013	35N	74W	NE/SW 16	851197	345853	Converse	2	980	0	Concrete Cap
3574-16-612	7/25/2013	10/3/2013	35N	74W	NE/SW 16	851198	345647	Converse	2	980	0	Concrete Cap
3574-16-613	7/26/2013	10/3/2013	35N	74W	SE/SW 16	851151	345797	Converse	2	980	0	Concrete Cap
3574-16-614	8/7/2013	10/1/2013	35N	74W	SE/SW 16	850949	346150	Converse	2	980	0	Concrete Cap
3574-16-615	8/7/2013	10/2/2013	35N	74W	SE/SW 16	850692	346198	Converse	2	980	0	Concrete Cap
3574-16-616	8/8/2013	8/21/2013	35N	74W	SE/SW 16	850546	345998	Converse	2	960	0	Concrete Cap
3574-16-617	8/7/2013	8/21/2013	35N	74W	SE/SW 16	850545	346154	Converse	2	960	0	Concrete Cap
3574-16-618	8/8/2013	8/21/2013	35N	74W	SW/SE 16	850538	346301	Converse	2	960	0	Concrete Cap
3574-16-619	8/9/2013	8/11/2013	35N	74W	SW/SE 16	850496	346352	Converse	2	960	0	Concrete Cap
3574-16-620	8/9/2013	8/21/2013	35N	74W	SW/SE 16	849989	346393	Converse	2	880	0	Concrete Cap
3574-16-621	8/7/2013	8/21/2013	35N	74W	SE/SW 16	850849	346050	Converse	2	980	0	Concrete Cap
3574-16-622	8/7/2013	8/9/2013	35N	74W	SW/SE 16	850692	346354	Converse	2	980	0	Concrete Cap
3574-16-623	8/7/2013	8/21/2013	35N	74W	SE/SW 16	850500	346102	Converse	2	960	0	Concrete Cap
3574-16-624	8/13/2013	10/24/2013	35N	74W	SE/SW 16	849876	346040	Converse	2	880	0	Concrete Cap
3574-16-625	8/9/2013	8/11/2013	35N	74W	NE/SW 16	851339	346062	Converse	2	990	0	Concrete Cap
3574-16-626	8/13/2013	9/25/2013	35N	74W	NE/SW 16	851853	345740	Converse	2	1040	0	Concrete Cap
3574-16-627	8/15/2013	8/21/2013	35N	74W	SW/SE 16	850101	346657	Converse	2	900	0	Concrete Cap
3574-16-628	8/14/2013	9/25/2013	35N	74W	NE/SW 16	851810	345820	Converse	2	1060	0	Concrete Cap
3574-16-629	8/12/2013	9/25/2013	35N	74W	SE/SW 16	851146	345947	Converse	2	980	0	Concrete Cap
3574-16-630	8/12/2013	10/25/2013	35N	74W	NE/SW 16	851810	345820	Converse	2	990	0	Concrete Cap
3574-16-631	8/15/2013	8/28/2013	35N	74W	NE/SW 16	851248	345827	Converse	2	980	0	Concrete Cap
3574-16-632	8/15/2013	10/1/2013	35N	74W	NE/SW 16	851445	345614	Converse	2	1000	0	Concrete Cap
3574-16-633	8/14/2013	10/25/2013	35N	74W	NE/SW 16	851537	345620	Converse	2	1000	0	Concrete Cap
3574-16-634	8/19/2013	10/2/2013	35N	74W	SW/SE 16	850679	346279	Converse	2	960	0	Concrete Cap
3574-16-635	8/16/2013	9/26/2013	35N	74W	NE/SW 16	851446	346054	Converse	2	1000	0	Concrete Cap
3574-16-636	8/16/2013	9/26/2013	35N	74W	NE/SW 16	851389	346007	Converse	2	990	0	Concrete Cap
3574-16-637	8/16/2013	8/21/2013	35N	74W	SW/SE 16	849969	346645	Converse	2	880	0	Concrete Cap
3574-16-638	8/19/2013	10/3/2013	35N	74W	SE/SW 16	850077	346008	Converse	2	880	0	Concrete Cap
3574-16-639	8/19/2013	10/2/2013	35N	74W	SW/SE 16	850749	346353	Converse	2	960	0	Concrete Cap
3574-16-640	8/20/2013	10/25/2013	35N	74W	SW/SE 16	850399	346353	Converse	2	960	0	Concrete Cap
3574-16-641	8/20/2013	10/23/2013	35N	74W	SE/SW 16	850240	346231	Converse	2	920	0	Concrete Cap
3574-16-642	8/28/2013	9/25/2013	35N	74W	NE/SW 16	851540	345530	Converse	2	1020	0	Concrete Cap
3574-16-643	8/27/2013	10/1/2013	35N	74W	NE/SW 16	851395	346101	Converse	2	1000	0	Concrete Cap
3574-16-644	8/26/2013	9/26/2013	35N	74W	NE/SW 16	851250	346150	Converse	2	1000	0	Concrete Cap

3574-16-645	8/27/2013	9/30/2013	35N	74W	NE/SW 16	851400	345550	Converse	2	1000	0	Concrete Cap
3574-16-646	8/26/2013	10/3/2013	35N	74W	SE/SW 16	851108	345954	Converse	2	980	0	Concrete Cap
3574-16-647	8/23/2013	10/2/2013	35N	74W	SW/SE 16	850750	346406	Converse	2	960	0	Concrete Cap
3574-16-648	8/23/2013	10/2/2013	35N	74W	SE/SW 16	850467	345944	Converse	2	940	0	Concrete Cap
3574-16-649	8/22/2013	10/2/2013	35N	74W	SE/SW 16	850206	345930	Converse	2	880	0	Concrete Cap
3574-16-650	9/18/2013	11/2/2013	35N	74W	SW/SE 16	849856	346523	Converse	2	860	0	Concrete Cap
3574-16-651	8/29/2013	10/24/2013	35N	74W	SW/SE 16	850307	346309	Converse	2	900	0	Concrete Cap
3574-16-652	8/30/2013	9/1/2013	35N	74W	SW/SE 16	850055	346409	Converse	2	880	0	Concrete Cap
3574-16-653	8/30/2013	10/3/2013	35N	74W	SE/SW 16	850238	345979	Converse	2	900	0	Concrete Cap
3574-16-654	8/28/2013	10/1/2013	35N	74W	SE/SW 16	851001	345982	Converse	2	980	0	Concrete Cap
3574-16-655	8/29/2013	10/2/2013	35N	74W	SE/SW 16	850790	346111	Converse	2	980	0	Concrete Cap
3574-16-656	9/16/2013	10/1/2013	35N	74W	NE/SW 16	851352	345600	Converse	2	1000	0	Concrete Cap
3574-16-657	9/12/2013	10/3/2013	35N	74W	SE/SW 16	850140	345881	Converse	2	920	0	Concrete Cap
3574-16-658	9/13/2013	10/1/2013	35N	74W	SE/SW 16	850962	346061	Converse	2	980	0	Concrete Cap
3574-16-659	9/13/2013	10/2/2013	35N	74W	SE/SW 16	850852	346114	Converse	2	980	0	Concrete Cap
3574-16-660	9/12/2013	10/2/2013	35N	74W	SE/SW 16	850746	346103	Converse	2	980	0	Concrete Cap
3574-16-661	9/20/2013	10/2/2013	35N	74W	SE/SW 16	850264	345921	Converse	2	860	0	Concrete Cap
3574-16-662	9/25/2013	9/30/2013	35N	74W	NE/SW 16	851580	345650	Converse	2	1000	0	Concrete Cap
3574-16-663	9/18/2013	10/3/2013	35N	74W	SW/SE 16	850023	346364	Converse	2	840	0	Concrete Cap
3574-16-664	9/19/2013	10/3/2013	35N	74W	SE/SW 16	850148	346023	Converse	2	920	0	Concrete Cap
3574-16-665	10/1/2013	10/3/2013	35N	74W	SE/SW 16	850231	346178	Converse	2	900	0	Concrete Cap
3574-16-666	10/11/2013	1/7/2014	35N	74W	NE/SW 16	851420	345660	Converse	2	1000	0	Concrete Cap
3574-16-667	9/30/2013	10/28/2013	35N	74W	SW/SE 16	849957	346347	Converse	2	860	0	Concrete Cap
3574-16-668	10/1/2013	10/3/2013	35N	74W	SE/SW 16	850251	346100	Converse	2	1000	0	Concrete Cap
3574-16-669	9/30/2013	10/3/2013	35N	74W	SE/SW 16	850135	346082	Converse	2	1000	0	Concrete Cap
3574-16-670	10/2/2013	10/3/2013	35N	74W	SE/SW 16	850076	345932	Converse	2	1000	0	Concrete Cap
3574-16-671	10/17/2013	10/19/2013	35N	74W	NE/SW 16	851495	345560	Converse	2	1020	0	Concrete Cap
3574-16-672	10/3/2013	10/9/2013	35N	74W	SE/SW 16	850844	345594	Converse	2	980	0	Concrete Cap
3574-16-673	10/2/2013	10/23/2013	35N	74W	SE/SW 16	850453	345699	Converse	2	900	0	Concrete Cap
3574-16-674	10/9/2013	10/23/2013	35N	74W	NE/SW 16	851250	345706	Converse	2	980	0	Concrete Cap
3574-16-675	10/10/2013	10/23/2013	35N	74W	NE/SW 16	851350	345804	Converse	2	980	0	Concrete Cap
3574-16-676	10/9/2013	10/23/2013	35N	74W	NE/SW 16	851294	345862	Converse	2	980	0	Concrete Cap
3574-16-677	10/3/2013	10/25/2013	35N	74W	SE/SW 16	851009	346037	Converse	2	980	0	Concrete Cap
3574-16-678	10/10/2013	10/23/2013	35N	74W	SW/SE 16	850193	346370	Converse	2	920	0	Concrete Cap
3574-16-679	10/16/2013	10/25/2013	35N	74W	NE/SW 16	851514	346140	Converse	2	1060	0	Concrete Cap
3574-16-680	10/11/2013	10/25/2013	35N	74W	SE/SW 16	850598	346151	Converse	2	940	0	Concrete Cap
3574-16-681	1/20/2014	1/23/2014	35N	74W	SE/SW 16	850747	345544	Converse	2	920	0	Concrete Cap
3574-16-682	1/23/2014	1/23/2014	35N	74W	SE/SW 16	851155	345311	Converse	2	980	0	Concrete Cap
3574-16-683	1/21/2014	2/3/2014	35N	74W	SE/SW 16	850440	345563	Converse	2	900	0	Concrete Cap
3574-16-684	1/31/2014	2/3/2014	35N	74W	SE/SW 16	849931	345921	Converse	2	880	0	Concrete Cap
3574-16-685	1/27/2014	2/3/2014	35N	74W	SE/SW 16	849905	346151	Converse	2	880	0	Concrete Cap
3574-16-686	1/22/2014	2/4/2014	35N	74W	SE/SW 16	850898	345623	Converse	2	980	0	Concrete Cap
3574-16-687	1/27/2014	2/3/2014	35N	74W	SE/SW 16	850903	346157	Converse	2	980	0	Concrete Cap
3574-16-688	1/30/2014	2/3/2014	35N	74W	SW/SE 16	849956	346300	Converse	2	860	0	Concrete Cap
3574-16-689	2/13/2014	2/18/2014	35N	74W	NE/SW 16	851697	345449	Converse	2	1020	0	Concrete Cap
3574-16-690	2/3/2014	2/4/2014	35N	74W	SE/SW 16	850750	345490	Converse	2	940	0	Concrete Cap
3574-16-691	1/30/2014	2/3/2014	35N	74W	SE/SW 16	850438	346102	Converse	2	960	0	Concrete Cap
3574-16-692	1/29/2014	2/3/2014	35N	74W	SE/SW 16	850704	346050	Converse	2	960	0	Concrete Cap
3574-16-693	2/10/2014	2/18/2014	35N	74W	SE/SW 16	851000	345275	Converse	2	980	0	Concrete Cap
3574-16-694	1/31/2014	2/3/2014	35N	74W	SE/SW 16	850684	345692	Converse	2	920	0	Concrete Cap
3574-16-695	2/14/2014	2/21/2014	35N	74W	NE/SW 16	851470	345350	Converse	2	1020	0	Concrete Cap
3574-16-696	2/11/2014	2/18/2014	35N	74W	SE/SW 16	850673	345502	Converse	2	920	0	Concrete Cap
3574-16-697	2/18/2014	2/21/2014	35N	74W	SE/SW 16	850402	346181	Converse	2	940	0	Concrete Cap
3574-16-698	2/18/2014	2/21/2014	35N	74W	SW/SE 16	850035	346299	Converse	2	860	0	Concrete Cap
3574-16-699	2/12/2014	2/18/2014	35N	74W	NE/SW 16	851650	346010	Converse	2	1060	0	Concrete Cap
3574-16-700	2/19/2014	2/21/2014	35N	74W	SE/SW 16	849941	345992	Converse	2	880	0	Concrete Cap
3574-16-701	4/23/2014	4/30/2014	35N	74W	NW/SW 16	851838	343930	Converse	2	680	0	Concrete Cap
3574-16-702	4/22/2014	4/23/2014	35N	74W	NW/SW 16	852048	343754	Converse	2	680	0	Concrete Cap
3574-16-703	4/29/2014	4/30/2014	35N	74W	NW/SW 16	851925	343740	Converse	2	680	0	Concrete Cap

3574-16-704	4/28/2014	5/1/2014	35N	74W	NW/SW 16	851254	344715	Converse	2	620	0	Concrete Cap
3574-16-705	4/25/2014	5/1/2014	35N	74W	SW/SW 16	850992	344821	Converse	2	620	0	Concrete Cap
3574-17-1140	4/25/2014	4/30/2014	35N	74W	NE/SW 17	852328	340706	Converse	1	700	0	Concrete Cap
3574-17-1141	4/24/2014	4/30/2014	35N	74W	NW/SW 17	852330	340151	Converse	1	700	0	Concrete Cap
3574-17-1142	4/25/2014	5/6/2014	35N	74W	SW/SW 17	850390	338549	Converse	1	960	0	Concrete Cap
3574-17-1143	4/29/2014	5/6/2014	35N	74W	SW/SW 17	850386	338655	Converse	1	960	0	Concrete Cap
3574-17-1144	4/23/2014	5/6/2014	35N	74W	SW/SW 17	850280	338765	Converse	1	680	0	Concrete Cap
3574-17-1148	4/30/2014	5/6/2014	35N	74W	NE/SW 17	852430	340860	Converse	1	720	0	Concrete Cap
3574-17-1150	4/25/2014	5/6/2014	35N	74W	SW/SW 17	850280	338771	Converse	1	960	0	Concrete Cap
3574-18-1129	5/22/2013	5/24/2013	35N	74W	NW/SE 18	851396	335999	Converse	1	920	0	Concrete Cap
3574-18-1130	5/16/2013	5/18/2013	35N	74W	SW/SW 18	850005	333465	Converse	1	900	0	Concrete Cap
3574-18-1131	6/3/2013	6/5/2013	35N	74W	NW/SE 18	851782	336702	Converse	1	920	0	Concrete Cap
3574-18-1132	7/16/2013	10/16/2013	35N	74W	NE/SE 18	851809	337569	Converse	1	900	0	Concrete Cap
3574-18-1133	7/22/2013	8/14/2013	35N	74W	NW/SE 18	851847	336917	Converse	1	920	0	Concrete Cap
3574-18-1134	7/23/2013	7/25/2013	35N	74W	NW/SE 18	851848	336902	Converse	1	920	0	Concrete Cap
3574-21-371	9/17/2013	11/2/2013	35N	74W	NW/NE 21	849300	346450	Converse	1	870	0	Concrete Cap
3574-21-372	8/15/2013	11/9/2013	35N	74W	NW/NE 21	849296	346378	Converse	1	870	0	Concrete Cap
3574-21-373	8/19/2013	11/9/2013	35N	74W	NW/NE 21	849298	346293	Converse	1	870	0	Concrete Cap
3574-21-374	8/19/2013	11/9/2013	35N	74W	NE/NW 21	849337	346249	Converse	1	880	0	Concrete Cap
3574-21-375	8/15/2013	11/11/2013	35N	74W	NE/NW 21	849201	346159	Converse	1	870	0	Concrete Cap
3574-21-376	8/14/2013	11/11/2013	35N	74W	NE/NW 21	849148	346254	Converse	1	870	0	Concrete Cap
3574-21-377	8/13/2013	11/6/2013	35N	74W	NW/NE 21	849094	346304	Converse	1	870	0	Concrete Cap
3574-21-378	8/12/2013	10/10/2013	35N	74W	NW/NE 21	848809	346459	Converse	1	870	0	Concrete Cap
3574-21-379	8/20/2013	10/10/2013	35N	74W	NW/NE 21	848669	346612	Converse	1	870	0	Concrete Cap
3574-21-380	8/29/2013	10/10/2013	35N	74W	SW/NE 21	848443	346708	Converse	1	860	0	Concrete Cap
3574-21-381	8/22/2013	10/10/2013	35N	74W	SW/NE 21	848458	346805	Converse	1	860	0	Concrete Cap
3574-21-382	8/23/2013	11/19/2013	35N	74W	SW/NE 21	848211	346861	Converse	1	860	0	Concrete Cap
3574-21-383	8/28/2013	11/13/2013	35N	74W	SW/NE 21	848047	347049	Converse	1	840	0	Concrete Cap
3574-21-384	9/18/2013	12/31/2013	35N	74W	SW/NE 21	847448	347466	Converse	1	840	0	Concrete Cap
3574-21-385	9/19/2013	12/31/2013	35N	74W	SW/NE 21	847350	347551	Converse	1	840	0	Concrete Cap
3574-21-386	9/19/2013	12/31/2013	35N	74W	SE/NE 21	847298	347611	Converse	1	840	0	Concrete Cap
3574-21-387	9/23/2013	1/23/2014	35N	74W	SW/NE 21	847301	347303	Converse	1	840	0	Concrete Cap
3574-21-388	8/23/2013	9/30/2014	35N	74W	NE/NW 21	849043	345253	Converse	1	820	0	Concrete Cap
3574-21-389	8/14/2013	10/24/2013	35N	74W	NW/NE 21	849645	346596	Converse	1	880	0	Concrete Cap
3574-21-390	8/13/2013	11/9/2013	35N	74W	NW/NE 21	849009	346613	Converse	1	870	0	Concrete Cap
3574-21-391	8/29/2013	11/13/2013	35N	74W	SW/NE 21	848199	347110	Converse	1	860	0	Concrete Cap
3574-21-392	8/27/2013	11/13/2013	35N	74W	SW/NE 21	847996	347303	Converse	1	860	0	Concrete Cap
3574-21-393	9/12/2013	11/15/2013	35N	74W	SW/NE 21	847568	347060	Converse	1	840	0	Concrete Cap
3574-21-394	8/20/2013	11/2/2013	35N	74W	NE/NW 21	849425	346194	Converse	1	840	0	Concrete Cap
3574-21-395	9/18/2013	1/7/2014	35N	74W	SE/NW 21	847240	346270	Converse	1	900	0	Concrete Cap
3574-21-396	9/13/2013	1/2/2014	35N	74W	SE/NW 21	847550	345750	Converse	1	900	0	Concrete Cap
3574-21-397	9/17/2013	1/3/2014	35N	74W	SE/NW 21	847400	345930	Converse	1	900	0	Concrete Cap
3574-21-398	9/17/2013	1/3/2014	35N	74W	SE/NW 21	847240	346070	Converse	1	900	0	Concrete Cap
3574-21-399	8/26/2013	9/30/2013	35N	74W	NE/NW 21	848853	345252	Converse	1	820	0	Concrete Cap
3574-21-400	8/21/2013	11/2/2013	35N	74W	NE/NW 21	849375	345970	Converse	1	820	0	Concrete Cap
3574-21-401	8/20/2013	11/9/2013	35N	74W	NE/NW 21	849346	346061	Converse	1	820	0	Concrete Cap
3574-21-402	8/21/2013	11/2/2013	35N	74W	NE/NW 21	849459	346029	Converse	1	820	0	Concrete Cap
3574-21-403	8/21/2013	11/9/2013	35N	74W	NE/NW 21	849328	346155	Converse	1	840	0	Concrete Cap
3574-21-404	8/30/2013	11/19/2013	35N	74W	SW/NE 21	847775	347055	Converse	1	860	0	Concrete Cap
3574-21-405	9/13/2013	1/3/2014	35N	74W	SW/NE 21	847348	347152	Converse	1	840	0	Concrete Cap
3574-21-406	8/19/2013	10/24/2013	35N	74W	NE/NW 21	849801	346104	Converse	1	880	0	Concrete Cap
3574-21-407	8/22/2013	11/2/2013	35N	74W	NE/NW 21	849500	346142	Converse	1	880	0	Concrete Cap
3574-21-408	8/21/2013	10/24/2013	35N	74W	NW/NE 21	849648	346653	Converse	1	860	0	Concrete Cap
3574-21-409	8/21/2013	11/2/2013	35N	74W	NW/NE 21	849551	346603	Converse	1	860	0	Concrete Cap
3574-21-410	8/21/2013	11/9/2013	35N	74W	NW/NE 21	849149	346444	Converse	1	860	0	Concrete Cap
3574-21-411	8/26/2013	8/28/2013	35N	74W	SW/NE 21	847829	347007	Converse	1	860	0	Concrete Cap
3574-21-412	8/26/2013	11/13/2013	35N	74W	SW/NE 21	848131	347067	Converse	1	840	0	Concrete Cap

3574-21-413	9/18/2013	9/20/2013	35N	74W	SE/NW 21	847293	346177	Converse	1	900	0	Concrete Cap
3574-21-414	9/4/2013	11/11/2013	35N	74W	NE/NW 21	849074	346245	Converse	1	880	0	Concrete Cap
3574-21-415	9/4/2013	11/2/2013	35N	74W	NW/NE 21	849482	346535	Converse	1	840	0	Concrete Cap
3574-21-416	9/3/2013	10/24/2013	35N	74W	NW/NE 21	849598	346298	Converse	1	840	0	Concrete Cap
3574-21-417	9/10/2013	10/10/2013	35N	74W	NW/NE 21	848654	346550	Converse	1	840	0	Concrete Cap
3574-21-418	9/10/2013	10/10/2013	35N	74W	NW/NE 21	848551	346493	Converse	1	860	0	Concrete Cap
3574-21-419	10/2/2013	1/3/2014	35N	74W	SE/NW 21	847650	345750	Converse	1	880	0	Concrete Cap
3574-21-420	9/6/2013	11/2/2013	35N	74W	NE/NW 21	849414	345899	Converse	1	820	0	Concrete Cap
3574-21-421	8/30/2013	11/9/2013	35N	74W	NE/NW 21	849289	346003	Converse	1	820	0	Concrete Cap
3574-21-422	9/3/2013	11/11/2013	35N	74W	NE/NW 21	849138	346123	Converse	1	820	0	Concrete Cap
3574-21-423	9/5/2013	11/2/2013	35N	74W	NW/NE 21	849495	346600	Converse	1	860	0	Concrete Cap
3574-21-424	8/22/2013	10/24/2013	35N	74W	NE/NW 21	849800	346160	Converse	1	880	0	Concrete Cap
3574-21-425	9/11/2013	11/2/2013	35N	74W	NE/NW 21	849499	346098	Converse	1	840	0	Concrete Cap
3574-21-426	9/6/2013	11/15/2013	35N	74W	SW/NE 21	848196	346802	Converse	1	840	0	Concrete Cap
3574-21-427	9/6/2013	11/15/2013	35N	74W	SW/NE 21	848280	346851	Converse	1	840	0	Concrete Cap
3574-21-428	9/9/2013	9/30/2013	35N	74W	NE/NW 21	848999	345304	Converse	1	820	0	Concrete Cap
3574-21-429	9/6/2013	9/30/2013	35N	74W	NE/NW 21	848901	345196	Converse	1	820	0	Concrete Cap
3574-21-430	9/16/2013	1/3/2014	35N	74W	SE/NW 21	847557	345893	Converse	1	900	0	Concrete Cap
3574-21-431	9/4/2013	11/19/2013	35N	74W	SW/NE 21	848096	346885	Converse	1	860	0	Concrete Cap
3574-21-432	9/5/2013	11/15/2013	35N	74W	SW/NE 21	848199	346730	Converse	1	860	0	Concrete Cap
3574-21-433	9/3/2013	10/24/2013	35N	74W	NW/NE 21	849653	346500	Converse	1	840	0	Concrete Cap
3574-21-434	9/9/2013	10/10/2013	35N	74W	NW/NE 21	848593	346426	Converse	1	840	0	Concrete Cap
3574-21-435	9/5/2013	10/24/2013	35N	74W	NE/NW 21	849803	346066	Converse	1	880	0	Concrete Cap
3574-21-436	9/11/2013	10/9/2013	35N	74W	NW/NE 21	848843	346312	Converse	1	880	0	Concrete Cap
3574-21-437	9/3/2013	11/19/2013	35N	74W	SW/NE 21	847836	346952	Converse	1	840	0	Concrete Cap
3574-21-438	9/16/2013	9/18/2013	35N	74W	SW/NE 21	847422	347100	Converse	1	840	0	Concrete Cap
3574-21-439	9/17/2013	12/31/2013	35N	74W	SW/NE 21	847639	347507	Converse	1	840	0	Concrete Cap
3574-21-440	9/17/2013	12/31/2013	35N	74W	SW/NE 21	847513	347252	Converse	1	840	0	Concrete Cap
3574-21-441	9/18/2013	12/31/2013	35N	74W	SW/NE 21	847499	347500	Converse	1	840	0	Concrete Cap
3574-21-442	9/19/2013	12/31/2013	35N	74W	SW/NE 21	847349	347358	Converse	1	840	0	Concrete Cap
3574-21-443	9/4/2013	10/24/2013	35N	74W	NE/NW 21	849600	346143	Converse	1	880	0	Concrete Cap
3574-21-444	9/4/2013	11/19/2013	35N	74W	SW/NE 21	848105	346802	Converse	1	860	0	Concrete Cap
3574-21-445	9/5/2013	11/13/2013	35N	74W	SW/NE 21	848105	346961	Converse	1	840	0	Concrete Cap
3574-21-446	9/10/2013	11/13/2013	35N	74W	SW/NE 21	848250	347052	Converse	1	840	0	Concrete Cap
3574-21-447	9/11/2013	11/15/2013	35N	74W	SW/NE 21	847779	347003	Converse	1	840	0	Concrete Cap
3574-21-448	9/12/2013	11/15/2013	35N	74W	SW/NE 21	847701	347051	Converse	1	840	0	Concrete Cap
3574-21-449	9/10/2013	11/9/2013	35N	74W	NE/NW 21	849282	346067	Converse	1	820	0	Concrete Cap
3574-21-450	9/9/2013	11/9/2013	35N	74W	NE/NW 21	849102	346002	Converse	1	840	0	Concrete Cap
3574-21-451	9/10/2013	11/11/2013	35N	74W	NE/NW 21	849054	346163	Converse	1	860	0	Concrete Cap
3574-21-452	9/16/2013	11/2/2013	35N	74W	NW/NE 21	849399	346524	Converse	1	840	0	Concrete Cap
3574-21-453	9/11/2013	11/9/2013	35N	74W	NW/NE 21	849105	346502	Converse	1	840	0	Concrete Cap
3574-21-454	9/11/2013	11/15/2013	35N	74W	SW/NE 21	848053	346852	Converse	1	860	0	Concrete Cap
3574-21-455	9/26/2013	11/9/2013	35N	74W	NW/NE 21	849218	346607	Converse	1	840	0	Concrete Cap
3574-21-456	9/25/2013	11/19/2013	35N	74W	SW/NE 21	848154	346804	Converse	1	840	0	Concrete Cap
3574-21-457	9/26/2013	11/15/2013	35N	74W	SW/NE 21	848250	346768	Converse	1	840	0	Concrete Cap
3574-21-458	9/20/2013	10/9/2013	35N	74W	NW/NE 21	848901	346465	Converse	1	840	0	Concrete Cap
3574-21-459	9/23/2013	10/10/2013	35N	74W	NW/NE 21	848895	346540	Converse	1	840	0	Concrete Cap
3574-21-460	9/25/2013	11/9/2013	35N	74W	NE/NW 21	849200	346051	Converse	1	840	0	Concrete Cap
3574-21-461	9/23/2013	10/10/2013	35N	74W	SW/NE 21	848387	346695	Converse	1	840	0	Concrete Cap
3574-21-462	9/30/2013	11/13/2013	35N	74W	SW/NE 21	848291	347007	Converse	1	840	0	Concrete Cap
3574-21-463	9/24/2013	11/11/2013	35N	74W	NE/NW 21	849051	346050	Converse	1	840	0	Concrete Cap
3574-21-464	9/19/2013	11/2/2013	35N	74W	NE/NW 21	849635	346070	Converse	1	880	0	Concrete Cap
3574-21-465	9/19/2013	10/10/2013	35N	74W	NW/NE 21	848782	346374	Converse	1	840	0	Concrete Cap
3574-21-466	9/19/2013	10/9/2013	35N	74W	NE/NW 21	848832	346203	Converse	1	840	0	Concrete Cap
3574-21-467	9/26/2013	11/9/2013	35N	74W	NW/NE 21	849096	346398	Converse	1	860	0	Concrete Cap
3574-21-468	9/17/2013	11/2/2013	35N	74W	NE/NW 21	849510	346021	Converse	1	840	0	Concrete Cap
3574-21-469	9/25/2013	11/13/2013	35N	74W	SW/NE 21	848108	347004	Converse	1	840	0	Concrete Cap
3574-21-470	9/25/2013	11/13/2013	35N	74W	SW/NE 21	848088	347109	Converse	1	840	0	Concrete Cap
3574-21-471	9/24/2013	1/3/2014	35N	74W	SW/NE 21	847550	347167	Converse	1	840	0	Concrete Cap
3574-21-472	9/24/2013	11/19/2013	35N	74W	SW/NE 21	847650	347150	Converse	1	840	0	Concrete Cap
3574-21-473	9/30/2013	1/3/2014	35N	74W	SE/NW 21	847600	345927	Converse	1	900	0	Concrete Cap
3574-21-474	10/2/2013	1/3/2014	35N	74W	SE/NW 21	847600	345600	Converse	1	900	0	Concrete Cap

3574-21-475	9/26/2013	9/26/2013	35N	74W	SW/NE 21	848288	346932	Converse	1	840	0	Concrete Cap
3574-21-476	10/1/2013	1/7/2014	35N	74W	SW/NE 21	847300	346300	Converse	1	860	0	Concrete Cap
3574-21-477	10/1/2013	12/31/2013	35N	74W	SW/NE 21	847532	347558	Converse	1	840	0	Concrete Cap
3574-21-478	10/3/2013	10/9/2013	35N	74W	NE/NW 21	848842	346157	Converse	1	840	0	Concrete Cap
3574-21-479	10/2/2013	11/15/2013	35N	74W	SW/NE 21	847622	347037	Converse	1	860	0	Concrete Cap
3574-21-480	10/2/2013	10/9/2013	35N	74W	NE/NW 21	848993	346150	Converse	1	840	0	Concrete Cap
3574-21-481	10/3/2013	11/1/2013	35N	74W	NE/NW 21	849140	346186	Converse	1	840	0	Concrete Cap
3574-21-482	10/1/2013	10/25/2013	35N	74W	SE/NW 21	847331	345888	Converse	1	900	0	Concrete Cap
3574-21-483	10/1/2013	11/19/2013	35N	74W	SW/NE 21	847303	347053	Converse	1	840	0	Concrete Cap
3574-21-484	10/17/2013	10/24/2013	35N	74W	NE/NW 21	849853	346015	Converse	1	860	0	Concrete Cap
3574-21-485	10/16/2013	10/24/2013	35N	74W	NE/NW 21	849948	346110	Converse	1	860	0	Concrete Cap
3574-21-486	10/16/2013	12/31/2013	35N	74W	SW/NE 21	847293	347200	Converse	1	840	0	Concrete Cap
3574-21-487	1/24/2014	2/3/2014	35N	74W	NE/NW 21	849690	346105	Converse	1	860	0	Concrete Cap
3574-21-488	1/23/2014	2/3/2014	35N	74W	NE/NW 21	849566	346026	Converse	1	860	0	Concrete Cap
3574-21-489	1/22/2014	1/23/2014	35N	74W	NE/NW 21	848920	346153	Converse	1	860	0	Concrete Cap
3574-21-490	2/10/2014	2/18/2014	35N	74W	NW/NE 21	849441	346410	Converse	1	860	0	Concrete Cap
3574-21-491	1/16/2014	1/20/2014	35N	74W	NW/NE 21	848770	346294	Converse	1	840	0	Concrete Cap
3574-21-492	1/17/2014	1/20/2014	35N	74W	SW/NE 21	848507	346758	Converse	1	840	0	Concrete Cap
3574-21-493	1/20/2014	1/24/2014	35N	74W	SW/NE 21	848253	346953	Converse	1	840	0	Concrete Cap
3574-21-494	1/21/2014	1/23/2014	35N	74W	SW/NE 21	847888	346900	Converse	1	840	0	Concrete Cap
3574-21-495	2/3/2014	2/7/2014	35N	74W	NW/NE 21	849497	346451	Converse	1	840	0	Concrete Cap
3574-21-496	2/11/2014	2/18/2014	35N	74W	NW/NE 21	849595	346647	Converse	1	840	0	Concrete Cap
3574-21-497	2/20/2014	2/21/2014	35N	74W	NW/NE 21	848661	346302	Converse	1	840	0	Concrete Cap
3574-21-498	2/19/2014	2/21/2014	35N	74W	NW/NE 21	848536	346429	Converse	1	840	0	Concrete Cap
3574-21-499	2/12/2014	2/18/2014	35N	74W	NE/NW 21	849573	346114	Converse	1	860	0	Concrete Cap
3574-21-500	2/20/2014	2/21/2014	35N	74W	NE/NW 21	849845	345922	Converse	1	880	0	Concrete Cap
3574-21-501	2/13/2014	2/18/2014	35N	74W	NE/NW 21	849795	346230	Converse	1	860	0	Concrete Cap
3672-16-1	1/21/2014	1/24/2014	36N	72W	SE/SW 16	882052	408714	Converse	2	540	0	Concrete Cap
3672-20-1	1/22/2014	1/24/2014	36N	72W	NE/SE 20	878425	406829	Converse	1	400	0	Concrete Cap
3674-26-2884	7/1/2013	7/3/2013	36N	74W	NW/SW 26	873250	354765	Converse	3	820	0	Concrete Cap
3674-26-2885	7/11/2013	7/13/2013	36N	74W	NW/SW 26	872940	354324	Converse	3	840	0	Concrete Cap
3674-27-826	6/24/2013	6/26/2013	36N	74W	SW/SE 27	871971	351901	Converse	3	900	0	Concrete Cap
3674-27-827	6/27/2013	1/7/2014	36N	74W	SW/SE 27	871987	351906	Converse	3	880	0	Concrete Cap
3674-27-828	7/10/2013	1/7/2014	36N	74W	SW/SE 27	871875	352224	Converse	3	940	0	Concrete Cap
3674-27-829	8/7/2013	1/9/2014	36N	74W	SE/NE 27	873870	353929	Converse	3	880	0	Concrete Cap
3674-27-830	10/21/2013	10/23/2013	36N	74W	NE/SE 27	872483	353584	Converse	3	920	0	Concrete Cap
3674-27-831	12/12/2013	12/14/2013	36N	74W	NE/SE 27	872296	353555	Converse	3	920	0	Concrete Cap
3674-27-832	12/13/2013	12/15/2013	36N	74W	NE/SE 27	873424	353979	Converse	3	820	0	Concrete Cap
3674-27-833	3/10/2014	3/19/2014	36N	74W	NW/SE 27	872302	352675	Converse	3	880	0	Concrete Cap
3674-34-1563	6/19/2013	6/21/2013	36N	74W	NE/SW 34	867390	349295	Converse	3	800	0	Concrete Cap
3674-34-1564	11/11/2013	1/3/2014	36N	74W	NE/NE 34	870426	354080	Converse	1	800	0	Concrete Cap
3674-34-1565	11/7/2013	11/9/2013	36N	74W	NE/NE 34	870068	354081	Converse	1	800	0	Concrete Cap
3674-34-1566	10/30/2013	1/3/2014	36N	74W	NE/NE 34	870318	353130	Converse	1	760	0	Concrete Cap
3674-34-1567	10/31/2013	1/3/2014	36N	74W	NE/NE 34	870387	353081	Converse	1	760	0	Concrete Cap
3674-34-1568	11/4/2013	1/3/2014	36N	74W	NW/NE 34	870423	352583	Converse	1	760	0	Concrete Cap
3674-34-1569	11/1/2013	1/3/2014	36N	74W	NW/NE 34	870578	352585	Converse	1	760	0	Concrete Cap
3674-34-1570	11/5/2013	11/7/2013	36N	74W	NW/NE 34	869857	352684	Converse	1	760	0	Concrete Cap
3674-34-1571	11/6/2013	1/2/2014	36N	74W	NW/NE 34	869824	352608	Converse	1	760	0	Concrete Cap
3674-34-1572	11/12/2013	1/3/2014	36N	74W	NW/NE 34	869909	352587	Converse	1	760	0	Concrete Cap
3674-34-1573	11/13/2013	1/3/2014	36N	74W	NW/NE 34	869923	352661	Converse	1	760	0	Concrete Cap
3674-34-1574	11/15/2013	1/3/2014	36N	74W	NW/NE 34	869991	352691	Converse	1	760	0	Concrete Cap
3674-34-1575	11/14/2013	1/2/2014	36N	74W	NW/NE 34	869757	352592	Converse	1	760	0	Concrete Cap
3674-34-1576	11/14/2013	1/3/2014	36N	74W	NW/NE 34	869663	352598	Converse	1	760	0	Concrete Cap
3674-34-1577	11/15/2013	1/2/2014	36N	74W	NW/NE 34	869638	352660	Converse	1	760	0	Concrete Cap
3674-35-1471	10/25/2013	12/30/2013	36N	74W	NW/NW 35	870811	354553	Converse	3	840	0	Concrete Cap
3674-35-1472	11/12/2013	1/3/2014	36N	74W	NW/NW 35	870461	354154	Converse	3	800	0	Concrete Cap
3674-35-1473	11/13/2013	1/3/2014	36N	74W	NW/NW 35	870373	354170	Converse	3	800	0	Concrete Cap
3674-35-1474	1/15/2014	1/20/2014	36N	74W	NW/NW 35	870357	354276	Converse	3	800	0	Concrete Cap
3674-35-1475	11/8/2013	1/3/2014	36N	74W	NW/NW 35	870248	354185	Converse	3	800	0	Concrete Cap
3674-35-1476	11/8/2013	1/2/2014	36N	74W	NW/NW 35	870065	354238	Converse	3	800	0	Concrete Cap
3674-35-1477	10/24/2013	12/30/2013	36N	74W	NW/NW 35	870309	354775	Converse	3	780	0	Concrete Cap

3674-35-1478	11/11/2013	1/3/2014	36N	74W	NW/NW 35	870177	354674	Converse	3	780	0	Concrete Cap
3674-35-1479	11/7/2013	1/3/2014	36N	74W	NW/NW 35	869659	354859	Converse	3	740	0	Concrete Cap
3674-35-1480	10/24/2013	12/30/2013	36N	74W	NW/NW 35	869669	355344	Converse	3	740	0	Concrete Cap
3674-35-1481	10/23/2013	12/31/2013	36N	74W	SE/NW 35	869557	355463	Converse	3	740	0	Concrete Cap
3674-35-1482	11/6/2013	1/2/2014	36N	74W	SW/NW 35	869199	354682	Converse	3	760	0	Concrete Cap
3674-35-1483	11/5/2013	1/3/2014	36N	74W	SW/NW 35	869257	355097	Converse	3	760	0	Concrete Cap
3674-35-1484	11/4/2013	1/2/2014	36N	74W	SW/NW 35	869160	355156	Converse	3	760	0	Concrete Cap
3674-35-1485	11/1/2013	12/31/2013	36N	74W	SW/NW 35	869104	355194	Converse	3	760	0	Concrete Cap
3674-35-1486	10/31/2013	12/31/2013	36N	74W	SW/NW 35	869047	355226	Converse	3	760	0	Concrete Cap
3674-35-1487	10/22/2013	12/31/2013	36N	74W	SW/NW 35	869141	355339	Converse	3	740	0	Concrete Cap
3674-35-1488	10/22/2013	12/31/2013	36N	74W	SW/NW 35	869183	355389	Converse	3	740	0	Concrete Cap
3674-35-1489	10/23/2013	12/31/2013	36N	74W	SE/NW 35	869230	355472	Converse	3	740	0	Concrete Cap
3674-35-1490	10/18/2013	12/31/2013	36N	74W	SE/NW 35	869311	355489	Converse	3	740	0	Concrete Cap
3674-35-1491	10/30/2013	12/31/2013	36N	74W	SW/NW 35	868661	355287	Converse	3	720	0	Concrete Cap
3674-35-1492	10/30/2013	12/31/2013	36N	74W	SW/NW 35	868499	355409	Converse	3	720	0	Concrete Cap
3674-35-1493	10/31/2013	12/20/2013	36N	74W	SE/NW 35	868348	356695	Converse	3	760	0	Concrete Cap
3674-35-1494	10/31/2013	12/20/2013	36N	74W	SW/NE 35	868349	357097	Converse	3	760	0	Concrete Cap
3674-35-1495	11/5/2013	12/20/2013	36N	74W	NW/SE 35	868109	357188	Converse	3	760	0	Concrete Cap
3674-35-1496	11/4/2013	12/31/2013	36N	74W	NW/SE 35	868122	357254	Converse	3	760	0	Concrete Cap
3674-35-1497	11/1/2013	12/20/2013	36N	74W	NW/SE 35	868126	357353	Converse	3	760	0	Concrete Cap
3674-35-1498	11/1/2013	12/20/2013	36N	74W	SW/NE 35	868364	357303	Converse	3	760	0	Concrete Cap
3674-35-1499	11/6/2013	12/20/2013	36N	74W	NW/SE 35	867891	357579	Converse	3	760	0	Concrete Cap
3674-35-1500	11/12/2013	12/30/2013	36N	74W	NW/SE 35	867941	357857	Converse	3	760	0	Concrete Cap
3674-35-1501	11/11/2013	12/30/2013	36N	74W	NW/SE 35	867827	357938	Converse	3	760	0	Concrete Cap
3674-35-1502	11/7/2013	12/30/2013	36N	74W	NW/SE 35	867750	358048	Converse	3	760	0	Concrete Cap
3674-35-1503	11/8/2013	12/30/2013	36N	74W	NW/SE 35	867825	358073	Converse	3	760	0	Concrete Cap
3674-35-1504	11/13/2013	12/30/2013	36N	74W	NE/SE 35	868173	358215	Converse	3	760	0	Concrete Cap
3674-35-1505	11/19/2013	12/31/2013	36N	74W	NE/SE 35	868136	358400	Converse	3	760	0	Concrete Cap
3674-35-1506	11/18/2013	12/30/2013	36N	74W	NE/SE 35	868219	358391	Converse	3	760	0	Concrete Cap
3674-35-1507	11/14/2013	1/7/2014	36N	74W	NE/SE 35	868272	358210	Converse	3	760	0	Concrete Cap
3674-35-1508	11/15/2013	12/30/2013	36N	74W	SE/NE 35	868317	358392	Converse	3	760	0	Concrete Cap
3674-35-1509	11/20/2013	12/30/2013	36N	74W	NE/SE 35	868261	358723	Converse	3	760	0	Concrete Cap
3674-35-1510	11/21/2013	12/30/2013	36N	74W	SE/NE 35	868460	358680	Converse	3	740	0	Concrete Cap
3674-35-1511	11/25/2013	12/30/2013	36N	74W	SE/NE 35	868554	358663	Converse	3	740	0	Concrete Cap
3674-35-1512	10/29/2013	12/31/2013	36N	74W	SE/NE 35	869008	358288	Converse	3	740	0	Concrete Cap
3674-35-1513	10/30/2013	12/31/2013	36N	74W	SE/NE 35	869058	358356	Converse	3	740	0	Concrete Cap
3674-35-1514	10/30/2013	12/20/2013	36N	74W	SE/NE 35	869135	358363	Converse	3	740	0	Concrete Cap
3674-35-1515	10/29/2013	12/20/2013	36N	74W	SE/NE 35	869213	358313	Converse	3	760	0	Concrete Cap
3674-35-1516	10/29/2013	12/20/2013	36N	74W	SE/NE 35	869274	358274	Converse	3	760	0	Concrete Cap
3674-35-1517	10/30/2013	1/9/2014	36N	74W	SW/NE 35	869199	357914	Converse	3	760	0	Concrete Cap
3674-35-1518	10/28/2013	12/30/2013	36N	74W	SW/NE 35	869150	357728	Converse	3	800	0	Concrete Cap
3674-35-1519	10/25/2013	12/30/2013	36N	74W	SW/NE 35	869042	357656	Converse	3	800	0	Concrete Cap
3674-35-1520	10/25/2013	12/30/2013	36N	74W	SW/NE 35	868982	357732	Converse	3	740	0	Concrete Cap
3674-35-1521	10/24/2013	12/30/2013	36N	74W	SW/NE 35	868890	357689	Converse	3	740	0	Concrete Cap
3674-35-1522	10/29/2013	12/30/2013	36N	74W	SW/NE 35	868809	357723	Converse	3	740	0	Concrete Cap
3674-35-1523	10/28/2013	12/31/2013	36N	74W	SW/NE 35	868895	357324	Converse	3	800	0	Concrete Cap
3674-35-1524	10/24/2013	12/30/2013	36N	74W	SW/NE 35	868894	357138	Converse	3	800	0	Concrete Cap
3674-35-1525	10/25/2013	12/31/2013	36N	74W	SW/NE 35	869076	357125	Converse	3	820	0	Concrete Cap
3674-35-1526	10/28/2013	1/9/2014	36N	74W	SW/NE 35	869156	357452	Converse	3	820	0	Concrete Cap
3674-35-1527	10/18/2013	12/30/2013	36N	74W	SW/NE 35	869256	357526	Converse	3	820	0	Concrete Cap
3674-35-1528	10/21/2013	12/30/2013	36N	74W	SW/NE 35	869357	357458	Converse	3	840	0	Concrete Cap
3674-35-1529	10/22/2013	1/9/2014	36N	74W	SW/NE 35	869302	357323	Converse	3	840	0	Concrete Cap
3674-35-1530	10/22/2013	12/30/2013	36N	74W	SW/NE 35	869316	357214	Converse	3	840	0	Concrete Cap
3674-35-1531	10/23/2013	12/30/2013	36N	74W	SW/NE 35	869276	357148	Converse	3	840	0	Concrete Cap
3674-35-1532	10/21/2013	12/31/2013	36N	74W	SW/NE 35	869497	356998	Converse	3	840	0	Concrete Cap
3674-35-1533	10/21/2013	1/9/2014	36N	74W	NW/NE 35	869595	357299	Converse	3	840	0	Concrete Cap
3674-35-1534	10/18/2013	1/7/2014	36N	74W	NW/NE 35	869676	357303	Converse	3	840	0	Concrete Cap
3674-35-1535	10/18/2013	10/20/2013	36N	74W	NW/NE 35	869663	357239	Converse	3	840	0	Concrete Cap
3674-35-1536	10/22/2013	12/31/2013	36N	74W	NW/NE 35	869688	356985	Converse	3	840	0	Concrete Cap
3674-35-1537	10/25/2013	10/27/2013	36N	74W	NW/NE 35	869867	357358	Converse	3	840	0	Concrete Cap
3674-35-1538	10/24/2013	1/3/2014	36N	74W	NW/NE 35	869966	357278	Converse	3	840	0	Concrete Cap
3674-35-1539	10/24/2013	1/3/2014	36N	74W	NW/NE 35	870052	357157	Converse	3	840	0	Concrete Cap

3674-35-1540	10/23/2013	1/3/2014	36N	74W	NW/NE 35	870058	357050	Converse	3	840	0	Concrete Cap
3674-35-1541	10/22/2013	12/31/2013	36N	74W	NW/NE 35	869856	356993	Converse	3	840	0	Concrete Cap
3674-35-1542	10/23/2013	1/3/2014	36N	74W	NW/NE 35	869935	357008	Converse	3	840	0	Concrete Cap
3674-35-1543	10/28/2013	12/31/2013	36N	74W	NE/SW 35	868087	355778	Converse	3	760	0	Concrete Cap
3674-35-1544	10/29/2013	12/31/2013	36N	74W	NE/SW 35	868016	355698	Converse	3	760	0	Concrete Cap
3674-35-1545	10/28/2013	12/31/2013	36N	74W	NE/SW 35	868009	355897	Converse	3	760	0	Concrete Cap
3674-35-1546	1/24/2014	2/4/2014	36N	74W	NE/SW 35	868264	356701	Converse	3	760	0	Concrete Cap
3674-35-1547	12/18/2013	1/3/2014	36N	74W	NW/NW 35	870050	354157	Converse	3	800	0	Concrete Cap
3674-35-1548	1/14/2014	1/23/2014	36N	74W	NW/NW 35	870048	354305	Converse	3	800	0	Concrete Cap
3674-35-1549	1/16/2014	1/20/2014	36N	74W	SW/NW 35	869273	354707	Converse	3	760	0	Concrete Cap
3674-35-1550	1/22/2014	2/11/2014	36N	74W	SE/NW 35	869315	355609	Converse	3	740	0	Concrete Cap
3674-35-1551	1/21/2014	2/11/2014	36N	74W	SE/NW 35	869250	355554	Converse	3	740	0	Concrete Cap
3674-35-1552	1/20/2014	1/23/2014	36N	74W	SE/NW 35	869146	355459	Converse	3	740	0	Concrete Cap
3674-35-1553	1/17/2014	1/23/2014	36N	74W	SW/NW 35	869082	355402	Converse	3	740	0	Concrete Cap
3674-35-1554	12/13/2013	12/20/2013	36N	74W	NW/SE 35	868101	357413	Converse	3	760	0	Concrete Cap
3674-35-1555	12/16/2013	12/20/2013	36N	74W	NW/SE 35	868173	357467	Converse	3	760	0	Concrete Cap
3674-35-1556	2/3/2014	2/14/2014	36N	74W	NW/SE 35	867815	357553	Converse	3	760	0	Concrete Cap
3674-35-1557	11/27/2013	12/31/2013	36N	74W	NE/SE 35	867774	358127	Converse	3	760	0	Concrete Cap
3674-35-1558	11/26/2013	12/31/2013	36N	74W	NE/SE 35	867855	358143	Converse	3	760	0	Concrete Cap
3674-35-1559	12/2/2013	12/30/2013	36N	74W	SE/NE 35	869100	358460	Converse	3	760	0	Concrete Cap
3674-35-1560	12/3/2013	12/30/2013	36N	74W	SE/NE 35	869271	358440	Converse	3	760	0	Concrete Cap
3674-35-1561	12/11/2013	12/20/2013	36N	74W	SE/NE 35	869283	358356	Converse	3	760	0	Concrete Cap
3674-35-1562	12/12/2013	1/7/2014	36N	74W	SW/NE 35	868739	357776	Converse	3	740	0	Concrete Cap
3674-35-1563	12/17/2013	12/19/2013	36N	74W	SW/NE 35	868847	357638	Converse	3	740	0	Concrete Cap
3674-35-1564	2/11/2014	4/4/2014	36N	74W	SW/NE 35	869084	357485	Converse	3	820	0	Concrete Cap
3674-35-1565	2/10/2014	4/4/2014	36N	74W	SW/NE 35	869137	357535	Converse	3	820	0	Concrete Cap
3674-35-1566	12/17/2013	12/19/2013	36N	74W	SW/NE 35	868834	357266	Converse	3	800	0	Concrete Cap
3674-35-1567	12/18/2013	12/30/2013	36N	74W	SW/NE 35	868812	357104	Converse	3	800	0	Concrete Cap
3674-35-1568	12/18/2013	12/30/2013	36N	74W	SW/NE 35	868870	357056	Converse	3	800	0	Concrete Cap
3674-35-1569	12/19/2013	12/31/2013	36N	74W	SW/NE 35	868945	357062	Converse	3	800	0	Concrete Cap
3674-35-1570	1/27/2014	4/7/2014	36N	74W	SW/NE 35	869370	357360	Converse	3	840	0	Concrete Cap
3674-35-1571	12/20/2013	12/30/2013	36N	74W	SW/NE 35	869368	357261	Converse	3	840	0	Concrete Cap
3674-35-1572	1/27/2014	1/29/2014	36N	74W	NW/NE 35	869904	356935	Converse	3	840	0	Concrete Cap
3674-35-1573	1/29/2014	2/19/2014	36N	74W	NW/NE 35	869962	356927	Converse	3	840	0	Concrete Cap
3674-35-1574	2/19/2014	2/21/2014	36N	74W	NW/NE 35	870056	357270	Converse	3	840	0	Concrete Cap
3674-35-1575	2/13/2014	2/19/2014	36N	74W	NW/NE 35	870112	357201	Converse	3	840	0	Concrete Cap
3674-35-1576	2/12/2014	2/20/2014	36N	74W	NW/NE 35	870116	357114	Converse	3	840	0	Concrete Cap
3674-35-1577	1/30/2014	2/19/2014	36N	74W	NW/NE 35	870127	357031	Converse	3	840	0	Concrete Cap
3674-35-1578	12/16/2013	1/7/2014	36N	74W	SE/NE 35	869287	358360	Converse	3	840	0	Concrete Cap
3674-35-1579	2/19/2014	2/21/2014	36N	74W	NW/NW 35	869945	354148	Converse	3	800	0	Concrete Cap
3674-35-1580	2/18/2014	2/21/2014	36N	74W	NW/NW 35	869869	354146	Converse	3	800	0	Concrete Cap
3674-35-1581	2/14/2014	2/21/2014	36N	74W	NW/NW 35	869767	354149	Converse	3	800	0	Concrete Cap
3674-35-1582	2/12/2014	2/20/2014	36N	74W	SE/NW 35	869137	355553	Converse	3	740	0	Concrete Cap
3674-35-1583	2/13/2014	2/20/2014	36N	74W	SE/NW 35	869070	355495	Converse	3	740	0	Concrete Cap
3674-35-1584	1/30/2014	2/4/2014	36N	74W	SW/NE 35	868781	357013	Converse	3	840	0	Concrete Cap
3674-35-1585	1/29/2014	2/4/2014	36N	74W	SW/NE 35	868716	357064	Converse	3	840	0	Concrete Cap
3674-35-1586	1/28/2014	4/4/2014	36N	74W	SW/NE 35	868720	357140	Converse	3	840	0	Concrete Cap
3674-35-1587	1/29/2014	2/4/2014	36N	74W	NW/SE 35	868036	357260	Converse	3	760	0	Concrete Cap
3674-35-1588	1/31/2014	2/4/2014	36N	74W	NW/SE 35	868042	357347	Converse	3	760	0	Concrete Cap
3674-35-1589	2/26/2014	4/3/2014	36N	74W	NW/SE 35	868022	357435	Converse	3	760	0	Concrete Cap
3674-35-1590	2/21/2014	3/6/2014	36N	74W	NW/SE 35	867963	357268	Converse	3	760	0	Concrete Cap
3674-35-1591	2/24/2014	4/3/2014	36N	74W	NW/SE 35	867973	357360	Converse	3	760	0	Concrete Cap
3674-35-1592	2/25/2014	4/3/2014	36N	74W	NW/SE 35	867948	357431	Converse	3	760	0	Concrete Cap
3674-35-1593	2/26/2014	3/31/2014	36N	74W	SW/NE 35	868645	357111	Converse	3	840	0	Concrete Cap
3674-35-1594	2/25/2014	3/19/2014	36N	74W	SW/NE 35	868636	357016	Converse	3	840	0	Concrete Cap
3674-35-1595	2/24/2014	3/19/2014	36N	74W	SW/NE 35	868703	356951	Converse	3	840	0	Concrete Cap
3674-35-1596	2/28/2014	3/13/2014	36N	74W	NW/NE 35	870138	357288	Converse	3	840	0	Concrete Cap
3674-35-1597	2/27/2014	3/13/2014	36N	74W	NW/NE 35	870191	357225	Converse	3	840	0	Concrete Cap
3674-35-1598	2/26/2014	3/13/2014	36N	74W	NW/NE 35	870195	357148	Converse	3	840	0	Concrete Cap
3674-35-1599	2/25/2014	3/13/2014	36N	74W	NW/NE 35	870203	357064	Converse	3	840	0	Concrete Cap
3674-35-1600	2/21/2014	3/13/2014	36N	74W	NW/NE 35	870198	356963	Converse	3	840	0	Concrete Cap
3674-35-1601	3/3/2014	3/13/2014	36N	74W	NW/NE 35	870257	357021	Converse	3	840	0	Concrete Cap

3674-35-1602	3/4/2014	3/13/2014	36N	74W	NW/NE 35	870258	357121	Converse	3	840	0	Concrete Cap
3674-35-1603	3/5/2014	3/13/2014	36N	74W	NW/NE 35	870264	357207	Converse	3	840	0	Concrete Cap
3674-35-1604	3/6/2014	3/14/2014	36N	74W	NW/NE 35	870232	357286	Converse	3	840	0	Concrete Cap
3674-35-1605	2/28/2014	3/31/2014	36N	74W	SW/NE 35	868684	356857	Converse	3	840	0	Concrete Cap
3674-35-1606	3/3/2014	3/31/2014	36N	74W	SW/NE 35	868634	356929	Converse	3	840	0	Concrete Cap
3674-35-1607	2/27/2014	3/31/2014	36N	74W	SW/NE 35	868616	356817	Converse	3	840	0	Concrete Cap
3674-35-1608	3/4/2014	4/1/2014	36N	74W	SW/NE 35	868546	356776	Converse	3	840	0	Concrete Cap
3674-35-1609	3/6/2014	3/31/2014	36N	74W	SW/NE 35	868569	356880	Converse	3	840	0	Concrete Cap
3674-35-1610	2/28/2014	3/31/2014	36N	74W	SW/NE 35	868565	356980	Converse	3	840	0	Concrete Cap
3674-35-1611	2/27/2014	3/31/2014	36N	74W	SW/NE 35	868569	357065	Converse	3	840	0	Concrete Cap
3674-35-1612	3/5/2014	3/14/2014	36N	74W	SW/NE 35	868570	357149	Converse	3	840	0	Concrete Cap
3674-35-1613	3/5/2014	3/31/2014	36N	74W	SW/NE 35	868494	356832	Converse	3	840	0	Concrete Cap
3674-35-1614	3/3/2014	3/31/2014	36N	74W	SW/NE 35	868495	356934	Converse	3	840	0	Concrete Cap
3674-35-1615	3/4/2014	3/31/2014	36N	74W	SW/NE 35	868495	357021	Converse	3	840	0	Concrete Cap
3674-35-1616	3/6/2014	3/31/2014	36N	74W	SW/NE 35	868500	357105	Converse	3	840	0	Concrete Cap
3674-35-1617	3/17/2014	3/31/2014	36N	74W	SW/NE 35	868644	356752	Converse	3	840	0	Concrete Cap
3674-35-1618	3/19/2014	4/1/2014	36N	74W	SE/NW 35	868578	356694	Converse	3	840	0	Concrete Cap
3674-35-1619	3/12/2014	4/1/2014	36N	74W	SE/NW 35	868500	356706	Converse	3	840	0	Concrete Cap
3674-35-1620	3/10/2014	4/1/2014	36N	74W	SW/NE 35	868451	356771	Converse	3	840	0	Concrete Cap
3674-35-1621	3/14/2014	4/1/2014	36N	74W	SE/NW 35	868578	356618	Converse	3	840	0	Concrete Cap
3674-35-1622	3/13/2014	4/1/2014	36N	74W	SE/NW 35	868502	356623	Converse	3	840	0	Concrete Cap
3674-35-1623	3/11/2014	4/1/2014	36N	74W	SE/NW 35	868449	356686	Converse	3	840	0	Concrete Cap
3674-35-1624	3/14/2014	3/16/2014	36N	74W	NW/NE 35	870316	357286	Converse	3	840	0	Concrete Cap
3674-35-1625	3/13/2014	3/15/2014	36N	74W	NW/NE 35	870309	357374	Converse	3	840	0	Concrete Cap
3674-35-1626	3/12/2014	4/4/2014	36N	74W	NW/NE 35	870231	357391	Converse	3	840	0	Concrete Cap
3674-35-1627	3/17/2014	4/3/2014	36N	74W	NW/NE 35	870153	357378	Converse	3	840	0	Concrete Cap
3674-35-1628	3/20/2014	4/4/2014	36N	74W	NW/NE 35	870394	357291	Converse	3	800	0	Concrete Cap
3674-35-1629	3/19/2014	4/4/2014	36N	74W	NW/NE 35	870394	357373	Converse	3	800	0	Concrete Cap
3674-35-1630	3/21/2014	4/4/2014	36N	74W	NW/NE 35	870314	357455	Converse	3	800	0	Concrete Cap
3674-35-1631	3/21/2014	4/1/2014	36N	74W	SE/NE 35	869273	358174	Converse	3	780	0	Concrete Cap
3674-35-1632	3/20/2014	4/3/2014	36N	74W	SE/NE 35	869348	358205	Converse	3	780	0	Concrete Cap
3674-35-1633	3/19/2014	4/3/2014	36N	74W	SE/NE 35	869351	358295	Converse	3	780	0	Concrete Cap
3674-35-1634	3/17/2014	4/3/2014	36N	74W	SE/NE 35	869346	358379	Converse	3	780	0	Concrete Cap
3674-35-1635	3/21/2014	3/31/2014	36N	74W	SE/NW 35	868619	356545	Converse	3	800	0	Concrete Cap
3674-35-1636	3/20/2014	4/1/2014	36N	74W	SE/NW 35	868539	356535	Converse	3	800	0	Concrete Cap
3674-35-1637	3/20/2014	3/31/2014	36N	74W	SW/NE 35	868419	356890	Converse	3	800	0	Concrete Cap
3674-35-1638	3/24/2014	4/3/2014	36N	74W	NW/SE 35	868149	357855	Converse	3	720	0	Concrete Cap
3674-35-1639	3/21/2014	4/10/2014	36N	74W	SW/NE 35	868672	357771	Converse	3	740	0	Concrete Cap
3674-35-1640	3/24/2014	4/3/2014	36N	74W	NW/NE 35	867800	357898	Converse	3	840	0	Concrete Cap
3674-35-1641	3/26/2014	4/4/2014	36N	74W	NW/NE 35	870395	357459	Converse	3	800	0	Concrete Cap
3674-35-1642	3/26/2014	4/4/2014	36N	74W	NW/NE 35	870475	357257	Converse	3	800	0	Concrete Cap
3674-35-1643	3/27/2014	4/4/2014	36N	74W	NW/NE 35	870472	357345	Converse	3	800	0	Concrete Cap
3674-35-1644	3/27/2014	4/4/2014	36N	74W	NW/NE 35	870468	357425	Converse	3	800	0	Concrete Cap
3674-35-1645	3/27/2014	4/3/2014	36N	74W	NW/NE 35	870469	357507	Converse	3	800	0	Concrete Cap
3674-35-1646	3/25/2014	4/4/2014	36N	74W	NW/NE 35	870548	357302	Converse	3	800	0	Concrete Cap
3674-35-1647	3/28/2014	4/4/2014	36N	74W	NW/NE 35	870546	357385	Converse	3	800	0	Concrete Cap
3674-35-1648	3/28/2014	4/3/2014	36N	74W	NW/NE 35	870552	357468	Converse	3	800	0	Concrete Cap
3674-35-1649	3/28/2014	4/3/2014	36N	74W	NW/NE 35	870549	357548	Converse	3	800	0	Concrete Cap
3674-35-1650	3/27/2014	4/1/2014	36N	74W	SE/NW 35	868470	356499	Converse	3	780	0	Concrete Cap
3674-35-1651	3/25/2014	4/3/2014	36N	74W	SE/NW 35	868648	356462	Converse	3	820	0	Concrete Cap
3674-35-1652	3/25/2014	4/3/2014	36N	74W	SE/NW 35	868656	356342	Converse	3	820	0	Concrete Cap
3674-35-1653	3/25/2014	4/3/2014	36N	74W	SE/NW 35	868655	356239	Converse	3	760	0	Concrete Cap
3674-35-1654	3/26/2014	4/3/2014	36N	74W	SE/NW 35	868653	356142	Converse	3	760	0	Concrete Cap
3674-35-1655	3/26/2014	4/3/2014	36N	74W	SE/NW 35	868658	356055	Converse	3	760	0	Concrete Cap
3674-35-1656	3/28/2014	4/3/2014	36N	74W	SE/NW 35	868731	356103	Converse	3	760	0	Concrete Cap
3674-35-1657	4/24/2014	5/6/2014	36N	74W	NW/NE 35	870551	357216	Converse	3	800	0	Concrete Cap
3674-35-1658	4/23/2014	5/6/2014	36N	74W	NW/NE 35	870482	357170	Converse	3	800	0	Concrete Cap
3674-35-1659	4/22/2014	4/29/2014	36N	74W	SW/NE 35	869148	357181	Converse	3	800	0	Concrete Cap
3674-35-1660	4/23/2014	5/2/2014	36N	74W	SW/NE 35	868837	356969	Converse	3	800	0	Concrete Cap
3674-35-1661	4/23/2014	4/25/2014	36N	74W	SW/NE 35	868756	357639	Converse	3	760	0	Concrete Cap
3674-35-1662	4/21/2014	4/25/2014	36N	74W	SW/NE 35	868711	357699	Converse	3	760	0	Concrete Cap
3674-35-1663	4/22/2014	4/25/2014	36N	74W	SW/NE 35	868671	357623	Converse	3	760	0	Concrete Cap

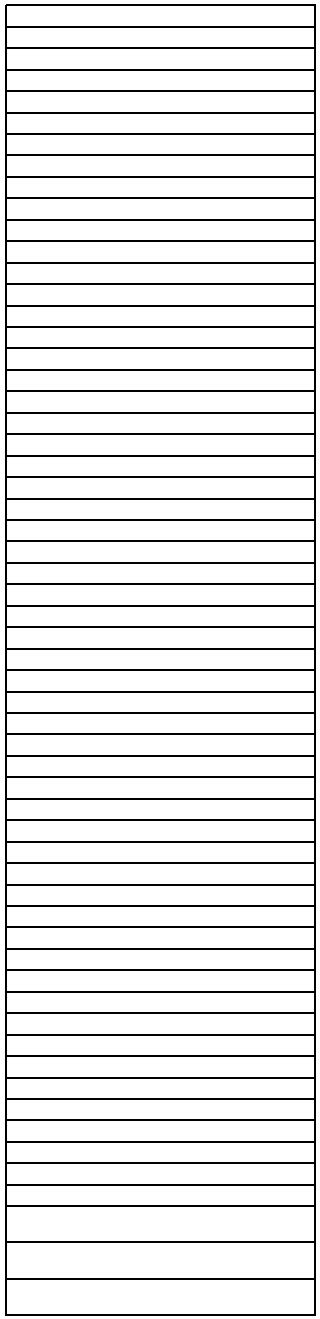
3674-35-1664	4/23/2014	4/25/2014	36N	74W	SW/NE 35	868628	357705	Converse	3	760	0	Concrete Cap
3674-35-1665	4/21/2014	4/25/2014	36N	74W	SE/NE 35	868709	358184	Converse	3	760	0	Concrete Cap
3674-35-1666	4/23/2014	4/25/2014	36N	74W	SE/NW 35	868805	356067	Converse	3	760	0	Concrete Cap
3674-35-1667	4/24/2014	4/29/2014	36N	74W	SE/NW 35	868809	356131	Converse	3	760	0	Concrete Cap
3674-35-1668	4/23/2014	4/25/2014	36N	74W	SE/NW 35	868732	356015	Converse	3	760	0	Concrete Cap
3674-35-1669	4/23/2014	4/25/2014	36N	74W	SE/NW 35	868729	356180	Converse	3	760	0	Concrete Cap
3674-35-1670	4/22/2014	4/25/2014	36N	74W	SE/NW 35	868657	355971	Converse	3	760	0	Concrete Cap
3674-35-1671	4/21/2014	4/25/2014	36N	74W	SE/NW 35	868581	356009	Converse	3	760	0	Concrete Cap
3674-35-1672	4/22/2014	4/25/2014	36N	74W	SE/NW 35	869067	355575	Converse	3	760	0	Concrete Cap
3674-35-1673	4/21/2014	4/25/2014	36N	74W	SE/NW 35	869017	355433	Converse	3	760	0	Concrete Cap
3674-35-1674	4/25/2014	4/29/2014	36N	74W	SW/NW 35	868937	355242	Converse	3	760	0	Concrete Cap
3674-35-1675	4/24/2014	4/29/2014	36N	74W	SW/NW 35	868883	355300	Converse	3	760	0	Concrete Cap
3674-35-1676	4/24/2014	4/29/2014	36N	74W	SE/NW 35	868719	355849	Converse	3	740	0	Concrete Cap
3674-35-1677	4/24/2014	4/29/2014	36N	74W	SE/NW 35	868723	355933	Converse	3	740	0	Concrete Cap
3674-35-1678	4/25/2014	4/29/2014	36N	74W	SW/NE 35	868716	356784	Converse	3	800	0	Concrete Cap
3674-35-1679	4/24/2014	5/1/2014	36N	74W	SW/NE 35	868758	356860	Converse	3	800	0	Concrete Cap
3674-35-1680	4/28/2014	5/30/2014	36N	74W	SW/NE 35	868774	356930	Converse	3	800	0	Concrete Cap
3674-35-1681	4/29/2014	4/29/2014	36N	74W	SW/NE 35	869419	357080	Converse	3	820	0	Concrete Cap
3674-35-1682	4/29/2014	5/1/2014	36N	74W	SW/NE 35	869446	357251	Converse	3	820	0	Concrete Cap
3674-35-1683	4/24/2014	5/1/2014	36N	74W	SW/NE 35	869530	357273	Converse	3	820	0	Concrete Cap
3674-35-1684	4/25/2014	4/29/2014	36N	74W	SW/NE 35	869537	357148	Converse	3	820	0	Concrete Cap
3674-36-1616	4/28/2014	4/30/2014	36N	74W	SW/NW 36	868716	359858	Converse	2	800	0	Concrete Cap
3674-36-1617	4/25/2014	4/30/2014	36N	74W	SW/NW 36	868709	359929	Converse	2	800	0	Concrete Cap
3674-36-1618	4/24/2014	4/30/2014	36N	74W	SW/NW 36	360014	868712	Converse	2	800	0	Concrete Cap
3674-36-1619	4/25/2014	5/6/2014	36N	74W	SW/NW 36	868545	360211	Converse	2	800	0	Concrete Cap
3674-36-1620	4/30/2014	5/7/2014	36N	74W	SW/NW 36	868509	359994	Converse	2	800	0	Concrete Cap
3674-36-1621	4/29/2014	5/6/2014	36N	74W	SW/NW 36	868471	359850	Converse	2	800	0	Concrete Cap
3674-36-1622	4/28/2014	5/7/2014	36N	74W	SW/NW 36	868471	359751	Converse	2	800	0	Concrete Cap
3674-36-1623	4/28/2014	5/6/2014	36N	74W	SW/NW 36	868410	359726	Converse	2	800	0	Concrete Cap
3674-36-1624	4/25/2014	5/6/2014	36N	74W	SW/NW 36	868333	359747	Converse	2	800	0	Concrete Cap
3674-36-1625	4/25/2014	5/6/2014	36N	74W	NW/SW 36	868193	360407	Converse	2	820	0	Concrete Cap
3674-36-1626	4/29/2014	5/5/2014	36N	74W	NW/SW 36	868148	360480	Converse	2	820	0	Concrete Cap
3674-36-1627	4/29/2014	5/5/2014	36N	74W	NW/SW 36	868120	360399	Converse	2	820	0	Concrete Cap
3674-36-1630	4/30/2014	5/5/2014	36N	74W	NW/SW 36	867637	360044	Converse	2	820	0	Concrete Cap
3674-36-1631	4/29/2014	5/5/2014	36N	74W	NW/SW 36	867616	360128	Converse	2	820	0	Concrete Cap
3674-36-1632	4/30/2014	5/5/2014	36N	74W	NW/SW 36	867481	360211	Converse	2	800	0	Concrete Cap
3674-36-1634	4/30/2014	5/5/2014	36N	74W	NW/SW 36	867353	360138	Converse	2	800	0	Concrete Cap
3674-36-1639	4/29/2014	5/5/2014	36N	74W	NE/SW 36	867167	361658	Converse	2	800	0	Concrete Cap
Total = 506 holes												

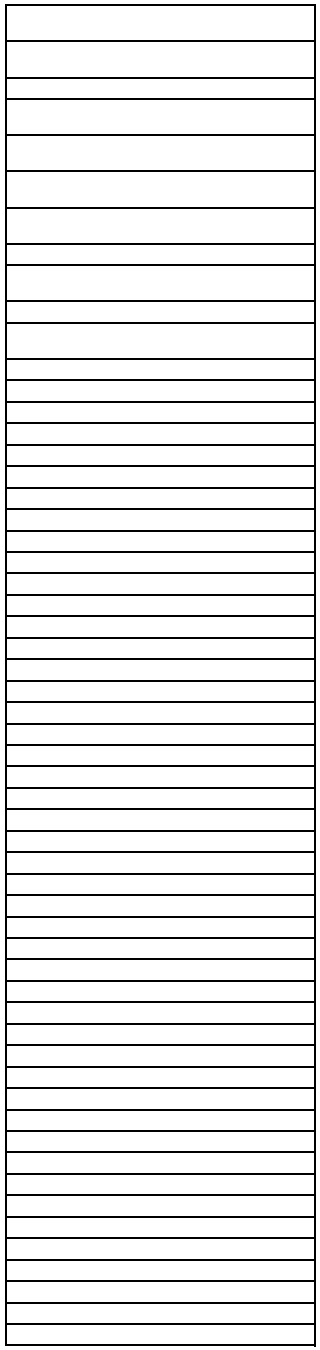
Seed Tables

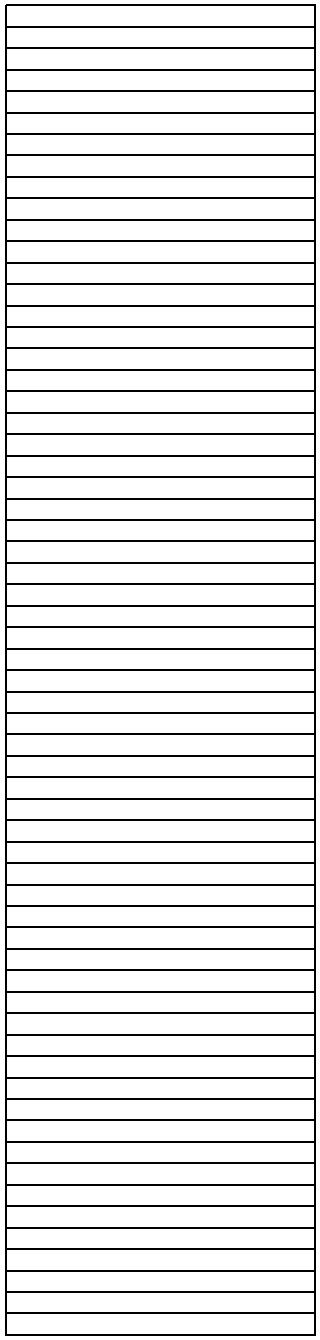
2013 seed mix:#/pls Canby bluegrass 2 , basin wild rye 2, prairie June grass 1.5, slender wheat grass 2, sand drop seed 3, blue Grama 1.5, Linn Perennial rye 2. This seed mix was used from 5/1/13 to 4/7/14

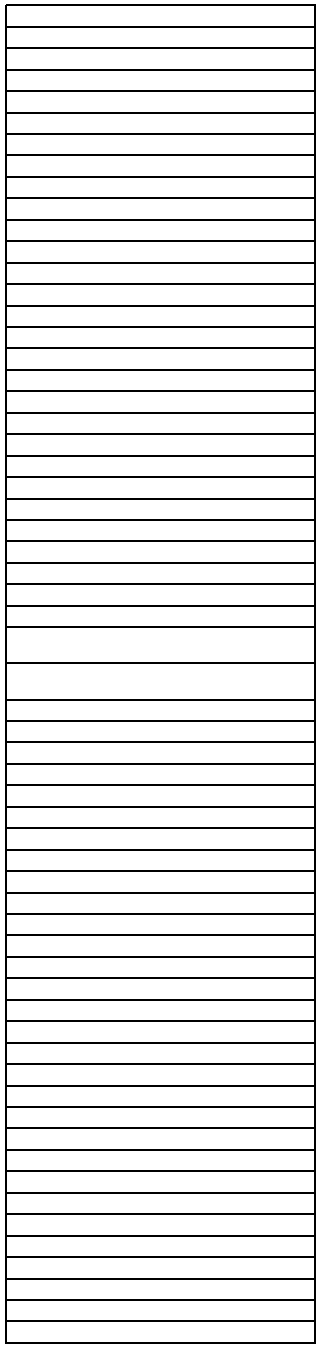
2014 wheat grass MIX: Pls#/ac: Lender Wheatgrass 4.8 pls Intermediate Wheatgrass 4.8 pls Western Wheatgrass 6.4 pls @ $126 PER ACRE. This seed mix was used from 4/7/14 to 4/30/2014

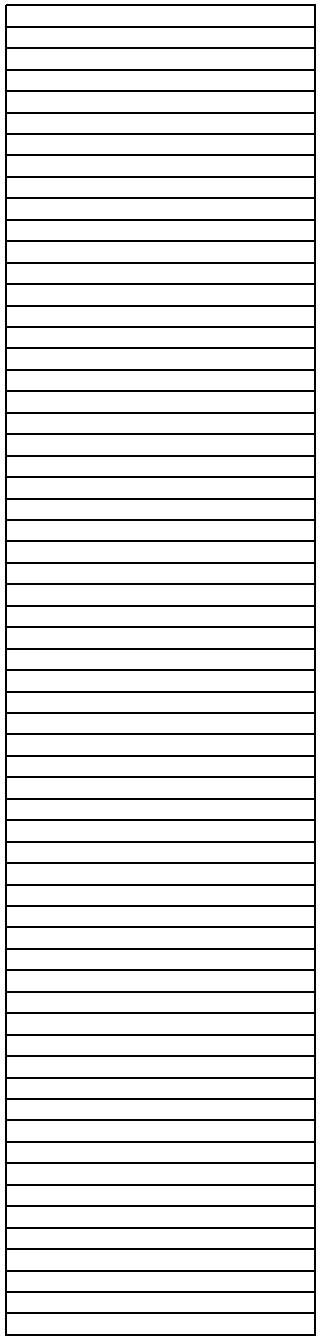
ABANDONMENT PROCEDURE REMARKS

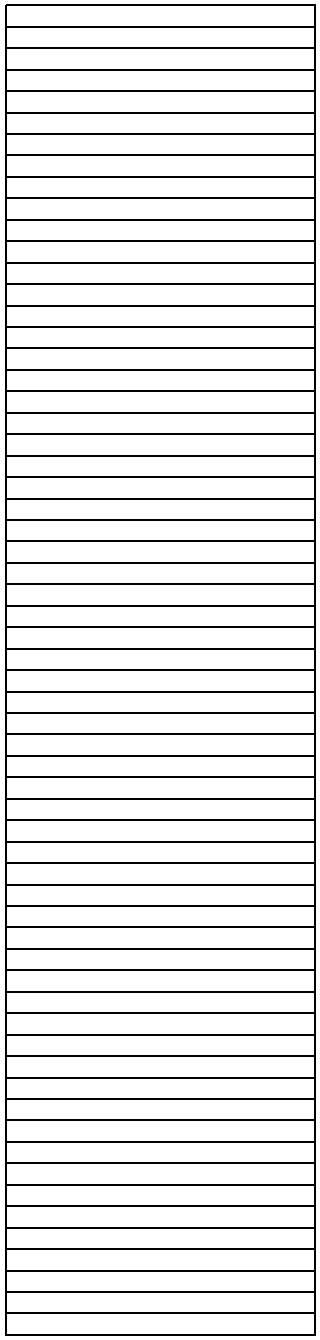


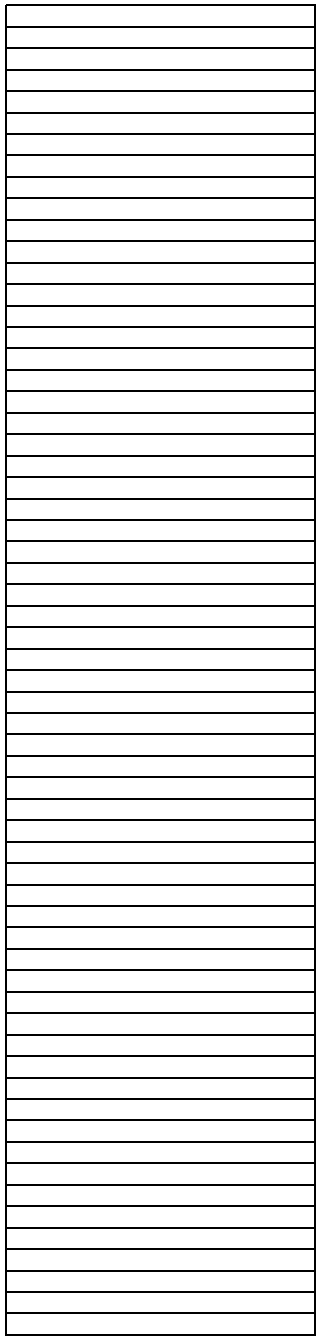












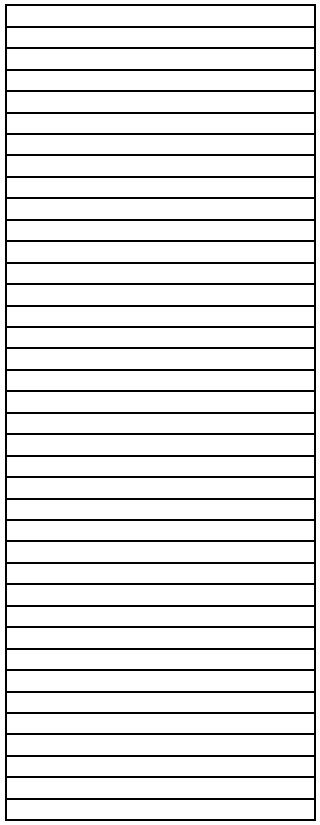


Figure II-1
Mean Selenium Concentrations (mg/kg) in Vegetation Samples from Irrigator No. 1
During 1996-2013

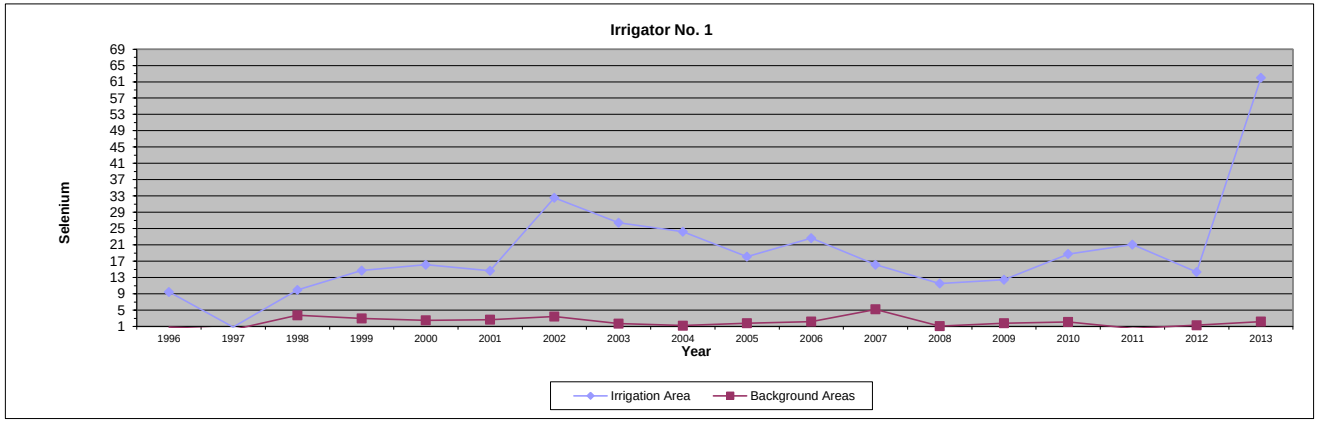
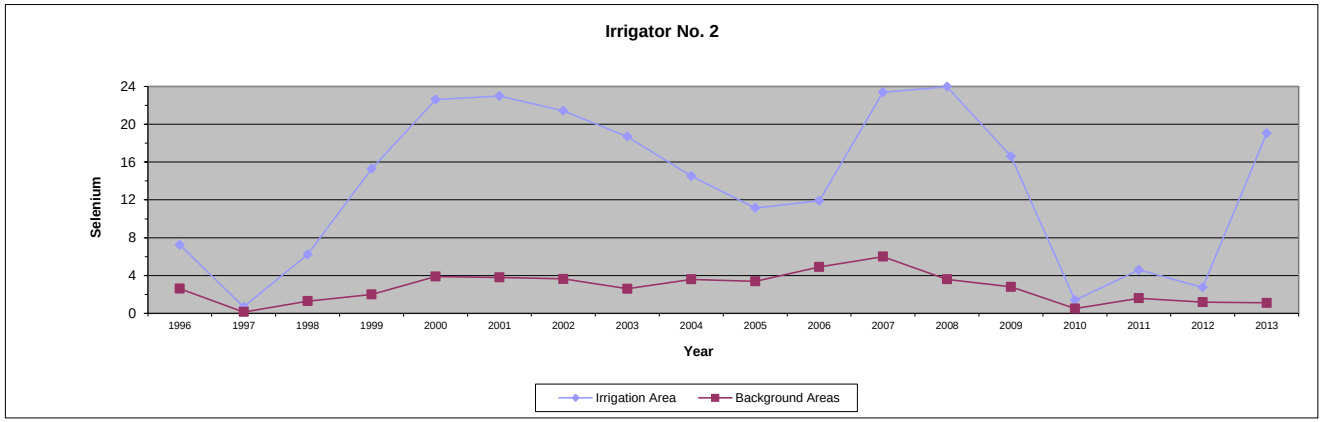


Figure II-2
Mean Selenium Concentrations (mg/kg) in Vegetation Samples from Irrigator No. 2
During 1996-2013



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

Figure II-3
Mean Conductivity, Selenium, Uranium, and Radium-226 Concentrations in Soil Samples from Irrigator No. 1 During 1986 and 1990-2013

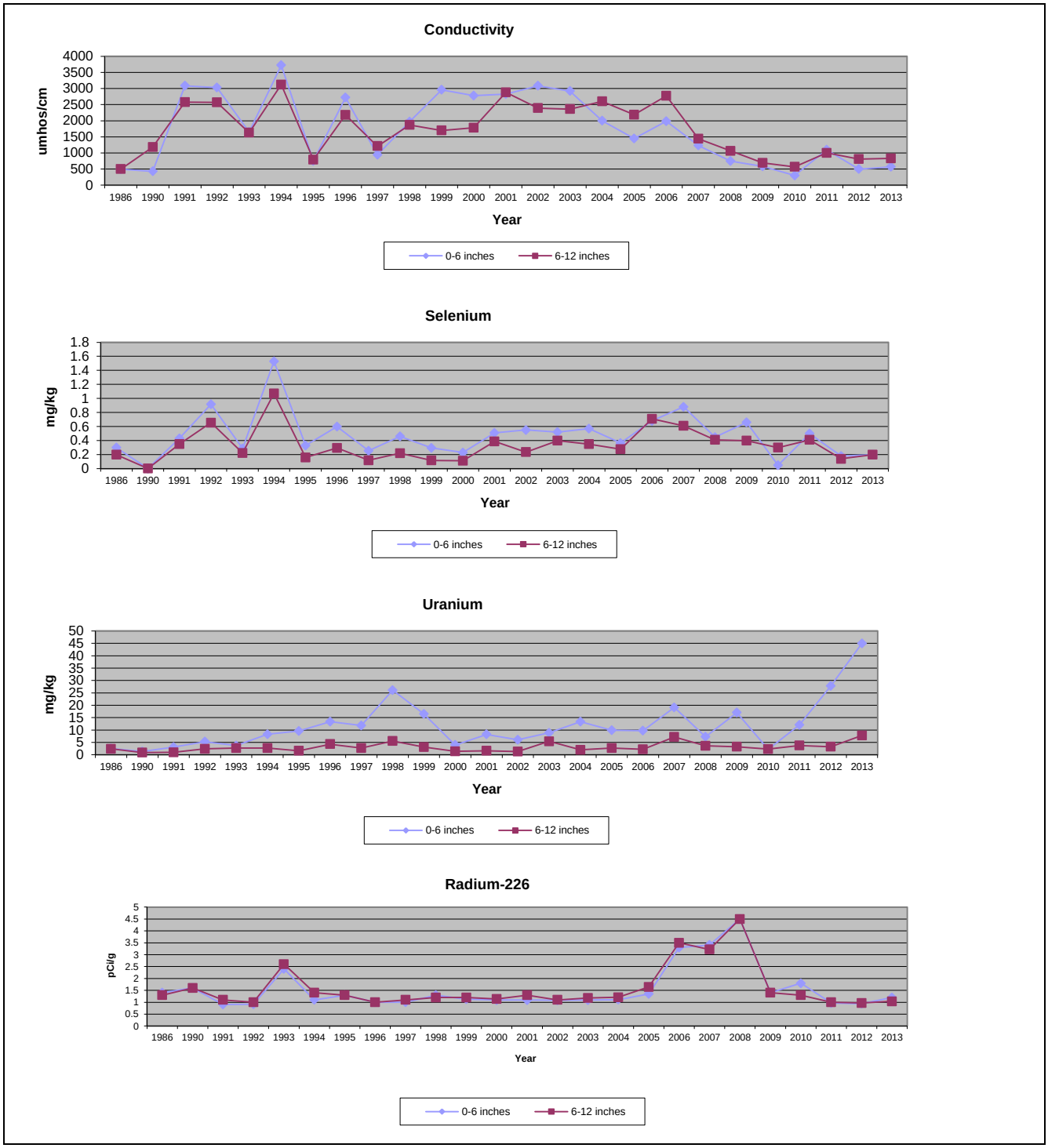


Figure II-4
Mean Conductivity, Selenium, Uranium, and Radium-226 Concentrations in Soil Samples from Irrigator No. 2 During 1993 and 1995-2013

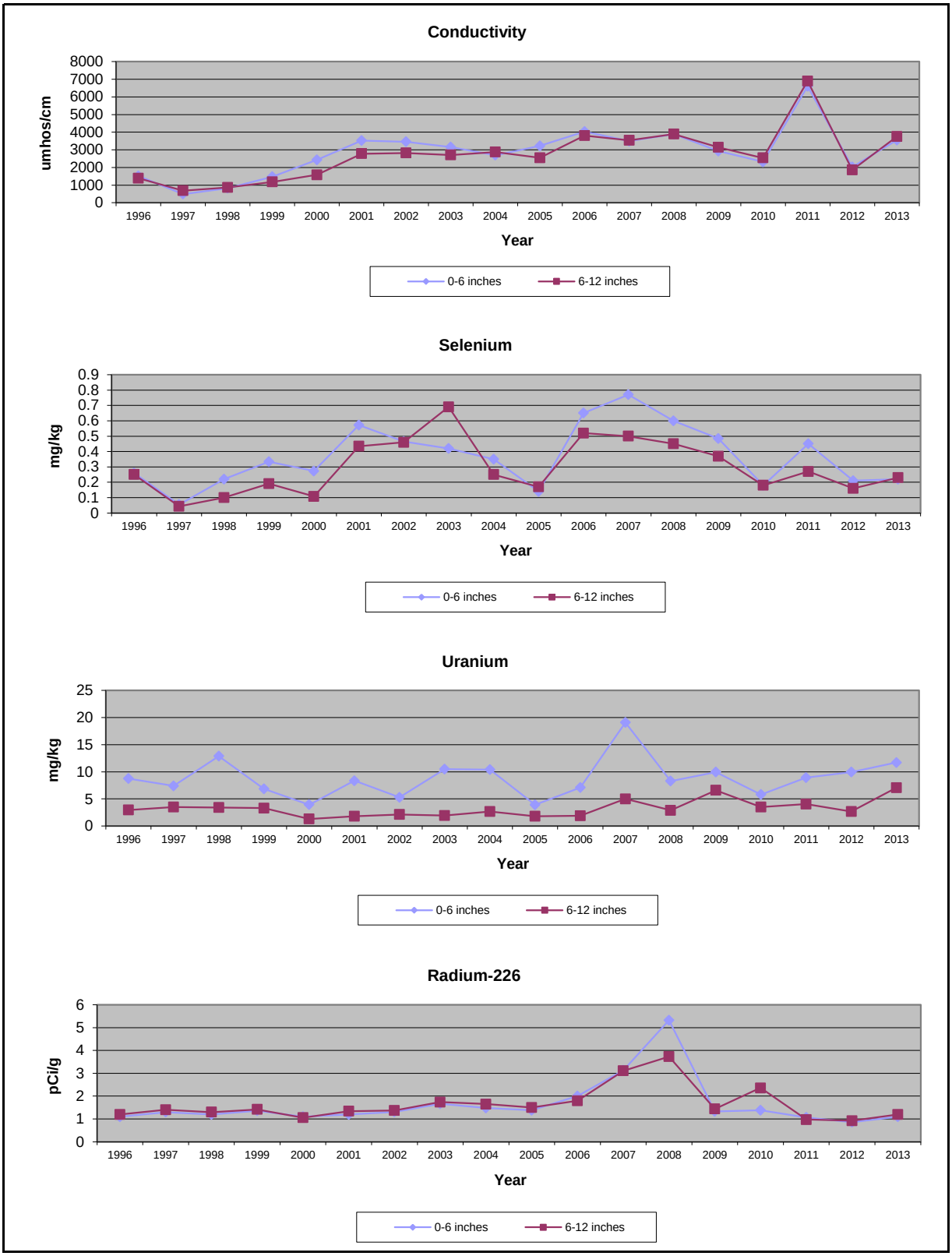
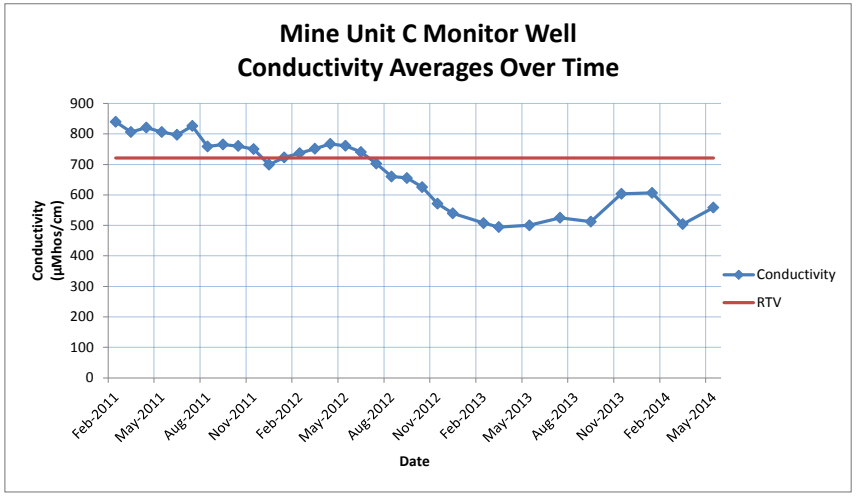
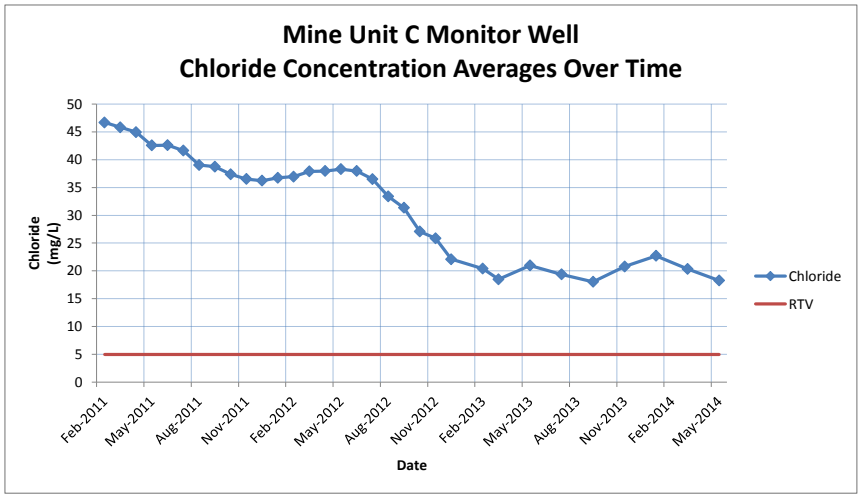
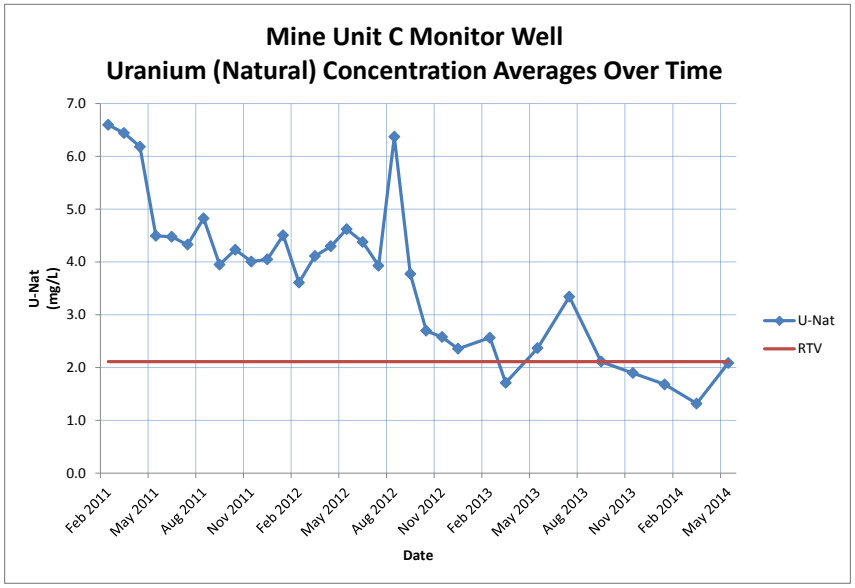


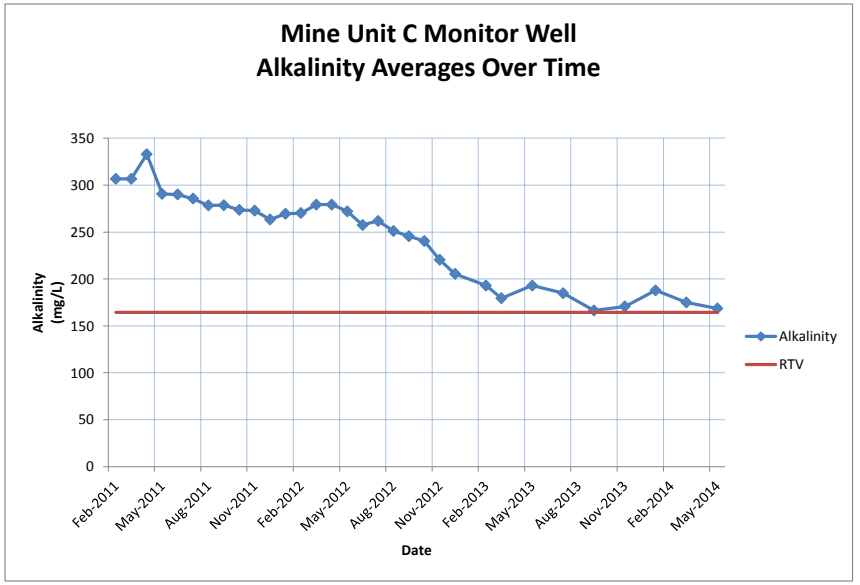
Figure III-1

MU C Restoration Progress





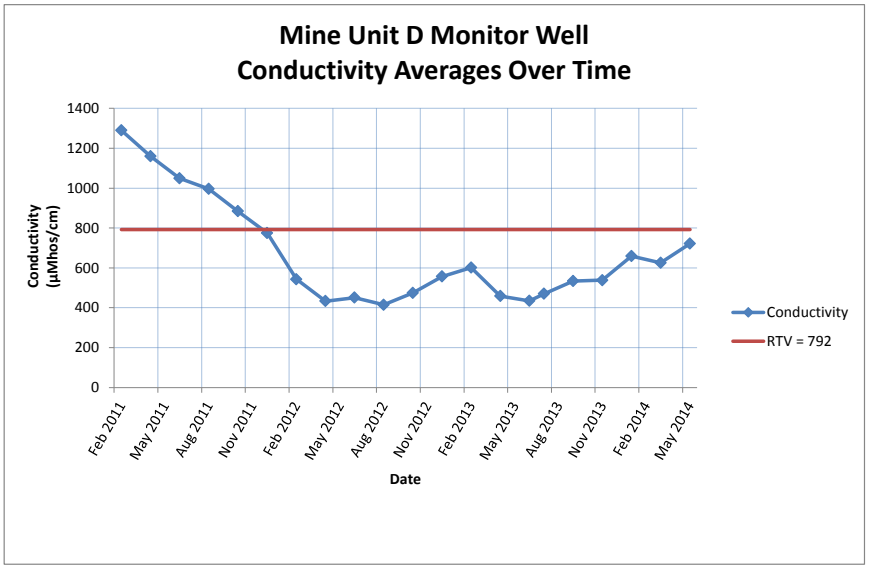


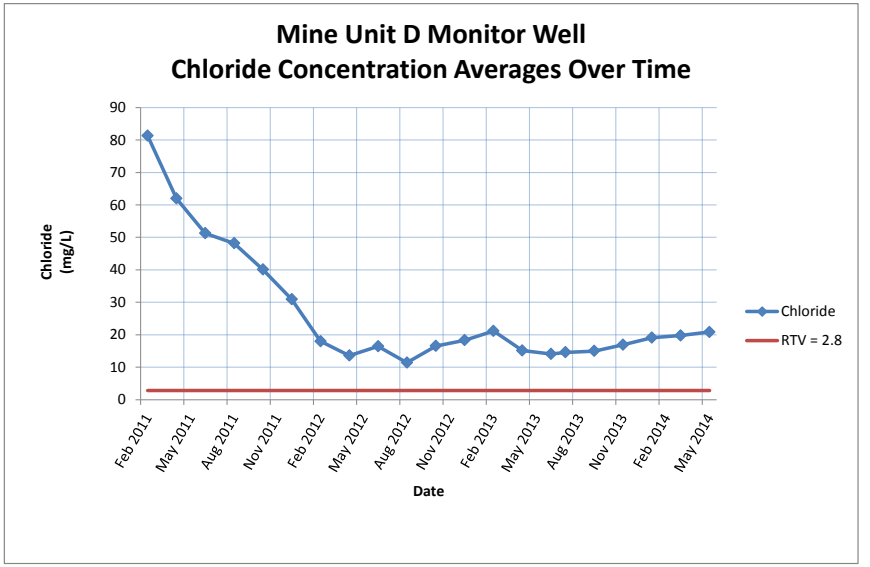


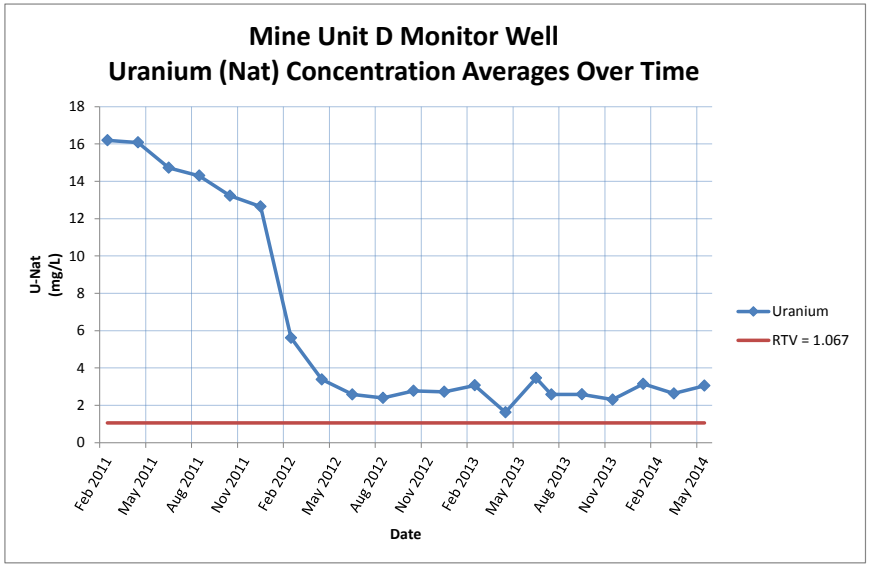
uS/cm equivalent to uMhos/cm mg/L equivalent to ppm RTV= Restoration Target Value

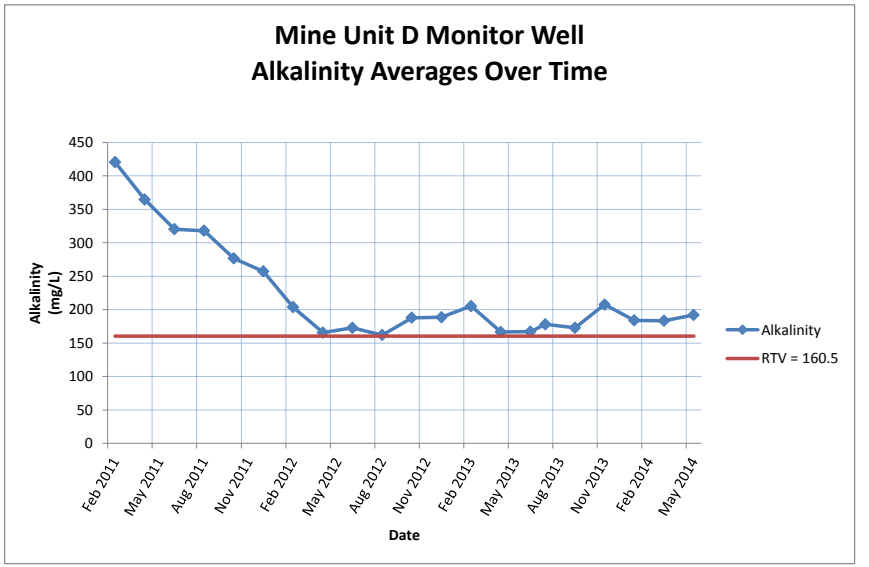
Figure III-2

MU D Restoration Progress





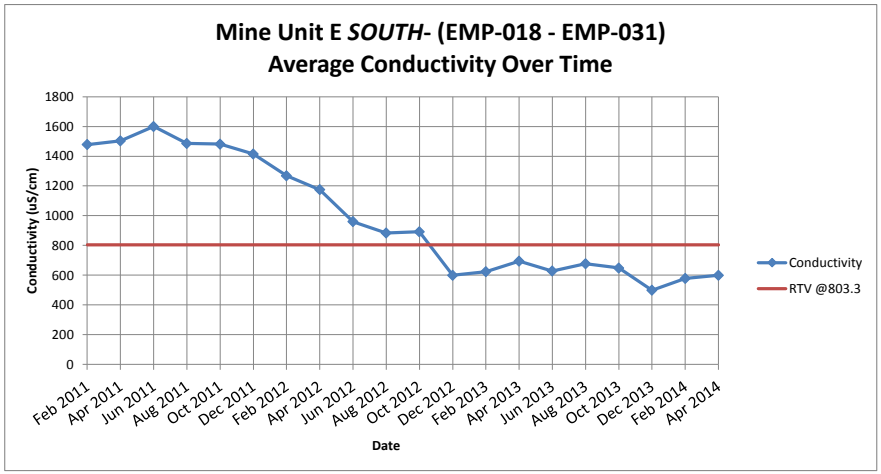


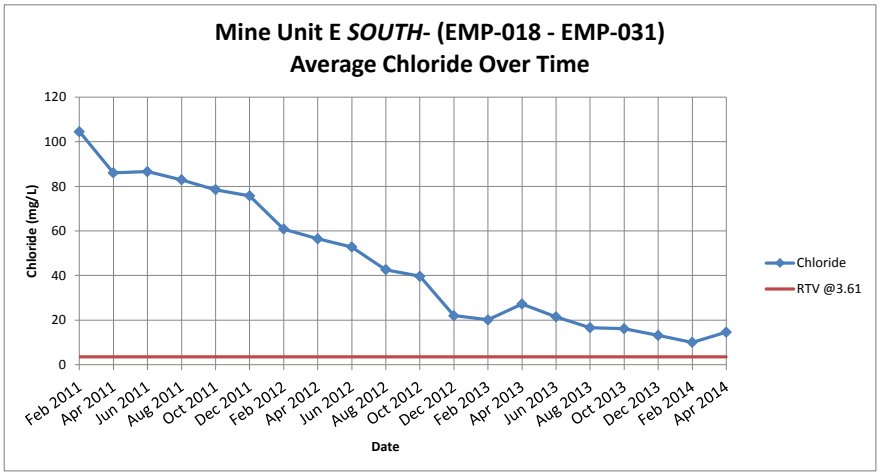


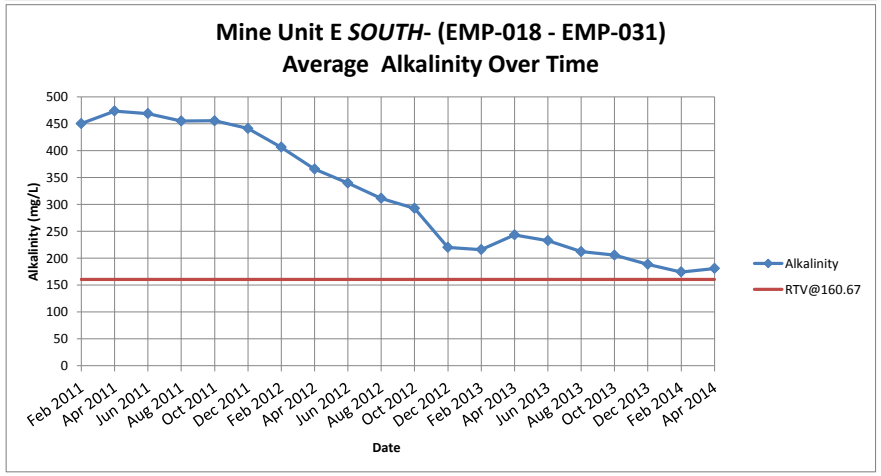
uS/cm equivalent to uMhos/cm mg/L equivalent to ppm RTV= Restoration Target Value

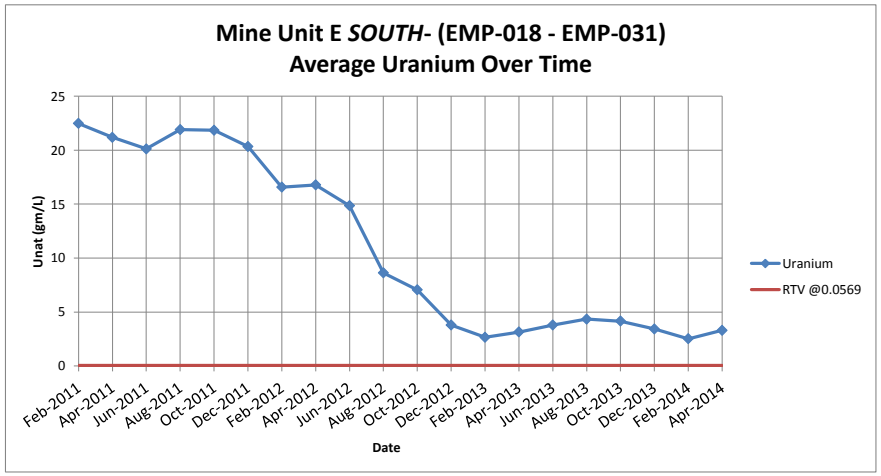
Figure III-3

MU E South Restoration Progress





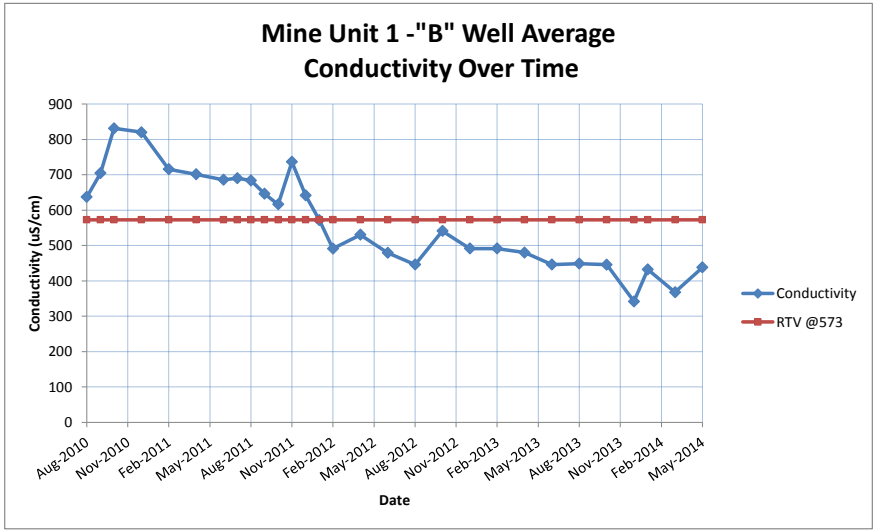


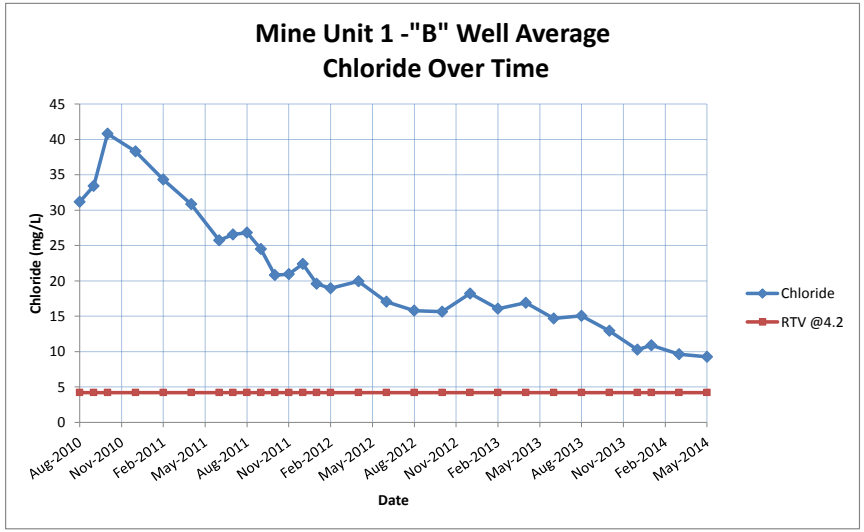


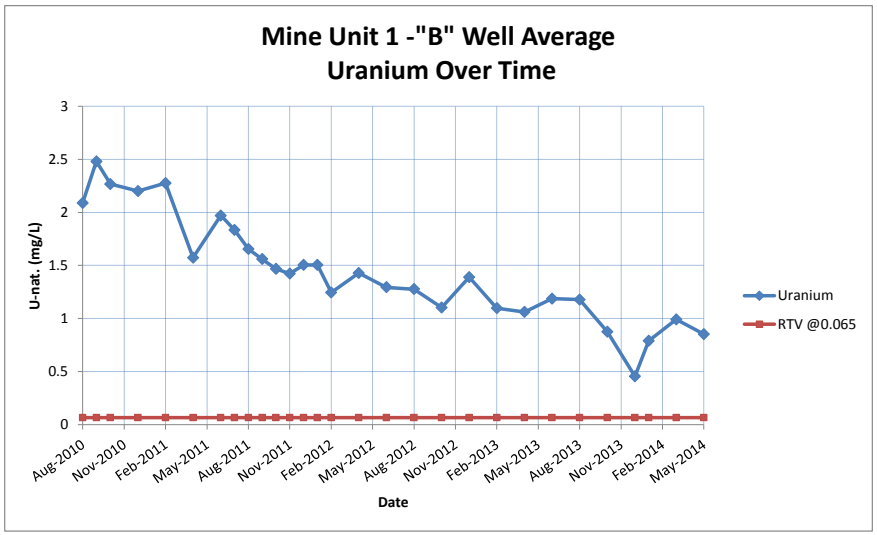
uS/cm equivalent to uMhos/cm mg/L equivalent to ppm RTV= Restoration Target Value

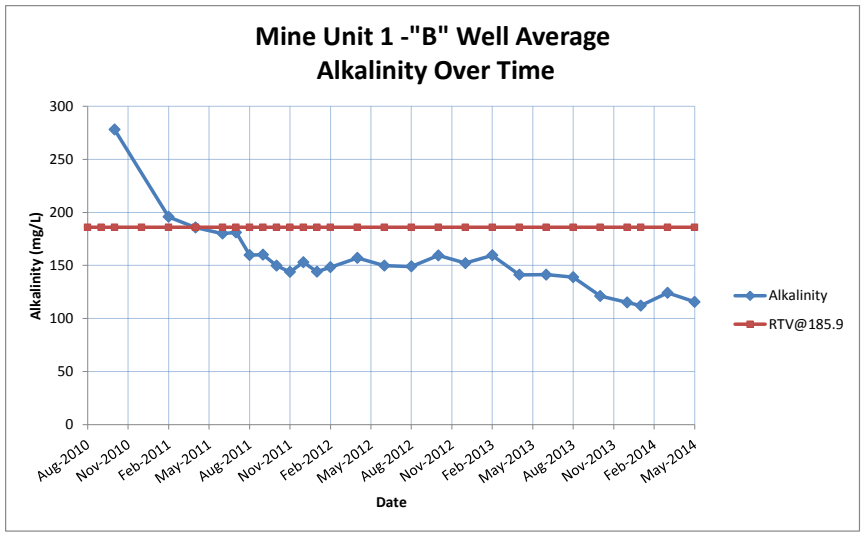
Figure III-4

MU 1 Restoration Progress





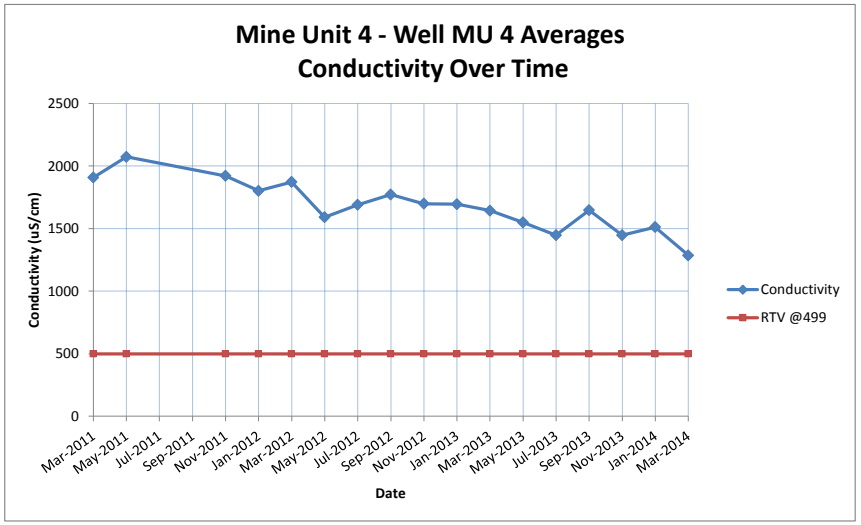


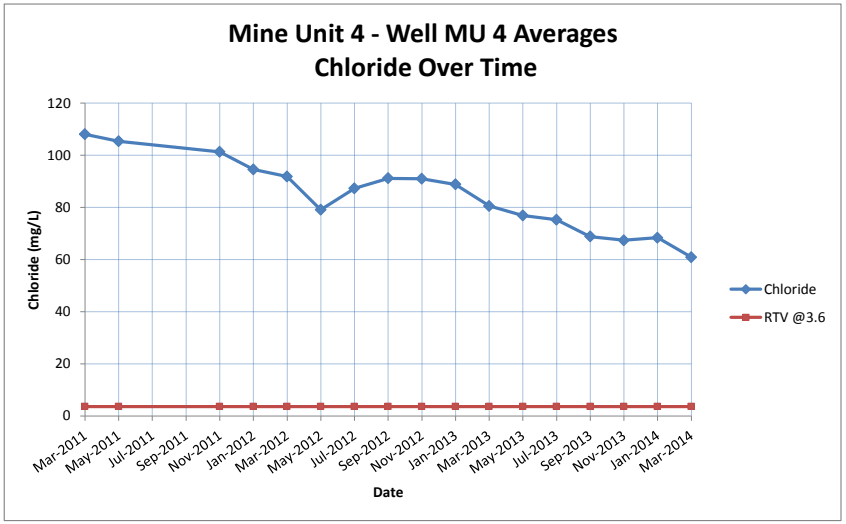


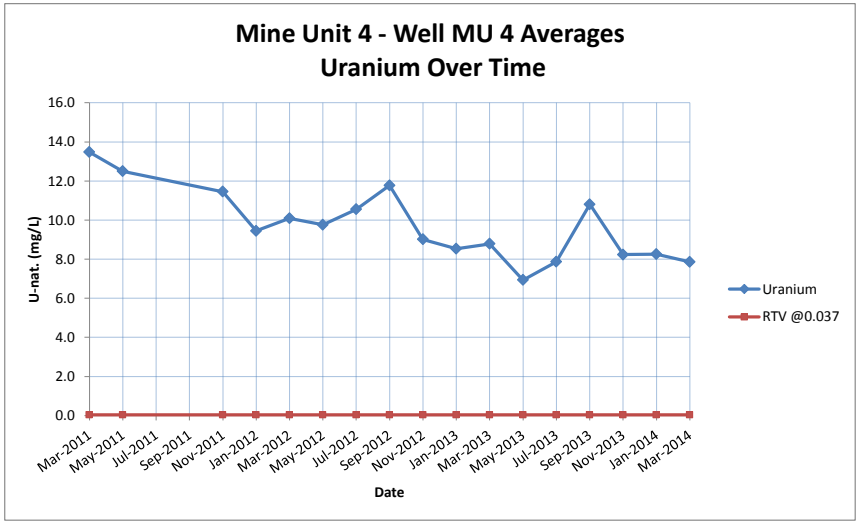
uS/cm equivalent to uMhos/cm mg/L equivalent to ppm RTV= Restoration Target Value

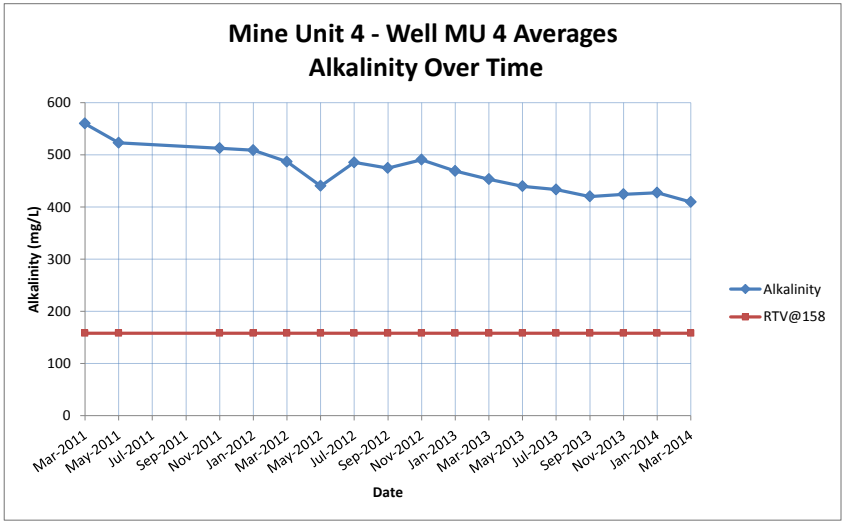
Figure III-5

MU 4 Restoration Progress









uS/cm equivalent to uMhos/cm mg/L equivalent to ppm RTV= Restoration Target Value

Cameco Resources
Smith Ranch/Reynolds Ranch and Highland Combined Operations
2014-2015 Surety Estimate

Total Restoration and Reclamation Cost Estimate			
I.	Groundwater Restoration (GWR-WF and GWR-SITE Sheets)		$127,290,606
II.	Well & Drill Hole Abandonment (WA Sheet)		$28,984,114
III.	Wellfield Buildings & Equipment Removal & Disposal (WF BLDGS Sheet)		$10,167,732
IV.	Wellfield and Satellite Surface Relclamation (WF REC Sheet)		$1,553,658
V.	Equipment Removal & Disposal (EQUIP Sheet)		$1,914,511
VI.	Building Removal & Disposal (BLDGS Sheet)		$7,373,410
VII.	Miscellaneous Reclamation (MISC REC Sheet)		$8,303,364
	Subtotal Restoration and Reclamation Cost Estimate		$185,587,395
	Contractor Profit & Overhead (10%)[1]	See Master Costs	
	Contingency (15%)[2]	15%	$27,838,109
	TOTAL[3]		$213,425,500

[1], Per WDEQ/LQD Guideline No. 12, Section 12(b)

[2], Per WDEQ/LQD Guideline No. 12, Section 12(a) and (c-h), Section 13 and NRC License Condition 9.5 (SUA-1548)

[3], Costs reflect both WDEQ & NRC requirements. No salvage value assumed.

Cameco Resources
Smith Ranch/Reynolds Ranch Operations
2014-2015 Surety Estimate

Total Restoration and Reclamation Cost Estimate			
I.	Groundwater Restoration (GWR-WF and GWR-SITE Sheets)		$75,165,079
II.	Well & Drill Hole Abandonment (WA Sheet)		$19,565,678
III.	Wellfield Buildings & Equipment Removal & Disposal (WF BLDGS Sheet)		$4,951,771
IV.	Wellfield and Satellite Surface Relclamation (WF REC Sheet)		$1,013,053
V.	Equipment Removal & Disposal (EQUIP Sheet)		$1,161,531
VI.	Building Removal & Disposal (BLDGS Sheet)		$4,183,853
VII.	Miscellaneous Reclamation (MISC REC Sheet)		$1,010,184
	Subtotal Restoration and Reclamation Cost Estimate		$107,051,148
	Contractor Profit & Overhead (10%)[1]	See Master Costs	
	Contingency (15%)[2]	15%	$16,057,672
	TOTAL[3]		$123,108,800

[1], Per WDEQ/LQD Guideline No. 12, Section 12(b)

[2], Per WDEQ/LQD Guideline No. 12, Section 12(a) and (c-h), Section 13 and NRC License Condition 9.5 (SUA-1548)

[3], Costs reflect both WDEQ & NRC requirements. No salvage value assumed.

Cameco Resources
Smith Ranch Uranium Project
2013-14 Surety Estimate Update

Ground Water Restoration -Wellfield	Mine Unit 1	Mine Unit 2	Mine Unit 3/Ext	Mine Unit 4/4A	Mine Unit 15	Mine Unit 15A	Mine Unit K	K-North	Mine Unit 9	Mine Unit 10	Mine Unit 10-Ext	Mine Unit 27	Mine Unit 21	Mine Unit 7
I. Ground Water Sweep Costs														
Estimated PV's	0	1	1	0.6	1	1	1	1	1	1	1	1	0	1
Total kgals for GWS	0	110,785	152,825	71,530	137,426	52,669	84,209	78,562	136,376	190,435	99,498	54,232	0	104,736
Bleed to Deep Disposal Well (%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Groundwater Sweep Unit Cost ($/kgal)	$2.04	$2.04	$2.04	$2.04	$2.04	$2.04	$2.04	$2.04	$2.04	$2.04	$2.04	$2.04	$2.04	$2.04
Subtotal Ground Water Sweep Costs per Wellfield	$0.00	$226,554.74	$312,526.31	$146,277.65	$281,035.44	$107,707.83	$172,206.96	$160,658.87	$278,888.20	$389,438.56	$203,472.88	$110,904.15	$0.00	$214,184.56
Total Ground Water Sweep Costs	**$2,603,856**													
II. Reverse Osmosis Costs														
Estimated PV's	0	4.5	4.5	3.3	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	0	4.5
Total Kgals for RO	0	498,533	687,713	393,413	618,417	237,011	378,941	353,529	613,692	856,958	447,741	244,044	0	471,312
Wellfield Pumping Cost	$0.20	$0.20	$0.20	$0.20	$0.20	$0.20	$0.20	$0.20	$0.20	$0.20	$0.20	$0.20	$0.20	$0.20
Reverse Osmosis Unit Cost ($/kgal)	$0.62	$0.62	$0.62	$0.62	$0.62	$0.62	$0.62	$0.62	$0.62	$0.62	$0.62	$0.62	$0.62	$0.62
Bleed to Deep Disposal Well (%)	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
Brine Volume for Disposal	0	99,707	137,543	78,683	123,683	47,402	75,788	70,706	122,738	171,392	89,548	48,809	0	94,262
DDW Disposal Cost($/kgal)	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13
Permeate Volume for Re-Use	0	398,826	550,170	314,730	494,734	189,608	303,152	282,823	490,954	685,566	358,193	195,235	0	377,050
Satellite Pumping Cost	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72
Subtotal Reverse Osmosis & Disposal Costs per Wellfield	$0.00	$805,140.40	$1,110,670.05	$635,369.89	$998,756.37	$382,776.91	$611,996.82	$570,956.72	$991,125.40	$1,384,004.26	$723,111.07	$394,136.16	$0.00	$761,178.72
Total Reverse Osmosis Costs	**$9,369,223**													
III. Reverse Osmosis with Chemical Reductant Costs														
Estimated PV's	0.5	3.5	3.5	3.3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	0.0	3.5
Total kgals for RO	31,419	387,748	534,888	393,413	480,991	184,342	294,732	274,967	477,316	666,523	348,243	189,812	0	366,576
Wellfield Pumping Cost	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reverse Osmosis with Chemical Reductant Unit Cost ($/kgal)	$0.71	$0.71	$0.71	$0.71	$0.71	$0.71	$0.71	$0.71	$0.71	$0.71	$0.71	$0.71	$0.71	$0.71
Bleed to Deep Disposal Well (%)	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
Brine Volume for Disposal (kgal)	6,284	77,550	106,978	78,683	96,198	36,868	58,946	54,993	95,463	133,305	69,649	37,962	0	73,315
DDW Disposal Cost($/kgal)	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13
Permeate Volume for Re-Use	$25,135	$310,198	$427,910	$314,730	$384,793	$147,473	$235,785	$219,974	$381,853	$533,218	$278,594	$151,850	$0	$293,261
Satellite Pumping Cost ($/kgal)	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72
Subtotal RO with Chemical Reductant per Wellfield	$53,689.85	$662,606.54	$914,048.33	$672,287.75	$821,946.71	$315,013.98	$503,655.13	$469,880.35	$815,666.64	$1,138,994.23	$595,098.84	$324,362.30	$0.00	$626,427.39
Total Reverse Osmosis Costs	**$7,913,678**													
IV. Mechanical Integrity Testing (MIT) Costs														
Pre-Restoration, Restoration and Stability Period (yrs)	1	7	10	6	13	14	22	22	19	20	19	12	0	15
Number of Injection Wells	160	233	280	371	835	0	280	175	398	380	200	380	0	250
Number of MITs required per Well	0.2	1.4	2.0	1.2	2.6	2.8	4.4	4.4	3.8	4.0	3.8	2.4	0.0	3.0
MIT Cost per Injection Well	$130.60	$130.60	$130.60	$130.60	$130.60	$130.60	$130.60	$130.60	$130.60	$130.60	$130.60	$130.60	$130.60	$130.60
Subtotal MIT Mine Unit	$4,179.14	$42,601.07	$73,134.88	$58,142.23	$283,528.26	$0.00	$160,896.74	$100,560.46	$197,516.42	$198,508.96	$99,254.48	$119,105.38	$0.00	$97,948.50
Total MIT Costs	**$1,435,376**													
V. Wellfield Refurbishment Costs														
Well Replacement (#)	0	10	50	10	50	0	0	0	0	0	0	0	0	0
Replacement ($/well)	$14,763	$14,763	$14,763	$14,763	$14,763	$14,763	$14,763	$14,763	$14,763	$14,763	$14,763	$14,763	$14,763	$14,763
Bellhole Refurbishment (#)	0	7	11	14	0	0	0	0	0	0	0	0	0	0
Refurbishment ($/bellhole)	$5,530	$5,530	$5,530	$5,530	$5,530	$5,530	$5,530	$5,530	$5,530	$5,530	$5,530	$5,530	$5,530	$5,530
Header House Refurbishment (#)	0	5	5	5	12	0	0	0	0	0	0	0	0	0
Refurbishment ($/header house)	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000
Subtotal Refurbishment Cost per Wellfield	$0	$236,340	$848,980	$275,050	$858,150	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Wellfield Refurbishment Cost	**$2,218,520**													
VI. Monitoring and Sampling Costs														
A. Pre-Restoration Monitoring														
1. Excursion Monitoring (M, MO and MU wells, twice per month)														
# of Wells	49	50	40	90	83	42	51	53	69	59	35	85	0	49
Total # samples	0	0	3840	0	5976	9072	12240	13992	18216	18408	12600	8160	0	10584
UCL Parameters ($/sample)	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
Subtotal Pre-Restoration Monitoring Costs per Mine Unit	$0.00	$0.00	$115,200.00	$0.00	$179,280.00	$272,160.00	$367,200.00	$419,760.00	$546,480.00	$552,240.00	$378,000.00	$244,800.00	$0.00	$317,520.00
Total Pre-Restoration Monitoring Costs	$3,392,640													
B. Restoration Monitoring														
1. Sampling Prior to Start-up (MP Wells)														
# of Wells	19	13	24	12	22	10	13	11	14	20	9	15	0	18

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Ground Water Restoration -Wellfield	Mine Unit 1	Mine Unit 2	Mine Unit 3/Ext	Mine Unit 4/4A	Mine Unit 15	Mine Unit 15A	Mine Unit K	K-North	Mine Unit 9	Mine Unit 10	Mine Unit 10-Ext	Mine Unit 27	Mine Unit 21	Mine Unit 7
Modified Guideline 8 ($/sample)	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00
2. Restoration Progress Monitoring (MP Wells, every 2 months)														
# of Wells	19	13	24	12	22	10	13	11	14	20	9	15	0	18
Total # samples	0	468	720	360	1188	240	858	660	588	720	162	630	0	540
Restoration Progress Parameters ($/sample)	$50.00	$50.00	$50.00	$50.00	$50.00	$50.00	$50.00	$50.00	$50.00	$50.00	$50.00	$50.00	$50.00	$50.00
3. Excursion Monitoring (M, MO and MU wells, every 2 months)														
# of Wells	49	50	40	90	83	42	51	53	69	59	35	85	0	49
Total # samples	0	1800	1200	2700	4482	1008	3366	3180	2898	2124	630	3570	0	1470
UCL Parameters ($/sample)	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
Subtotal Restoration Monitoring Costs per Mine Unit	$4,731.00	$80,637.00	$77,976.00	$101,988.00	$199,338.00	$44,730.00	$147,117.00	$131,139.00	$119,826.00	$104,700.00	$29,241.00	$142,335.00	$0.00	$75,582.00
Total Restoration Monitoring Costs	$1,259,340.00													
C. Stability Monitoring														
1. Beginning of stability (MP wells)														
# of Wells	19	13	24	12	22	10	13	11	14	20	9	15	0	18
Modified Guideline 8 ($/sample)	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00
2. Quarterly sampling (MP wells)														
# of Wells	19	13	24	12	22	10	13	11	14	20	9	15	0	18
Total # samples	76	52	96	48	88	40	52	44	56	80	36	60	0	72
Modified Guideline 8 ($/sample)	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00
3. Monitor Well Sampling (M wells, every 2 months)														
# of Wells	25	24	24	57	39	18	28	28	43	49	20	40	0	20
Total # samples	150	144	144	342	234	108	168	168	258	294	120	240	0	120
UCL Parameters ($/sample)	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
Subtotal Stability Monitoring Costs per Mine Unit	$28,155.00	$20,505.00	$34,200.00	$25,200.00	$34,410.00	$15,690.00	$21,225.00	$18,735.00	$25,170.00	$33,720.00	$14,805.00	$25,875.00	$0.00	$26,010.00
Total Stability Monitoring Costs	$323,700.00													
D. Other Laboratory Costs														
Radon Sampling	$13,200.00	$92,400.00	$132,000.00	$79,200.00	$171,600.00	$184,800.00	$290,400.00	$290,400.00	$250,800.00	$264,000.00	$250,800.00	$158,400.00	$0.00	$198,000.00
Subtotal Monitoring and Sampling Costs per Mine Unit	$46,086.00	$193,542.00	$359,376.00	$206,388.00	$584,628.00	$517,380.00	$825,942.00	$860,034.00	$942,276.00	$954,660.00	$672,846.00	$571,410.00	$0.00	$617,112.00
Total Monitoring and Sampling Costs	**$7,351,680**													
VII. Header House Heating Costs														
Number of Header Houses per Unit(s)	6	5	10	11	18	5	9	7	13	9	5	4	0	7
Pre-Restoration and Restoration Period (yrs)	0	6	9	5	12	13	21	21	18	19	18	11	0	14
Electrical Heating Costs ($/yr)	$1,050	$1,050	$1,050	$1,050	$1,050	$1,050	$1,050	$1,050	$1,050	$1,050	$1,050	$1,050	$1,050	$1,050
Subtotal Header House Heating Cost per Wellfield	$0	$31,493	$94,478	$57,737	$226,748	$68,234	$198,405	$154,315	$245,644	$179,509	$94,478	$46,189	$0	$102,876
Total Header House Heating Costs	**$1,500,107**													
TOTAL RESTORATION COST PER WELLFIELD	$103,955	$2,198,278	$3,713,214	$2,051,252	$4,054,793	$1,391,113	$2,473,102	$2,316,405	$3,471,116	$4,245,115	$2,388,262	$1,566,107	$0	$2,419,728
TOTAL WELLFIELD RESTORATION COSTS	**$32,392,441**													

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Ground Water Restoration - Site Wide										
I.	**Building Utility Costs**	**CPP**	**Main Office**	**Maint Shop**	**Pumphouse**	**Sat SR-1**	**Sat SR-2**	**Sat Reynolds**		
	Electricity Unit Cost ($/yr)	$30,384	$25,564	$5,749	$10,078	$41,255	$41,255	$41,255		
	Propane ($/yr)	$0	$0	$0	$0	$0	$47,203	$47,203		
	Natural Gas ($/yr)	$33,817	$0	$0	$0	$4,180	$0	$0		
	Number of Years	21	21	21	21	16	21	6		
	Subtotal Utility Cost per Building	$1,348,219	$536,851	$120,730	$211,638	$726,955	$1,857,610	$530,746		
	*Yrs for Satellite SR-1 assumes end of restoration for MU-7									
	*Yrs for Satellite Reynolds assumes end of restoration for MU-27									
	Total Building Utility Costs	**$5,332,749**								
II.	**Deep Disposal Well Utility Costs**	**SR-1**	**SR-2**	**REY-1**	**REY-2**	**REY-3**	**SRHUP #6**	**SRHUP #7**	**SRHUP #8**	**SRHUP #10**
	Electricity Unit Cost ($/yr)	$4,587	$4,587	$4,587	$4,587	$4,587	$4,587	$4,587	$4,587	$4,587
	Propane ($/yr)	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Natural Gas ($/yr)	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Number of Years	21	21	21	0	0	21	21	0	21
	Subtotal Utility Cost per Building	$96,322	$96,322	$96,322	$0	$0	$96,322	$96,322	$0	$96,322
	Total Deep Disposal Well Utility Costs	**$577,933**								
III.	**Booster Pump Operation Costs**									
	Restoration Period (yrs)	21								
	Booster Pump Operating Cost ($/yr)	$169,386.16								
	Total Booster Pump Operating Cost	**$3,557,109**								
IV.	**Infrastructure, Equipment Maintenance,**									
	Replacement and Repair Costs									
	Annual Maintenance Cost	$92,320		*Based on planned expenditures (2013)						
	Restoration Period (yrs)	21								
	Total Cost	**$1,938,720**								
V.	**Deep Disposal Well MIT Costs**									
	Five-year MIT Costs for Disposal Wells	$31,625.00								
	Number of DDWs	9								
	Number of MITs per DDW	3								
	Total DDW MIT Cost	**$853,875**								
VI.	**Capital Costs**									
	*Estimates based on planned expenditures (2013)									
	Deep Disposal Well SRHUP #8	$3,400,000								
	RO Installation (Satellite SR-2)	$600,000								
	RO Installation (Reynolds Satellite)	$600,000								
	Satellite SR-2 to Mine Unit 15 Pipeline	$266,376								
	SR-HUP Connecting Pipeline	$209,872								
	Total Capital Costs	**$5,076,248**								

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VII.	**Vehicle Operation Costs**										
	Number of Pickup Trucks (Gas)	10									
	Truck Cost ($/hr)	$22.14									
	Average Operating Time (hrs/yr)	1000									
	Restoration and Stability Period (yrs)	22									
	Total Vehicle Operation Cost	**$4,871,460**									
VII.	**Labor Costs**										
	Assumptions:										
	Number of Environmental Managers/RSOs	0.5		*Management positions split between Smith Ranch and Highland							
	$/hr	$64.40									
	Number of Restoration Managers	0.5		*Management positions split between Smith Ranch and Highland							
	$/hr	$56.00									
	Number of Environmental Techs/HPTs	2									
	$/hr	$35.00									
	Number of Operators/Laborers	7									
	$/hr	$36.40									
	Number of Maintenance Technicians	2									
	$/hr	$32.20									
	Hrs/yr	2080									
	Restoration and Stability Period (yrs)	22									
	Total Labor Cost	**$20,564,544**									
TOTAL SITE-WIDE RESTORATION COSTS		**$42,772,638**									

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Well and Drill Hole Abandonment	Mine Unit 1	Mine Unit 2	Mine Unit 3/Ext	Mine Unit 4/4A	Mine Unit 15	Mine Unit 15A	Mine Unit K	K-North	Mine Unit 9	Mine Unit 10	Mine Unit 10-Ext	Mine Unit 27	Mine Unit 21	Mine Unit 7	Other
I. Well Abandonment (Wellfields)															
A. Sealing Costs						Inc in MU-15									
Total # of Wells per Wellfield	305	429	580	700	1387	42	502	328	734	640	335	658	0	436	21
Production, Injection and Perimeter Well Average Depth (ft)	500	850	750	850	450	500	950	864	950	900	900	800	600	825	950
Well Abandonment (Sealing) Costs ($/ft)	$2.75	$2.75	$2.75	$2.75	$2.75	$2.75	$2.75	$2.75	$2.75	$2.75	$2.75	$2.75	$2.75	$2.75	$2.75
Subtotal Sealing Costs per Wellfield	$419,375	$1,002,788	$1,196,250	$1,636,250	$1,716,413	$57,750	$1,311,475	$779,328	$1,917,575	$1,584,000	$829,125	$1,447,600	$0	$989,175	$54,863
B Casing Removal and Diposal Costs															
Total # of Wells per Wellfield (In Service)	305	429	580	700	1387	42	502	328	734	640	335	658	0	436	21
# of Previously Abandoned Wells Pending Release	124	100	70	88	121	0	128	11	89	4	0	19	0	0	0
Total # of Wells for Casing Removal and Disposal	429	529	650	788	1508	42	630	339	823	644	335	677	0	436	21
Remove and Dispose Casing ($/well)	$33	$33	$33	$33	$33	$33	$33	$33	$33	$33	$33	$33	$33	$33	$33
Subtotal Casing Removal and Diposal Costs per Wellfield	$14,157	$17,457	$21,450	$26,004	$49,764	$1,386	$20,790	$11,187	$27,159	$21,252	$11,055	$22,341	$0	$14,388	$693
Subtotal Well Abandonment Costs per Wellfield	$433,532	$1,020,245	$1,217,700	$1,662,254	$1,766,177	$59,136	$1,332,265	$790,515	$1,944,734	$1,605,252	$840,180	$1,469,941	$0	$1,003,563	$55,556
Total Well Abandonment Costs	**$15,201,049**														
II. Removal of Contaminated Soil Around Wells															
# of Production and Injection Wells	255	377	537	610	1301	0	451	274	658	590	300	570	0	385	
Removal of Contaminated Soil Around Wells ($/well)	$85.46	$85.46	$85.46	$85.46	$85.46	$85.46	$85.46	$85.46	$85.46	$85.46	$85.46	$85.46	$85.46	$85.46	
Subtotal Contaminated Soil Removal/Disposal Costs per Wellfield	$21,791	$32,217	$45,890	$52,129	$111,179	$0	$38,541	$23,415	$56,231	$50,420	$25,637	$48,710	$0	$32,901	
Total Contaminated Soil Removal/Disposal Costs	**$539,062**														
III. Delineation Hole Abandonment															
A. Drill Hole Plug and Abandonment															
# of Drill Holes Pending Bond Release															
2007-08	56														
2008-09	55														
2009-10	638														
2010-11	821														
2011-12	0														
2012-13	594														
2013-14	591														
Total # of Drill Holes	2755														
# of Projected Drill Holes															
2014-15	900														
Total # of Drill Holes	3655														
% of 2755 Drill Holes Requiring Bentonite Top 100 ft	20%														
Total Footage Requiring Abandonment (ft)	55,100														
Hole Abandonment ($/ft)	$3.30														
Subtotal Plug and Abandonment Costs	$181,830														
Projected Drill Hole Abandonment; ave depth 800ft	$2,376,000														
B. Incidental Costs															
Total # of Drill Holes	3655														
Site Location ($/hole)	$11														
Capping ($/hole)	$11														
Small Site Grading and Seeding ($/site)	$55														
Subtotal Incidental Costs	$281,435														
Total Delineation Hole Abandonment	**$2,839,265**														
IV. Waste Disposal Well Abandonment	**SR-1**	**SR-2**	**SRHUP #6**	**SRHUP #7**	**SRHUP #8**	**SRHUP #10**	**REY-1**	**REY-2**	**REY-3**						
A. Well Sealing															
Total Depth of Well	10,097	9,996	9,600	9,900	9,700	9,550	9,950	0	0						
Sealing Cost Per Foot	$13.62	$13.62	$13.62	$13.62	$13.62	$13.62	$13.62	$13.62	$13.62						
*Sealing costs per foot includes surface reclamation costs															
Subtotal Plugging Costs per Well	$137,521	$136,146	$130,752	$134,838	$132,114	$130,071	$135,519	$0	$0						
B. Pump Dismantling and Decontamination															
Number of Pumps	2	2	2	2	2	2	2	0	0						
Pump Dismantling and Disposal Cost	$2,788	$2,788	$2,788	$2,788	$2,788	$2,788	$2,788	$2,788	$2,788						
Subtotal Dismantling and Decon Costs per Well	$5,576.06	$5,576.06	$5,576.06	$5,576.06	$5,576.06	$5,576.06	$5,576.06	$0.00	$0.00						
C. Tubing String Disposal (NRC-Licensed Facility)															
Length of Tubing String (ft)	8,271	8,257	8,910	9,100	8,910	8,800	8,217	0	0						
Diameter of Tubing String (inches)	2.875	2.875	2.875	2.875	2.875	2.875	2.875	0	0						
Volume of Tubing String (ft^3)	193	192	207	212	207	205	191	0	0						
Transportation and Disposal Unit Cost ($/ft3)	$7.32	$7.32	$7.32	$7.32	$7.32	$7.32	$7.32	$7.32	$7.32						
Subtotal Tubing String Disposal Costs per Well	$1,410	$1,408	$1,519	$1,552	$1,519	$1,501	$1,401	$0	$0						
Total Waste Disposal Well Abandonment Costs	**$986,303**														
TOTAL WELL AND DRILL HOLE ABANDONMENT COSTS	**$19,565,678**														

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Wellfield Buildings and Equipment Removal and Disposal	Mine Unit 1	Mine Unit 2	Mine Unit 3/Ext	Mine Unit 4/4A	Mine Unit 15	Mine Unit 15A	Mine Unit K	K-North	Mine Unit 9	Mine Unit 10	Mine Unit 10-Ext	Mine Unit 27	Mine Unit 21	Mine Unit 7
I. Wellfield Piping														
Number of Header Houses per Wellfield	6	5	10	11	18	5	9	7	13	9	5	4	0	7
Length of Piping per Header House (ft)	13800	13800	13800	13800	13800	13800	13800	13800	13800	13800	13800	13800	13800	13800
*Based on 46 wells per header house with 300 ft pipeline per well														
Approximate Total Length of Piping (ft)	82800	69000	138000	151800	248400	69000	124200	96600	179400	124200	69000	55200	0	96600
A. Removal and Loading														
Wellfield Piping Removal Unit Cost ($/ft of pipe)	$1.86	$1.86	$1.86	$1.86	$1.86	$1.86	$1.86	$1.86	$1.86	$1.86	$1.86	$1.86	$1.86	$1.86
Subtotal Wellfield Piping Removal and Loading Costs	$153,731	$128,109	$256,218	$281,840	$461,192	$128,109	$230,596	$179,352	$333,083	$230,596	$128,109	$102,487	$0	$179,352
B. Transport and Disposal Costs (NRC-Licensed Facility)														
Average Diameter of Piping (inches)	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Chipped Volume Reduction (ft3/ft)	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011
Chipped Volume per Wellfield (ft^3)	888	740	1480	1628	2663	740	1332	1036	1923	1332	740	592	0	1036
Volume for Disposal Assuming 10% Void Space (ft^3)	977	814	1628	1790	2930	814	1465	1139	2116	1465	814	651	0	1139
Transportation and Disposal Unit Cost ($/ft3)	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77
Subtotal Wellfield Piping Transport and Disposal Costs	$5,637	$4,697	$9,393	$10,328	$16,905	$4,697	$8,453	$6,572	$12,209	$8,453	$4,697	$3,756	$0	$6,572
Subtotal Wellfield Piping Costs per Wellfield	$159,368	$132,806	$265,611	$292,168	$478,097	$132,806	$239,049	$185,924	$345,292	$239,049	$132,806	$106,243	$0	$185,924
Total Wellfield Piping Costs	**$2,895,143**													
II. Well Pumps and Tubing														
*Pump and tubing removal costs included under ground water restoration labor														
*60% of production/injection wells contain pumps and/or tubing														
A. Pump and Tubing Transportation and Disposal						Inc in MU-15								
Number of Production Wells	95	139	232	234	441	0	171	99	260	210	100	190	0	135
Number of Injection Wells	160	238	305	376	860	0	280	175	398	380	200	380	0	250
Number of Monitor Wells	49	50	40	90	83	42	51	53	69	49	35	85	0	49
1. Pump Volume														
Number of Production Wells with Pumps	57	83	139	140	265	0	103	59	156	126	60	114	0	81
Pump Volume (ft3)	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Pump Volume per Wellfield (ft^3)	24.7	36.0	60.2	60.6	114.8	0.0	44.6	25.6	67.6	54.6	26.0	49.4	0.0	35.1
2. Tubing Volume														
Average Tubing Length per Well (ft)	475	825	725	825	425	475	925	839	925	875	875	775	575	800
*Based on average well depth minus 25 ft														
Tubing Length per Wellfield (ft)	144,400	352,275	418,325	577,500	588,200	19,950	464,350	274,353	672,475	559,125	293,125	507,625	0	347,200
Diameter of Production Well Fiberglass Tubing (inches)	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Diameter of Injection Well HDPE Tubing (inches)	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Chipped Volume Reduction (ft3/ft)	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011
Chipped Volume per Wellfield (ft^3)	1548	3777	4485	6192	6306	214	4978	2941	7210	5995	3143	5442	0	3722
Volume of Pump and Tubing (ft^3)	1573	3813	4545	6253	6421	214	5023	2967	7278	6050	3169	5491	0	3757
Volume for Disposal Assuming Void Space (ft^3)	1730	4194	5000	6878	7063	235	5525	3263	8005	6655	3486	6041	0	4133
Transportation and Disposal Unit Cost ($/ft3)	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77
Subtotal Pump and Tubing Transport and Disposal Costs Per Wellfield	$9,982	$24,198	$28,849	$39,684	$40,752	$1,356	$31,878	$18,827	$46,187	$38,398	$20,113	$34,855	$0	$23,846
Total Pump and Tubing Disposal Costs	**$358,925**													
III. Buried Trunkline (Includes $ for fiber optic cable removal)														
Assumptions:														
Length of Trunkline Trench (ft)	5075	7600	4790	12565	19085	7500	12000	17198	11565	9050	5000	20000	0	5400
A. Removal and Loading														
Main Pipeline Removal Unit Cost ($/ft of trench)	$3.71	$3.71	$3.71	$3.71	$3.71	$3.71	$3.71	$3.71	$3.71	$3.71	$3.71	$3.71	$3.71	$3.71
Subtotal Trunkline Removal and Loading Costs	$18,845	$28,221	$17,787	$46,658	$70,868	$27,850	$44,560	$63,861	$42,944	$33,605	$18,567	$74,266	$0	$20,052
B. Transport and Disposal Costs (NRC-Licensed Facility)														
1. 3" HDPE Trunkline														
Piping Length (ft)	5075	7600	4790	12565	0	0	0	0	0	0	0	0	0	0
Chipped Volume per foot of pipe (ft3/ft)	0.0233	0.0233	0.0233	0.0233	0.0233	0.0233	0.0233	0.0233	0.0233	0.0233	0.0233	0.0233	0.0233	0.0233
Chipped Volume (ft^3)	118	177	112	293	0	0	0	0	0	0	0	0	0	0
2. 6" HDPE Trunkline														
Piping Length (ft)	2410	10000	4820	7320	28170	2320	2288	3466	4800	6850	3500	6500	0	0
Chipped Volume per foot of pipe (ft3/ft)	0.0834	0.0834	0.0834	0.0834	0.0834	0.0834	0.0834	0.0834	0.0834	0.0834	0.0834	0.0834	0.0834	0.0834
Chipped Volume (ft^3)	201	834	402	610	2349	193	191	289	400	571	292	542	0	0
3. 8" HDPE Trunkline														
Piping Length (ft)	4100	0	1100	4240	4000	6266	1104	948	15980	5000	2500	0	0	4000
Chipped Volume per foot of pipe (ft3/ft)	0.1413	0.1413	0.1413	0.1413	0.1413	0.1413	0.1413	0.1413	0.1413	0.1413	0.1413	0.1413	0.1413	0.1413
Chipped Volume (ft^3)	579	0	155	599	565	885	156	134	2258	707	353	0	0	565
4. 10" HDPE Trunkline														
Piping Length (ft)	0	5200	3660	4680	6000	1400	0	1028	2800	2000	1000	800	0	2000
Chipped Volume per foot of pipe (ft3/ft)	0.2196	0.2196	0.2196	0.2196	0.2196	0.2196	0.2196	0.2196	0.2196	0.2196	0.2196	0.2196	0.2196	0.2196
Chipped Volume (ft^3)	0	1142	804	1028	1317	307	0	226	615	439	220	176	0	439

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Wellfield Buildings and Equipment Removal and Disposal	Mine Unit 1	Mine Unit 2	Mine Unit 3/Ext	Mine Unit 4/4A	Mine Unit 15	Mine Unit 15A	Mine Unit K	K-North	Mine Unit 9	Mine Unit 10	Mine Unit 10-Ext	Mine Unit 27	Mine Unit 21	Mine Unit 7
5. 12" HDPE Trunkline														
Piping Length (ft)	1460	0	0	5270	0	1080	0	2866	4110	0	0	2000	0	0
Chipped Volume per foot of pipe (ft3/ft)	0.3088	0.3088	0.3088	0.3088	0.3088	0.3088	0.3088	0.3088	0.3088	0.3088	0.3088	0.3088	0.3088	0.3088
Chipped Volume (ft^3)	451	0	0	1627	0	333	0	885	1269	0	0	618	0	0
6. 14" HDPE Trunkline														
Piping Length (ft)	740	0	0	0	0	6200	0	0	1830	0	0	0	0	4000
Chipped Volume per foot of pipe (ft3/ft)	0.3723	0.3723	0.3723	0.3723	0.3723	0.3723	0.3723	0.3723	0.3723	0.3723	0.3723	0.3723	0.3723	0.3723
Chipped Volume (ft^3)	276	0	0	0	0	2308	0	0	681	0	0	0	0	1489
7. 16" HDPE Trunkline														
Piping Length (ft)	1440	0	0	3620	0	0	2010	2210	1420	0	0	0	0	0
Chipped Volume per foot of pipe (ft3/ft)	0.4864	0.4864	0.4864	0.4864	0.4864	0.4864	0.4864	0.4864	0.4864	0.4864	0.4864	0.4864	0.4864	0.4864
Chipped Volume (ft^3)	700	0	0	1761	0	0	978	1075	691	0	0	0	0	0
8 18" HDPE Trunkline														
Piping Length (ft)	0	0	0	0	24170	0	2086	18600	7640	6550	3100	9091	0	0
Chipped Volume per foot of pipe (ft3/ft)	0.6155	0.6155	0.6155	0.6155	0.6155	0.6155	0.6155	0.6155	0.6155	0.6155	0.6155	0.6155	0.6155	0.6155
Chipped Volume (ft^3)	0	0	0	0	14877	0	1284	11448	4702	4032	1908	5596	0	0
Total Chipped Volume (ft^3)	2325	2153	1472	5918	19108	4028	2608	14057	10617	5748	2773	6931	0	2494
Volume for Disposal Assuming Void Space (ft^3)	2558	2368	1620	6509	21019	4431	2869	15463	11678	6323	3050	7624	0	2743
Transportation and Disposal Unit Cost ($/ft3)	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77
Subtotal Trunkline Transport and Disposal Costs	$14,759	$13,663	$9,347	$37,555	$121,275	$25,566	$16,553	$89,218	$67,379	$36,482	$17,598	$43,989	$0	$15,826
Trunkline Decommissioning Costs per Wellfield	$33,604	$41,884	$27,134	$84,213	$192,143	$53,416	$61,113	$153,079	$110,323	$70,087	$36,165	$118,255	$0	$35,878
Total Trunkline Decommissioning Costs	**$1,017,294**													
IV. Wellhead Cover Removal														
Number of Wells	305	429	580	700	1387	42	502	328	734	640	335	658	0	436
Well Head Removal, Decontamination, and Disposal Cost	$11.74	$11.74	$11.74	$11.74	$11.74	$11.74	$11.74	$11.74	$11.74	$11.74	$11.74	$11.74	$11.74	$11.74
Subtotal Wellhead Removal Costs	$3,580	$5,036	$6,809	$8,217	$16,282	$493	$5,893	$3,850	$8,617	$7,513	$3,933	$7,724	$0	$5,118
Total Well Head Removal and Disposal Costs	**$83,065**													
V. Header Houses (Includes Booster Stations)														
Booster Houses	0	0	1	1	6	0	3	0	1	0	0	0	0	0
Total Quantity	6	5	11	12	24	5	12	7	14	9	5	4	0	7
Average Header House Volume (ft^3)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
A. Removal														
Total Volume (ft^3)	9600	8000	17600	19200	38400	8000	19200	11200	22400	14400	8000	6400	0	11200
Demolition Cost	$0.316	$0.316	$0.316	$0.316	$0.316	$0.316	$0.316	$0.316	$0.316	$0.316	$0.316	$0.316	$0.316	$0.316
Subtotal Building Demolition Costs	$3,031	$2,526	$5,556	$6,061	$12,123	$2,526	$6,061	$3,536	$7,072	$4,546	$2,526	$2,020	$0	$3,536
B. Survey and Decontamination														
Cost per Header House	$621	$621	$621	$621	$621	$621	$621	$621	$621	$621	$621	$621	$621	$621
Subtotal Survey and Decontamination Costs	$3,728	$3,107	$6,835	$7,457	$14,913	$3,107	$7,457	$4,350	$8,699	$5,592	$3,107	$2,486	$0	$4,350
C. Disposal														
Total Volume for Disposal - Incl. 33% Factor (cy)	117	98	215	235	469	98	235	137	274	176	98	78	0	137
Volume for Disposal Assuming Void Space (cy)	129	108	237	258	516	108	258	151	301	194	108	86	0	151
Disposal Cost, Landfill (cy)	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17
Subtotal Off-Site County Landfill Disposal Costs	$5,440	$4,554	$9,994	$10,879	$21,758	$4,554	$10,879	$6,367	$12,692	$8,180	$4,554	$3,626	$0	$6,367
Headerhouse Soil Removal Volume (assumes 10'Wx20'Lx2.5'D)	500	500	500	500	500	500	500	500	500	500	500	500	500	500
11e.(2) Disposal Cost (ft3)	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80
Subtotal 11e.(2) Disposal Costs	$17,414	$14,512	$31,926	$34,829	$69,658	$14,512	$34,829	$20,317	$40,634	$26,122	$14,512	$11,610	$0	$20,317
Subtotal Header House Removal and Disposal Costs per Wellfield	$29,613	$24,699	$54,311	$59,226	$118,452	$24,699	$59,226	$34,570	$69,097	$44,440	$24,699	$19,742	$0	$34,570
Total Header House Removal and Disposal Costs	**$597,344**													
TOTAL REMOVAL AND DISPOSAL COSTS PER WELLFIELD	$236,147	$228,623	$382,714	$483,508	$845,726	$212,770	$397,159	$396,250	$579,516	$399,487	$217,716	$286,819	$0	$285,336
TOTAL WELLFIELD BUILDINGS AND EQUIPMENT REMOVAL	**$4,951,771**													

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Wellfield and Satellite Surface Reclamation	Mine Unit 1	Mine Unit 2	Mine Unit 3/Ext	Mine Unit 4/4A	Mine Unit 15	Mine Unit 15A	Mine Unit K	K-North	Mine Unit 9	Mine Unit 10	Mine Unit 10-Ext	Mine Unit 27	Mine Unit 21	Mine Unit 7
I. Wellfield Pattern Area, and Road Reclamation														
Area (acres)	50.9	104.3	99.8	125.1	117.3	44.5	83.3	65.4	88.7	99.5	52.0	29.5	0.0	68.4
*Assume wellfield pattern area X 2														
Discing/Seeding Unit Cost ($/acre)	$548	$548	$548	$548	$548	$548	$548	$548	$548	$548	$548	$548	$548	$548
Subtotal Pattern Area and Road Reclamation Costs	$27,865	$57,111	$54,679	$68,524	$64,231	$24,393	$45,610	$35,828	$48,567	$54,504	$28,479	$16,134	$0	$37,471
Total Wellfield Area Reclamation Costs	**$563,396**													
II. Wellfield Road Reclamation														
Road Construction														
Length of Wellfield Roads (1000 ft)	6.2	10.1	11.2	92.4	19.8	13.6	9.6	2.8	12.7	16.2	8	16.2	0	16.2
Wellfield Road Reclamation Unit Cost ($/1000 ft)	$1,438	$1,438	$1,438	$1,438	$1,438	$1,438	$1,438	$1,438	$1,438	$1,438	$1,438	$1,438	$1,438	$1,438
Subtotal Wellfield Road Reclamation Costs	$8,913	$14,520	$16,101	$132,836	$28,465	$19,552	$13,801	$4,025	$18,258	$23,290	$11,501	$23,290	$0	$23,290
Total Wellfield Road Reclamation Costs	**$256,471**													
III. Laydown area reclamation														
Area of Disturbance (acres)	1	1	2	2	1	1	2	2	1	1	1	1	1	1
Average Depth of Stripped Topsoil (ft)	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Surface Grade: Level Ground														
Average Length of Topsoil Haul (ft)	500	500	500	500	500	500	500	500	500	500	500	500	500	500
A. Ripping Overburden with Dozer														
Ripping Cost (per acre)	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381
Subtotal Ripping Costs	$1,381	$1,381	$2,763	$2,763	$1,381	$1,381	$2,072	$2,072	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381
B. Topsoil Application with Scraper														
Volume of Topsoil Removed (cy)	1,081	1,081	2,162	2,162	1,081	1,081	1,621	1,621	1,081	1,081	1,081	1,081	1,081	1,081
Moving Materials (0% Grade)	$1.21	$1.21	$1.21	$1.21	$1.21	$1.21	$1.21	$1.21	$1.21	$1.21	$1.21	$1.21	$1.21	$1.21
Subtotal Topsoil Application Costs	$1,307	$1,307	$2,613	$2,613	$1,307	$1,307	$1,960	$1,960	$1,307	$1,307	$1,307	$1,307	$1,307	$1,307
C. Discing and Seeding														
Discing/Seeding Unit Cost ($/acre)	$548	$548	$548	$548	$548	$548	$548	$548	$548	$548	$548	$548	$548	$548
Subtotal Discing/Seeding Costs	$548	$548	$1,095	$1,095	$548	$548	$822	$822	$548	$548	$548	$548	$548	$548
Subtotal Surface Reclamation Costs per WF laydown area	$3,236	$3,236	$6,471	$6,471	$3,236	$3,236	$4,854	$4,854	$3,236	$3,236	$3,236	$3,236	$3,236	$3,236
Total Wellfield Laydown Area Reclamation Costs	$55,010													
SUBTOTAL SURFACE RECLAMATION COSTS PER WELLFIELD	**$40,014**	**$74,867**	**$77,251**	**$207,831**	**$95,932**	**$47,181**	**$64,265**	**$44,707**	**$70,061**	**$81,030**	**$43,216**	**$42,660**	**$3,236**	**$63,997**
TOTAL WELLFIELD SURFACE RECLAMATION COSTS	**$874,877**													
IV. Fence Removal														
Length of Fencing (ft)	16,487	11,580	7,388	25,047	7,074	0	23,271	23,271	21,887	21,595	10,000	19,732	0	8,674
Fence Removal Costs	$0.43	$0.43	$0.43	$0.43	$0.43	$0.43	$0.43	$0.43	$0.43	$0.43	$0.43	$0.43	$0.43	$0.43
Subtotal Fence Removal Costs per Wellfield	$7,073	$4,968	$3,169	$10,745	$3,035	$0	$9,983	$9,983	$9,390	$9,264	$4,290	$8,465	$0	$3,721
Total Fence Removal Costs	**$84,087**													
V. Satellite Area Reclamation	**SR-1**	**SR-2**	**REY**											
Assumptions:														
Area of Disturbance (acres)	2.70	5.00	5.00											
Average Depth of Stripped Topsoil (ft)	1	1	1											
Surface Grade: Level Ground														
Average Length of Topsoil Haul (ft)	1000	500	500											
A. Ripping Overburden with Dozer														
Ripping Cost (per acre)	$1,381.27	$1,381.27	$1,381.27											
Subtotal Ripping Costs	$3,729	$6,906	$6,906											
B. Topsoil Application with Scraper														
Volume of Topsoil Removed (cy)	4356	8067	8067											
Moving Materials (0% Grade)	$1.44	$1.44	$1.44											
Subtotal Topsoil Application Costs	$6,291	$11,651	$11,651											
C. Discing and Seeding														
Discing/Seeding Unit Cost ($/acre)	$548	$548	$548											
Subtotal Discing/Seeding Costs	$1,479	$2,738	$2,738											
Subtotal Surface Reclamation Costs per Location	$11,499	$21,295	$21,295											
Total Satellite Building Area Reclamation Costs	**$54,089**													
TOTAL WELLFIELD AND SATELLITE SURFACE RECLMAATION COSTS	**$1,013,053**													

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Equipment Removal and Loading	CPP IX Plant	Central Plant	Dryer Building	Satellite SR-1	Pilot ISL	Pumphouse	Bone Yard	Satellite SR-2	Satellite Reynolds
I. Removal and Loading Costs									
A. Tankage									
Number of Tanks	23	36	2	21	15	3	3	10	10
Volume of Tank Construction Material (ft^3)	900	1340	300	840	260	164	164	397	397
Tank Removal Cost	$144.12	$144.12	$144.12	$144.12	$144.12	$144.12	$144.12	$144.12	$144.12
Subtotal Tankage Removal and Loading Costs	$129,709	$193,122	$43,236	$121,061	$37,471	$23,636	$23,636	$57,144	$57,216
B. PVC/Steel Pipe									
PVC Pipe Footage	4800	6000	350	7000	1500	0	0	4000	4000
Average PVC Pipe Diameter (inches)	3	3	2	3	3	3	0	3	3
Shredded PVC Pipe Volume Reduction (ft3/ft)	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023
Volume of Shredded PVC Pipe (ft^3)	112	140	8	163	35	0	0	93	93
Steel Pipe Footage	1100	1,000	300	250	0	80	0	0	0
Average Steel Pipe Diameter (inches)	6	0	0	6	0	8	0	0	0
Volume (ft^3)	216	0	0	49	0	30	0	0	0
Pipe Removal Cost	$8.93	$8.93	$8.93	$8.93	$8.93	$8.93	$8.93	$8.93	$8.93
Subtotal PVC/Steel Pipe Removal and Loading Costs	$52,682	$62,504	$5,804	$64,737	$13,394	$714	$0	$35,717	$35,717
C. Pumps									
Number of Pumps	23	67	6	23	12	2	0	13	13
Average Volume (ft^3/pump)	4.93	4.93	0	4.93	4.93	4.93	4.93	4.93	4.93
Volume of Pumps (ft^3)	113	330	0	113	59	10	0	64	64
Pump Removal Cost	$108	$108	$108	$108	$108	$108	$108	$108	$108
Subtotal Pump Removal and Loading Costs	$12,219.37	$35,684.88	$0.00	$12,219.37	$6,380.02	$1,081.36	$0.00	$6,920.70	$6,920.70
D. Dryer									
Dryer Volume (ft^3)	0	0	1,000	0	0	0	0	0	0
Dryer Removal Costs	$14.71	$14.71	$14.71	$14.71	$14.71	$14.71	$14.71	$14.71	$14.71
Subtotal Dryer Dismantling and Loading Cost	$0	$0	$14,709	$0	$0	$0	$0	$0	$0
E. RO Units									
Number of RO Units (500 gpm)									
Current	1	0	0	1	0	0	0	0.25	0
Planned	0	0	0	0	0	0	0	1	1
Number of Degasser Units									
Current	0	0	0	1	0	0	0	0	0
Planned	1	0	0	0	0	0	0	1	1
RO/Degasser Average Volume (ft3/Unit)	250	250	250	250	250	250	250	250	250
RO and Degasser Removal Cost	$5.02	$5.02	$5.02	$5.02	$5.02	$5.02	$5.02	$5.02	$5.02
Subtotal RO Unit Removal and Loading Costs	$2,512.43	$0.00	$0.00	$2,512.43	$0.00	$0.00	$0.00	$2,826.49	$2,512.43
Subtotal Equipment Removal and Loading Costs per Facility	$197,122	$291,311	$63,749	$200,530	$57,245	$25,431	$23,636	$102,608	$102,366
Total Equipment Removal and Loading Costs	**$1,086,468**								
II. Transportation and Disposal Costs (NRC-Licensed Facility)									
A. Tankage									
Volume of Tank Construction Material (ft^3)	900	1340	300	840	260	164	164	397	397
Volume for Disposal Assuming Void Space (ft^3)	990	1474	330	924	286	180	180	436	437
Transportation and Disposal Unit Cost ($/ft3)	$7.32	$7.32	$7.32	$7.32	$7.32	$7.32	$7.32	$7.32	$7.32

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Equipment Removal and Loading	CPP IX Plant	Central Plant	Dryer Building	Satellite SR-1	Pilot ISL	Pumphouse	Bone Yard	Satellite SR-2	Satellite Reynolds
Subtotal Tankage Transportation and Disposal Costs	$7,250	$10,795	$2,417	$6,767	$2,095	$1,318	$1,318	$3,193	$3,200
B. PVC / Steel Pipe									
Volume of Shredded PVC Pipe (ft^3)	111.8	139.7	8.2	163.0	34.9	0.0	0.0	93.1	93.1
Volume for Disposal Assuming Void Space (ft^3)	123	154	9	179	38	0	0	102	102
Volume of Steel Pipe (ft^3)	216	0	0	49.075	0	30	0	0	0
Volume for Disposal Assuming Void Space (ft^3)	238	0	0	54	0	33	0	0	0
Transportation and Disposal Unit Cost ($/ft3)	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77
Subtotal PVC Pipe Transportation and Disposal Costs	$2,083	$889	$52	$1,033	$219	$190	$0	$589	$589
C. Pumps									
Volume of Pumps (ft^3)	113	330	0	113	59	10	0	64	64
Volume for Disposal Assuming Void Space (ft^3)	124	363	0	124	65	11	0	70	70
Transportation and Disposal Unit Cost ($/ft3)	$7.32	$7.32	$7.32	$7.32	$7.32	$7.32	$7.32	$7.32	$7.32
Subtotal Pump Transportation and Disposal Costs	$908	$2,658	$0	$908	$476	$81	$0	$513	$513
D. Dryer									
Dryer Volume (ft^3)	0	0	1000	0	0	0	0	0	0
Volume for Disposal Assuming Dryer Remains Intact (ft^3)	0	0	1000	0	0	0	0	0	0
Transportation and Disposal Unit Cost ($/ft3)	$7.32	$7.32	$7.32	$7.32	$7.32	$7.32	$7.32	$7.32	$7.32
Total Dryer Transportation and Disposal Costs	$0	$0	$7,323	$0	$0	$0	$0	$0	$0
E. RO/Degasser Units									
Volume of RO Units (ft^3)	500	0	0	500	0	0	0	562.5	500
Volume for Disposal Assuming Volume Reduction (ft^3)	550	0	0	550	0	0	0	618.75	550
Transportation and Disposal Unit Costs	$7.32	$7.32	$7.32	$7.32	$7.32	$7.32	$7.32	$7.32	$7.32
Subtotal RO Unit Transportation and Disposal Costs	$4,028	$0	$0	$4,028	$0	$0	$0	$4,531	$4,028
Subtotal Equipment Transportation and Disposal Costs per Facility	$14,269	$14,342	$9,792	$12,736	$2,790	$1,589	$1,318	$8,826	$8,330
Total Equipment Transportation and Disposal Costs	**$75,063**								
III. Health and Safety Costs									
Radiation Safety Equipment	Accounted for on GW REST								
Total Health and Safety Costs									
SUBTOTAL EQUIPMENT REMOVAL AND DISPOSAL COSTS PER FACILITY	$211,391	$305,653	$73,541	$213,266	$60,035	$27,020	$24,954	$111,434	$110,696
TOTAL EQUIPMENT REMOVAL AND DISPOSAL COSTS	**$1,161,531**								

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	CPP IX Plant	Central Plant	Dryer Building	Office Building	Storage Building	Water Treat Plant	Shop Building	Pilot ISL Building	Fresh Water Pumphouse	CPP O2 Pad	CPP Fuel Area	Mine Unit 15 O2 Pad	DDW 1 Buildings	DDW SRHUP #10 Buildings	DDW REY-1 Buildings	DDW WellHead Buildings	Satellite SR-1
Building Demolition and Disposal	165 x 70	165 x 100	100 x 35										15x30	20x24	20x24	9 ea 8x8	160X120
I. Decontamination Costs																	
A. Wall Decontamination																	
Area to be Decontaminated (ft^2)	9,375	13,150	7,550	0	1,152	576	4,826	12,000	0	0	0	0	720	704	704	0	0
HCl Acid Wash, including labor ($/ft2)	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94
Subtotal Wall Decontamination Costs	$8,845	$12,407	$7,124	$0	$1,087	$543	$4,553	$11,322	$0	$0	$0	$0	$679	$664	$664	$0	$0
B. Concrete Floor Decontamination																	
Area to be Decontaminated (ft^2)	11,550	16,500	3,500	0	1,678	839	7,028	17,477	0	0	0	0	450	480	392	0	19200
HCl Acid Wash, including labor ($/ft2)	$0.53	$0.53	$0.53	$0.53	$0.53	$0.53	$0.53	$0.53	$0.53	$0.53	$0.53	$0.53	$0.53	$0.53	$0.53	$0.53	$0.53
Subtotal Concrete Floor Decontamination Costs	$6,066	$8,665	$1,838	$0	$881	$441	$3,691	$9,178	$0	$0	$0	$0	$236	$252	$206	$0	$10,083
C. Deep Well Injection Costs																	
Total kgals for Injection (1 gal used per ft2)	20.925	29.65	11.05	0	2.83	1.415	11.854	29.477	0	0	0	0	1.17	1.184	1.096	0	19.2
Deep Well Injection Unit Cost ($/kgals)	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13
Subtotal Deep Well Injection Costs	$24	$33	$12	$0	$3	$2	$13	$33	$0	$0	$0	$0	$1	$1	$1	$0	$22
Subtotal Decontamination Costs per Building	$14,935	$21,105	$8,974	$0	$1,971	$986	$8,257	$20,533	$0	$0	$0	$0	$916	$917	$871	$0	$10,105
Total Decontamination Costs	**$116,673**																
II. Demolition Costs																	
A. Building																	
Height of Building (ft)	30	35	35	15	10	10	25	18	10	0	0	0	8	10	10	10	24
Volume of Building (ft^3)	346,500	577,500	122,500	120,000	16,780	8,390	175,700	314,586	8,320	0	0	0	3600	4800	3920	5760	460,800
Demolition Cost	$0.32	$0.32	$0.32	$0.32	$0.32	$0.32	$0.32	$0.32	$0.32	$0.32	$0.32	$0.32	$0.32	$0.32	$0.32	$0.32	$0.32
Subtotal Building Demolition Costs	$109,390	$182,317	$38,673	$37,884	$5,297	$2,649	$55,468	$99,315	$2,627	$0	$0	$0	$1,137	$1,515	$1,238	$1,818	$145,475
B. Concrete Floor																	
Area of Concrete Floor (ft^2)	10,550	16,500	3,500	8,000	1,678	839	7,028	17,477	832	400	375	400	450	480	392	448	19,200
Demolition Cost	$6.03	$6.03	$6.03	$6.03	$6.03	$6.03	$6.03	$6.03	$6.03	$6.03	$6.03	$6.03	$6.03	$6.03	$6.03	$6.03	$6.03
Subtotal Concrete Floor Demolition Costs	$63,595	$99,462	$21,098	$48,224	$10,115	$5,057	$42,365	$105,351	$5,015	$2,411	$2,261	$2,411	$2,713	$2,893	$2,363	$2,701	$115,738
C. Concrete Footing																	
Length of Concrete Footing (ft)	411	514	237	358	164	116	335	529	115	80	77	80	85	88	79	85	554
Demolition Cost	$22.23	$22.23	$22.23	$22.23	$22.23	$22.23	$22.23	$22.23	$22.23	$22.23	$22.23	$22.23	$22.23	$22.23	$22.23	$22.23	$22.23
Subtotal Concrete Footing Demolition Costs	$9,134	$11,422	$5,261	$7,954	$3,643	$2,576	$7,455	$11,756	$2,565	$1,778	$1,722	$1,778	$1,886	$1,948	$1,761	$1,882	$12,322
Subtotal Demolition Costs per Building	$182,119	$293,201	$65,032	$94,062	$19,055	$10,282	$105,288	$216,422	$10,207	$4,189	$3,983	$4,189	$5,736	$6,356	$5,362	$6,401	$273,535
Total Demolition Costs	**$2,039,633**																
III. Disposal Costs																	
A. Building																	
Volume of Building (cy)	12833	21389	4537	4444	621	311	6507	11651	308	0	0	0	133	178	145	213	17067
Off-site County Facility																	
Percentage (%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Total Volume for Disposal - Incl. 33% Factor (cy)																	
Volume for Disposal (cubic yards)	4235	7058	1497	1467	205	103	2147	3845	102	0	0	0	44	59	48	70	5632
Disposal Unit Cost ($/cy)	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17
Subtotal county facility off-Site Disposal Costs	$178,576	$297,626	$63,133	$61,844	$8,648	$4,324	$90,551	$162,128	$4,288	$0	$0	$0	$1,855	$2,474	$2,020	$2,969	$237,483
B. Concrete Floor																	
Area of Concrete Floor (ft^2)	10,550	16,500	3,500	8,000	1,678	839	7,028	17,477	832	400	375	400	450	480	392	448	19,200
Average Thickness of Concrete Floor (ft)	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Volume of Concrete Floor (ft^3)	7912.5	12375	2625	6000	1258.5	629.25	5271	13107.75	624	300	281.25	300	337.5	360	294	336	14400
Volume of Concrete Floor (cy)	293	458	97	222	47	23	195	485	23	11	10	11	13	13	11	12	533
1. Off-site County disposal																	
Percentage (%)	75	75	75	100	100	100	100	75	100	100	100	100	75	75	75	100	75
Volume for Disposal (cy)	220	344	73	222	47	23	195	364	23	11	10	11	9	10	8	12	400
Disposal Unit Cost ($/cy)	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17
Subtotal county facility off-Site Disposal Costs	$9,268	$14,495	$3,075	$9,370	$1,965	$983	$8,232	$15,353	$975	$469	$439	$469	$395	$422	$344	$525	$16,867
2. NRC-Licensed Facility																	
Percentage (%)	25	25	25	0	0	0	0	25	0	0	0	0	25	25	25	0	25
Volume for Disposal (ft^3)	1978	3094	656	0	0	0	0	3277	0	0	0	0	84	90	74	0	3600
Transportation and Disposal Unit Cost ($/$ft^3$)	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80
Subtotal NRC-Licensed Facility Disposal Costs	$11,483	$17,959	$3,809	$0	$0	$0	$0	$19,022	$0	$0	$0	$0	$490	$522	$427	$0	$20,897
Subtotal Concrete Floor Disposal Costs	$20,751	$32,454	$6,884	$9,370	$1,965	$983	$8,232	$34,375	$975	$469	$439	$469	$885	$944	$771	$525	$37,764
C. Concrete Footing																	
Length of Concrete Footing (ft)	411	514	237	358	164	116	335	529	115	80	77	80	85	88	79	85	554
Average Depth of Concrete Footing (ft)	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Average Width of Concrete Footing (ft)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Volume of Concrete Footing (ft^3)	1643	2055	947	1431	655	463	1341	2115	462	320	310	320	339	351	317	339	2217
Volume of Concrete Footing (cy)	61	76	35	53	24	17	50	78	17	12	11	12	13	13	12	13	82
Disposal Unit Cost ($/cy)	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17
Subtotal Concrete Footing Disposal Costs	$2,567	$3,210	$1,478	$2,235	$1,024	$724	$2,095	$3,303	$721	$500	$484	$500	$530	$547	$495	$529	$3,462
Subtotal Disposal Costs per Building	$201,894	$333,290	$71,495	$73,449	$11,637	$6,031	$100,878	$199,806	$5,984	$969	$923	$969	$3,270	$3,965	$3,286	$4,023	$278,709
Total Disposal Costs	**$2,027,547**																

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		CPP IX Plant	Central Plant	Dryer Building	Office Building	Storage Building	Water Treat Plant	Shop Building	Pilot ISL Building	Fresh Water Pumphouse	CPP O2 Pad	CPP Fuel Area	Mine Unit 15 O2 Pad	DDW 1 Buildings	DDW SRHUP #10 Buildings	DDW REY-1 Buildings	DDW WellHead Buildings	Satellite SR-1
Building Demolition and Disposal		165 x 70	165 x 100	100 x 35										15x30	20x24	20x24	9 ea 8x8	160X120
IV. Health and Safety Costs	Accounted for on GW REST																	
SUBTOTAL BUILDING DEMOLITION AND DISPOSAL COSTS		$398,948	$647,596	$145,501	$167,511	$32,663	$17,299	$214,423	$436,761	$16,191	$5,158	$4,906	$5,158	$9,922	$11,238	$9,519	$10,424	$562,349
TOTAL BUILDING DEMOLITION AND DISPOSAL COSTS		**$4,183,853**																

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	Yellowcake Warehouse	Satellite SR-2	Satellite Reynolds	Construction Shop	CPP Lab Addition	DDW SRHUP #7 Buildings	DDW SRHUP #8 Buildings	CPP Control Room / Change Rooms	CPP Lab	CPP Maintenance Shop Addition	Sodium Hydroxide Addition	CPP Trailer Bay Addition
Building Demolition and Disposal	63 x 63	160X120	160X120	50X80	25X40	20x24	20x24	32 x 32	32 x 32	25X40	20 x 20	90 x 20
I. Decontamination Costs												
A. Wall Decontamination												
Area to be Decontaminated (ft^2)	4662	0	0	0	1000	704	704	0	1024	0	0	4600
HCl Acid Wash, including labor ($/ft2)	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	0.94	$0.94	0.94	0.94
Subtotal Wall Decontamination Costs	$4,399	$0	$0	$0	$944	$664	$664	$0	$963	$0	$0	$4,324
B. Concrete Floor Decontamination												
Area to be Decontaminated (ft^2)	3969	19200	0	0	0	480	480	1024	0	1000	800	1800
HCl Acid Wash, including labor ($/ft2)	$0.53	$0.53	$0.53	$0.53	$0.53	$0.53	$0.53	$0.53	$0.53	$0.53	$0.53	$0.53
Subtotal Concrete Floor Decontamination Costs	$2,084	$10,083	$0	$0	$0	$252	$252	$538	$0	$525	$420	$945
C. Deep Well Injection Costs												
Total kgals for Injection (1 gal used per ft2)	8.631	19.2	0	0	1	1.184	1.184	1.024	1.024	1	0.8	6.4
Deep Well Injection Unit Cost ($/kgals)	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13
Subtotal Deep Well Injection Costs	$10	$22	$0	$0	$1	$1	$1	$1	$1	$1	$1	$7
Subtotal Decontamination Costs per Building	$6,493	$10,105	$0	$0	$945	$917	$917	$539	$964	$526	$421	$5,276
Total Decontamination Costs												
II. Demolition Costs												
A. Building												
Height of Building (ft)	20	24	24	20	10	10	10	10	10	10	20	25
Volume of Building (ft^3)	79,380	460,800	460,800	80,000	10,000	4800	4800	10240	10240	10000	16000	45000
Demolition Cost	$0.32	$0.32	$0.32	$0.32	$0.32	$0.32	$0.32	$0.32	0.31	$0.32	0.31	0.31
Subtotal Building Demolition Costs	$25,060	$145,475	$145,475	$25,256	$3,157	$1,515	$1,515	$3,233	$3,174	$3,157	$4,960	$13,950
B. Concrete Floor												
Area of Concrete Floor (ft^2)	3,969	19,200	19,200	4,000	0	480	480	1,000	0	1,000	800	1800
Demolition Cost	$6.03	$6.03	$6.03	$6.03	$6.03	$6.03	$6.03	$6.03	$6.03	$6.03	$6.03	$6.03
Subtotal Concrete Floor Demolition Costs	$23,925	$115,738	$115,738	$24,112	$0	$2,893	$2,893	$6,028	$0	$6,028	$4,822	$10,850
C. Concrete Footing												
Length of Concrete Footing (ft)	252	554	554	253	0	88	88	0	0	63	57	127
Demolition Cost	$22.23	$22.23	$22.23	$22.23	$22.23	$22.23	$22.23	$22.23	$22.23	$22.23	$22.23	$22.23
Subtotal Concrete Footing Demolition Costs	$5,602	$12,322	$12,322	$5,624	$0	$1,948	$1,948	$0	$0	$1,406	$1,258	$2,830
Subtotal Demolition Costs per Building	$54,587	$273,535	$273,535	$54,992	$3,157	$6,356	$6,356	$9,261	$3,174	$10,591	$11,040	$27,630
Total Demolition Costs												
III. Disposal Costs												
A. Building												
Volume of Building (cy)	2940	17067	17067	2963	370	178	178	379	379	370	593	1667
Off-site County Facility												
Percentage (%)	100	100	100	100	100	100	100	100	100	100	100	100
Total Volume for Disposal - Incl. 33% Factor (cy)												
Volume for Disposal (cubic yards)	970	5632	5632	978	122	59	59	125	125	122	196	550
Disposal Unit Cost ($/cy)	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17
Subtotal county facility off-Site Disposal Costs	$40,910	$237,483	$237,483	$41,230	$5,154	$2,474	$2,474	$5,277	$5,277	$5,154	$8,246	$23,192
B. Concrete Floor												
Area of Concrete Floor (ft^2)	3,969	19,200	19,200	4,000	0	480	480	1,000	0	1,000	800	1,800
Average Thickness of Concrete Floor (ft)	0.75	0.75	0.75	0.75	0.75	0.75	0.75	1.75	0.5	0.5	0.75	0.75
Volume of Concrete Floor (ft^3)	2976.75	14400	14400	3000	0	360	360	1750	0	500	600	1350
Volume of Concrete Floor (cy)	110	533	533	111	0	13	13	65	0	19	22	50
1. Off-site County disposal												
Percentage (%)	75	75	75	100	90	75	75	90	75	90	75	75
Volume for Disposal (cy)	83	400	400	111	0	10	10	58	0	17	17	38
Disposal Unit Cost ($/cy)	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17
Subtotal county facility off-Site Disposal Costs	$3,487	$16,867	$16,867	$4,685	$0	$422	$422	$2,460	$0	$703	$703	$1,581
2. NRC-Licensed Facility												
Percentage (%)	25	25	25	0	10	25	25	10	25	10	25	25
Volume for Disposal (ft^3)	744	3600	3600	0	0	90	90	175	0	50	150	338
Transportation and Disposal Unit Cost ($/$ft^3$)	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80
Subtotal NRC-Licensed Facility Disposal Costs	$4,320	$20,897	$20,897	$0	$0	$522	$522	$1,016	$0	$290	$871	$1,959
Subtotal Concrete Floor Disposal Costs	$7,807	$37,764	$37,764	$4,685	$0	$944	$944	$3,476	$0	$993	$1,574	$3,540
C. Concrete Footing												
Length of Concrete Footing (ft)	252	554	554	253	0	88	88	0	0	63	113	127
Average Depth of Concrete Footing (ft)	4	4	4	4	0	4	4	4	0	4	5.75	4
Average Width of Concrete Footing (ft)	1	1	1	1	0	1	1	1	0	1	0.75	1
Volume of Concrete Footing (ft^3)	1008	2217	2217	1012	0	351	351	0	0	253	488	509
Volume of Concrete Footing (cy)	37	82	82	37	0	13	13	0	0	9	18	19
Disposal Unit Cost ($/cy)	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17
Subtotal Concrete Footing Disposal Costs	$1,574	$3,462	$3,462	$1,580	$0	$547	$547	$0	$0	$395	$762	$795
Subtotal Disposal Costs per Building	$50,291	$278,709	$278,709	$47,495	$5,154	$3,965	$3,965	$8,753	$5,277	$6,542	$10,582	$27,527
Total Disposal Costs												

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		Yellowcake Warehouse	Satellite SR-2	Satellite Reynolds	Construction Shop	CPP Lab Addition	DDW SRHUP #7 Buildings	DDW SRHUP #8 Buildings	CPP Control Room / Change Rooms	CPP Lab	CPP Maintenance Shop Addition	Sodium Hydroxide Addition	CPP Trailer Bay Addition
Building Demolition and Disposal		63 x 63	160X120	160X120	50X80	25X40	20x24	20x24	32 x 32	32 x 32	25X40	20 x 20	90 x 20
IV. Health and Safety Costs	Accounted for on GW REST												
SUBTOTAL BUILDING DEMOLITION AND DISPOSAL COSTS		$111,371	$562,349	$552,244	$102,487	$9,256	$11,238	$11,238	$18,553	$9,415	$17,659	$22,043	$60,433
TOTAL BUILDING DEMOLITION AND DISPOSAL COSTS													

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Miscellaneous Reclamation															
I.	**CPP/Office Area/Pilot Plant/Maint. Shop/Chem. Storage/Yard Reclamation**														
		Concrete Pad= 0.3 acres													
		Total Area = 10.57 acres													
	A.	Concrete Pad													
		Area of Concrete Pad (ft^2)				13068									
		Demolition Cost				$6.03									
		Average Thickness of Concrete Floor (ft)				0.50									
		Volume of Concrete Floor (ft^3)				6,534									
		Volume of Concrete Floor (cy)				242									
		Concrete Disposal On Site ($/cy)				$9.12									
		Subtotal Concrete Pad Demolition and Disposal Costs				$80,981									
	B.	Gravel Road Base Removal													
		Average haul distance (ft)				1000									
		Gravel Road Base Area (acres)				8.0									
		Average Road Base Depth (ft)				0.5									
		Volume of Road Base (cy)				6453									
		Moving Materials				$1.44									
		Subtotal Gravel Road Base Removal Costs				$9,321									
	C.	Ripping Overburden with Dozer													
		Overburden Surface Area (acres)				10.6									
		Ripping Cost (per acre)				$1,381.27									
		Subtotal Ripping Overburden Costs				$14,600									
	D.	Topsoil Application													
		Area of surface disturbance (ft^2)				460426									
		Average thickness of topsoil (ft)				0.5									
		Average haul distance (ft)				2000									
		Surface grade (%)													
		Volume of Topsoil (cy)				8,526									
		Moving Materials				$1.44									
		Subtotal Topsoil Application Costs				$12,315									
	E.	Discing/Seeding													
		Surface Area (acres)				10.57									
		Discing/Seeding Unit Cost ($/acre)				$548									
		Subtotal Discing/Seeding Costs				$5,789									
	Total CPP/Office/Yard Area Reclamation					**$123,006**									
II.	**Access Road Reclamation (includes culverts)**					**CPP Access Rd.**	**CPP to SAT 3**	**Access to WF**	**MU-15 Access**	**SR2 Access**	**Reynolds Access**	**Access SRHUP 7**	**Access SRHUP 8**	**Access SRHUP 10 from MU-4**	
	A.	Assumptions													
		Surface grade				1%	5%	5%	0%	5%	0%	0%	0%	0%	
		Length of Road (ft)				5,173	15,827	15,557	10,560	8,500	2,500	1,500	11,250	2,500	
		Width of Road (ft)				40	30	14	30	30	30	20	20	20	
		Area of road (acres)				4.8	10.9	5.0	7.3	5.9	1.7	0.7	5.2	1.1	
	B.	Ripping and Hauling Asphalt													
		Assumptions													
		Average Haul Distance (feet)				500	500	500	500	500	500	500	500	500	
		Average Thickness of Asphalt (ft)				0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
		Ripping Cost (per acre)				$969.29	$969.29	$969.29	$969.29	$969.29	$969.29	$969.29	$969.29	$969.29	
		Volume of Asphalt (cy)				3832	8793	4033	5867	4722	1389	556	4167	926	
		Moving Materials				$1.87	$1.87	$1.87	$1.87	$1.87	$1.87	$1.87	$1.87	$1.87	
		Subtotal Ripping and Hauling Asphalt				$11,774	$27,018	$12,393	$18,026	$14,510	$4,268	$1,707	$12,803	$2,845	
	B.	Gravel Road Base Removal													
		Average haul distance (ft)				1000	1000	1000	1000	1000	1000	1000	1000	1000	
		Gravel Road Base Width (ft)				30	20	10	20	20	20	20	20	20	
		Gravel Road Base Area (acres)				3.56	7.27	3.57	4.85	3.90	1.15	0.69	5.17	1.15	
		Average Road Base Depth (ft)				0.75	0.5	0.5	0.5	0.5	0	0	0	0	
		Volume of Road Base (cy)				4311	5862	2881	3911	3148	0	0	0	0	
		Moving Materials				$1.44	$1.44	$1.44	$1.44	$1.44	$1.44	$1.44	$1.44	$1.44	
		Subtotal Gravel Road Base Removal Costs				$6,226	$8,466	$4,161	$5,649	$4,547	$0	$0	$0	$0	
	C.	Ripping Overburden with Dozer													
		Overburden Surface Area (acres)				4.8	10.9	5.0	7.3	5.9	1.7	0.7	5.2	1.1	
		Ripping Cost (per Acre)				$1,381.27	$1,381.27	$1,381.27	$1,381.27	$1,381.27	$1,381.27	$1,381.27	$1,381.27	$1,381.27	
		Subtotal Ripping Overburden Costs				$6,561	$15,056	$6,906	$10,046	$8,086	$2,378	$951	$7,135	$1,585	
	D.	Topsoil Application													

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		Average haul distance (ft)	1500	1500	1500	1500	1500	1500	1500	1500	1500	
		Topsoil Surface Area (ft^2)	206920	474810	217798	316800	255000	75000	30000	225000	50000	
		Depth of Topsoil (ft)	0.3157	0.3157	0.3157	0.3157	0.3157	0.3157	0.3157	0.3157	0.3157	
		Volume of Topsoil (cy)	2419	5552	2547	3704	2982	877	351	2631	585	
		Moving Materials	$1.44	$1.44	$1.44	$1.44	$1.44	$1.44	$1.44	$1.44	$1.44	
		Subtotal Topsoil Application Costs	$3,494	$8,018	$3,678	$5,350	$4,306	$1,267	$507	$3,800	$844	
	E.	Discing/Seeding										
		Surface Area (acres)	4.8	10.9	5.0	7.3	5.9	1.7	0.7	5.2	1.1	
		Discing/Seeding Unit Cost ($/acre)	$548	$548	$548	$548	$548	$548	$548	$548	$548	
		Subtotal Discing/Seeding Costs	$2,602	$5,970	$2,738	$3,983	$3,206	$943	$377	$2,829	$629	
		Multiplier for Projected Additions	0	0	1	0	0	0	0	0	0	
		Subtotal Reclamation Costs per Access Road	$30,657	$64,528	$59,752	$43,054	$34,655	$8,856	$3,542	$26,567	$5,903	
		Total Access Road Reclamation Costs	**$277,514**									
III.	**Trunk Lines**		**Trunk Line #1 (CPP to MU-4)**	**Trunk Line #2 (CPP to SR-1)**	**Trunk Line #3 (MU-15 to SR-1) Included in MU 15 WF REC**	**Trunk Line #4 (O-Sand Pilot)**	**Trunk Line (SR-2 to CPP)**	**WF 4 to CPP - projected**	**Waste Transfer SR2 to MU-15**	**Waste Transfer SR2 to SRHUP 8**	**Waste Transfer SR1 to SRHUP 7**	**SR to HUP DDW Pipeline**
		Length of Trench (ft)	7750	8500	0	5500	2500	10000	12000	10000	7000	9700
	A.	Removal and Loading										
		Main Pipeline Removal Unit Cost ($/ft of trench)	$3.71	$3.71	$3.71	$3.71	$3.71	$3.71	$3.71	$3.71	$3.71	$3.71
		Subtotal Trunkline Removal and Loading Costs	$28,778	$31,563	$0	$20,423	$9,283	$37,133	$44,560	$37,133	$25,993	$36,019
	B.	Transport and Disposal Costs (NRC-Licensed Facility)										
		1 2" HDPE Trunkline										
		Piping Length (ft)	7750	8500	0	22000	0	0	0	0	0	0
		Chipped Volume Reduction (ft3/ft)	0.0107	0.0107	0.0107	0.0107	0.0107	0.0107	0.0107	0.0107	0.0107	0.0107
		Chipped Volume (ft^3)	83	91	0	236	0	0	0	0	0	0
		1. 4" HDPE Trunkline										
		Piping Length (ft)	0	0	0	0	15000	10000	12000	10000	7000	0
		Chipped Volume Reduction (ft3/ft)	0.0385	0.0385	0.0385	0.0385	0.0385	0.0385	0.0385	0.0385	0.0385	0.0385
		Chipped Volume (ft^3)	0	0	0	0	577	385	462	385	269	0
		2. 6" HDPE Trunkline										
		Piping Length (ft)	7750	17000	0	0	0	0	0	0	0	9700
		Chipped Volume Reduction (ft3/ft)	0.0834	0.0834	0.0834	0.0834	0.0834	0.0834	0.0834	0.0834	0.0834	0.0834
		Chipped Volume (ft^3)	646	1,418	0	0	0	0	0	0	0	809
		3. 12" HDPE Trunkline										
		Piping Length (ft)	0	6000	0	0	0	0	0	0	0	0
		Chipped Volume Reduction (ft3/ft)	0.3088	0.3088	0.3088	0.3088	0.3088	0.3088	0.3088	0.3088	0.3088	0.3088
		Chipped Volume (ft^3)	0	1,853	0	0	0	0	0	0	0	0
		4. 16" HDPE Trunkline										
		Piping Length (ft)	15500	11000	0	15500	15500	0	0	0	0	0
		Chipped Volume Reduction (ft3/ft)	0.4864	0.4864	0.4864	0.4864	0.4864	0.4864	0.4864	0.4864	0.4864	0.4864
		Chipped Volume (ft^3)	7,539	5,350	0	7,539	7,539	0	0	0	0	0
		5. 18" HDPE Trunkline										
		Piping Length (ft)	0	0	0	0	2320	0	0	0	0	0
		Chipped Volume Reduction (ft3/ft)	0.6155	0.6155	0.6155	0.6155	0.6155	0.6155	0.6155	0.6155	0.6155	0.6155
		Chipped Volume (ft^3)	0	0	0	0	1,428	0	0	0	0	0
		Total Volume Chipped (ft^3)	8,268	8,712	0	7,775	9,544	385	462	385	269	809
		Volume for Disposal Assuming Void Space (ft^3)	9,095	9,583	0	8,552	10,498	423	508	423	296	890
		Transportation and Disposal Unit Cost (NRC-Licensed Facility) ($/ft3)	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77
		Subtotal Transport and Disposal Costs	$52,476	$55,292	$0	$49,343	$60,571	$2,441	$2,931	$2,441	$1,708	$5,135
	C.	Discing/Seeding										
		Width of Pipeline Trench (ft)	4	4	4	4	4	5	5	5	5	5
		Area of Pipeline Trench (acres)	0.7	0.8	0.0	0.5	0.2	1.1	1.4	1.1	0.8	1.1
		Discing/Seeding Unit Cost ($/acre)	$548	$548	$548	$548	$548	$548	$548	$548	$548	$548
		Subtotal Discing/Seeding Costs	$390	$427	$0	$277	$126	$629	$754	$629	$440	$610
		Subtotal Reclamation Costs per Pipeline	$81,644	$87,282	$0	$70,043	$69,980	$40,203	$48,245	$40,203	$28,141	$41,764
		Total Pipeline Reclamation Costs	**$507,505**									
IV.	**Settling Basin/Storage Ponds Reclamation**		**Storage Ponds**	**Settling Pond**								
	A.	Soil Sampling and Monitoring										
		Number of Soil Samples	15	15								
		$/Sample	$255	$255								
		Subtotal Soil Sampling and Monitoring Costs	$3,825	$3,825								
	B.	Liner/Subsoil Removal and Disposal										

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Miscellaneous Reclamation																	
			Thickness of clay liner (ft)				1	0.5									
			Thickness of contaminated subsoil (ft)				1	0.5									
			Width of Pond (ft)				200	252									
			Length of Pond (ft)				100	432									
			Depth of Pond (ft)				10	20									
			Surface area of pond (ft^2)				20000	108864									
		1.	Removal and Loading														
				Volume of Clay Liner (cy)			1481	4032									
				Clay Liner Removal and Loading Unit Cost ($/cy)			$5.12	$5.12									
			Subtotal Liner Removal and Loading Costs				$7,580	$20,629									
		2.	Transportation and Disposal														
				Volume of Clay Liner (ft^3)			1481	4032									
				Volume of Geotextile Liner (ft^3)			52	0									
				Volume of Geotextile Liner @ 40% void (ft^3)			87	0									
				Transportation and Disposal Unit Cost ($/$ft^3$)			$5.80	$5.80									
			Subtotal Liner Transportation and Disposal Costs				$9,103	$23,405									
		Subtotal Liner Removal and Disposal Costs					$16,683	$44,034									
	C.	Grade and Contour															
				Volume of Embankment Material (CY)			7,407	80,640									
				Average Grade (%)			0	0									
				Distance (ft)			50	100									
				Material Moving Unit Cost per WDEQ Guideline No.12, App.E ($/cy)			$0.176	$0.297									
		Subtotal Grade and Contour Costs					$1,304	$23,950									
	D.	Topsoil Application															
				Area of surface disturbance (ft^2)			20000	108899									
				Average thickness of topsoil (ft)			1	1									
				Average haul distance (ft)			1000	1000									
				Surface grade (%)			0%	3%									
			Volume of Topsoil (cy)				741	4,033									
			Topsoil Unit Cost per WDEQ Guideline No.12, App.C ($/cy)				$1.444	$1.444									
		Subtotal Topsoil Application Costs					$1,070	$5,825									
	E.	Discing/Seeding															
				Area of surface disturbance (acres)			0.5	2.5									
			Discing/Seeding Unit Cost ($/acre)				$548	$548									
		Subtotal Discing/Seeding Costs					$274	$1,369									
	Subtotal Reclamation Costs						$23,156	$79,003									
	Total Settling Basin/Ponds Reclamation Costs						**$102,159**										
TOTAL MISCELLANEOUS RECLAMATION COSTS							**$1,010,184**										

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	Mine Unit-1	Mine Unit-2	Mine Unit-3/Ext	Mine Unit- 4/4A	Mine Unit-15	Mine Unit-15A	Mine Unit K	Mine Unit K-North	Mine Unit 9	Mine Unit 10	10-Extension	Mine Unit 27	Mine Unit 21	Mine Unit 7
Pore Volume Calculations														
Flare Factor	1.56	1.05	1.16	1.14	1.48	1.68	1.21	1.30	1.52	1.45	1.45	1.82	0	1.74
Wellfield Area (ft2)	1,108,034	2,271,426	2,174,453	2,725,270	2,554,278	970,206	1,813,644	1,424,902	1,931,533	2,167,666	1,132,560	641,495	0	1,490,217
Wellfield Area (acres)	25.44	52.14	49.92	62.56	58.64	22.27	41.64	32.71	44.34	49.76	26.00	14.73	0.00	34.21
Affected Ore Zone Area (ft2)	1,108,034	2,271,426	2,174,453	2,725,270	2,554,278	970,206	1,813,644	1,424,902	1,931,533	2,167,666	1,132,560	641,495	0	1,490,217
Avg. Completed Thickness	18.0	23.0	30.0	19.0	18.0	16.0	19.0	21.0	23.0	30.0	30.0	23.0	0.0	20.0
Porosity	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Affected Volume (ft3)	31,113,595	54,854,938	75,670,964	59,029,348	68,045,966	26,079,137	41,695,676	38,899,825	67,526,394	94,293,471	49,266,360	26,852,981	0	51,859,552
Kgallons per Pore Volume	62,837	110,785	152,825	119,216	137,426	52,669	84,209	78,562	136,376	190,435	99,498	54,232	0	104,736
Restoration Schedule (Based on Annual Water Balance/Schedule Update)														
Pre-Restoration Period (yrs)	0	0	4	0	3	9	10	11	11	13	15	4	0	9
Restoration Period (yrs)	0	6	5	5	9	4	11	10	7	6	3	7	0	5
Stability Period (yrs)	1	1	1	1	1	1	1	1	1	1	1	1	0	1
Total # of Years	1	7	10	6	13	14	22	22	19	20	19	12	0	15
End of Restoration (yrs)	21													
End of Stability (yrs)	22													
Number of Header Houses per Wellfield														
Current	6	5	10	11	18	5	9	7	13	9	0	0	0	0
Planned	0	0	0	0	0	0	0	0	0	0	0	4	0	7
Total Estimated	6	5	10	11	18	5	9	7	13	9	0	4	0	7
Average Header House Volume (ft3)	1600													
Number of Wells (In Service) per Wellfield														
Production Wells (P)						Inc in MU-15								
Current	95	134	207	229	416	0	171	99	260	196	0	0	0	27
Planned	0	0	0	0	0	0	0	0	0	14	100	190	0	108
Total Estimated	95	134	207	229	416	0	171	99	260	210	100	190	0	135
Injection Wells (I)														
Current	160	233	280	371	835	0	280	175	398	341	0	0	0	29
Planned	0	0	0	0	0	0	0	0	0	39	200	380	0	221
Total Estimated	160	233	280	371	835	0	280	175	398	380	200	380	0	250
Restoration Wells (R)														
Current	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Planned	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Estimated	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monitor Wells (M, MO, MU, etc.)														
Current	49	50	40	90	83	42	51	53	69	49	0	85	0	49
Planned	0	0	0	0	0	0	0	0	0	0	35	0	0	0
Total Estimated	49	50	40	90	83	42	51	53	69	49	35	85	0	49
Other Wells (Pumping Wells, etc.)														
Current	1	2	3	0	3	0	0	1	7	1	0	3	0	2
Planned	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Estimated	1	2	3	0	3	0	0	1	7	1	0	3	0	2
Wellfield Refurbishment (I or P)														
Planned	0	10	50	10	50	0	0	0	0	0	0	0	0	0
Number of In Service Wells per Wellfield	305	429	580	700	1387	42	502	328	734	640	335	658	0	436
Total Number of Wells	7,076													
Well Completion Details														
Average Well Depth (ft)	500	850	750	850	450	500	950	864	950	900	900	800	600	825
Average Diameter of Casing (inches)	5	5	5	5	4.5	4.5	4.5	4.5	5	5	5	0	0	5
Wellfield Fencing														
Length of Fencing (ft)	16,487	11580	7388	25047	7074	0	23271	23271	21887	21595	10000	19732	0	8674

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Labor Costs		**Rate ($)**	**Net Benefits***	**Units**	**Source**
Environmental Manager/RSO		$46.00	$64.40	hour	MSEC**
Restoration Manager		$40.00	$56.00	hour	MSEC
Environmental Tech/HPT		$25.00	$35.00	hour	MSEC
Operator/Laborer		$26.00	$36.40	hour	MSEC
Maintenance Tech		$23.00	$32.20	hour	MSEC
*Includes additional 40% net benefits based on InfoMine USA cost data for Surface Metal and Industrial Mineral Mines - Western U.S. (Table 5)					
**Mountain States Employers Council, 2012 Survey, Mining Industry Compensation & Benefits					
Utility Costs		**Rate ($)**	**Profit & Overhead**	**Units**	**Source**
Electrical Costs		$0.0648	included	kWhr	Actual Costs-2013
Kilowatt to Horsepower		0.746	included	Kw/HP	N/A
Efficiency - Downhole Pumps		80%	included	Percent	N/A
Efficiency - Surface Pumps		90%	included	Percent	N/A
Natural Gas - CPP/Main Office Area		$33,817.00	included	year	Actual Costs-2013
Natural Gas - Satellite SR-1		$4,180.00	included	year	Actual Costs-2013
Propane - CPP/Main Office Area		$0.00	included	year	Actual Costs-2013
Propane - Satellite SR-2		$47,202.97	included	year	Actual Costs-2013
Chemical & Materials Costs		**Rate ($)**	**Profit & Overhead**	**Units**	**Source**
Antiscalant for RO (Hypersperse)		$3.9050	included	pound	Actual Costs-2013
Antiscalant for RO (ScaleTrol)		$4.5177	included	pound	Actual Costs-2013
Sodium Tripolyphosphate		$1.0893	included	pound	Actual Costs-2013
EDTA Tetrasodium Dihydrate		$1.8774	included	pound	Actual Costs-2013
Sodium Sulfide		$0.5520	included	pound	Quote-2013
Hydrochloric Acid		$0.1992	included	pound	Actual Costs-2013
Barium Chloride		$0.7970	included	pound	Actual Costs-2013
Iron Aggregate		$0.5516	included	pound	Actual Costs-2013
Silica Sand		$0.1407	included	pound	Actual Costs-2011
Pea Gravel		$0.0190	included	pound	Actual Costs-2013
Analytical Costs		**Rate ($)**	**Profit & Overhead**	**Units**	**Source***
Modified Guideline 8		$249.00	included	analysis	Quote: 2012-13
Excursion Parameters (UCL)		$30.00	included	analysis	Fee Schedule-2013
Restoration Progress Parameters (UCL + U + Se)		$50.00	included	analysis	Fee Schedule-2013
Irrigator Fluid		$245.00	included	analysis	Actual Costs-2012
Irrigator Vegetation		$270.00	included	analysis	Actual Costs-2012
Irrigator Soil		$255.00	included	analysis	Actual Costs-2012
Irrigator Soil Water		$150.00	included	analysis	Fee Schedule-2013
Other (Radon, Bioassay, etc.)		$1,000.00	$1,100.00	analysis	Cost Estimate
*All quotes, fee schedules and actual costs based on Energy Laboratories, Inc., Casper, WY					
Equipment Costs		**Rate ($)**	**Profit & Overhead***	**Units**	**Source**
Bandit 1290XP Trailer Mounted Brush Chipper		$47.93	$52.72	hour	Equipment Watch**
Bobcat S250 Skid Steer Loader		$36.57	$40.23	hour	Equipment Watch
Cat 320C L Trackhoe - 1.25 cu yd bucket		$100.03	$110.03	hour	Equipment Watch
Cat 416E Backhoe		$34.97	$38.47	hour	Equipment Watch
Cat 924H Loader - 2.4 cu yd bucket		$52.93	$58.22	hour	Equipment Watch
Concrete Jaws Labounty - CP-60		$18.51	$20.36	hour	Equipment Watch
GEHL DL-8 Rough Terrain Lift Truck		$56.44	$62.08	hour	Equipment Watch
Manlift		$47.54	$52.29	hour	Equipment Watch
MIT Unit		$30.09	$33.10	hour	Equipment Watch
Pick-up Truck 3/4 ton 4X4		$20.13	$22.14	hour	Equipment Watch
Pulling Unit***		$35.32	$38.85	hour	Equipment Watch
*Includes additional 10% Profit & Overhead per WDEQ/LQD Guidline No. 12, Section 12(b)					
**Equipment Watch Rental Rate Blue Book: Volume 1 (1st Half 2013)					
***1 3/4 Ton 4x4 Truck with Hoist					
Quoted Costs		**Rate ($)**	**Profit & Overhead**	**Units**	**Source**
Deep Disposal Well - Plug & Abandonment Costs		$13.62	included	foot	UIC Permit-2012
Deep Disposal Well - MIT Costs		$31,625	included	well	Quote-2013
Well Replacements (Restoration)		$14,763	included	well	Actual Costs-2013
Bellhole Refurbishment		$5,530	included	bellhole	Contract-2012
Header House Refurbishment		$10,000	included	header house	Actual Costs-2013
WDEQ/LQD Guideline No. 12 Costs	**Appendix**	**Rate ($)**	**Profit & Overhead***	**Units**	**Source**
Moving Materials: One-Way Distance 500 feet, 0% grade	Appendix C	$1.099	$1.209	bcy	Guideline-10/2013
Moving Materials: One-Way Distance 1,000 feet, 0% grade	Appendix C	$1.313	$1.444	bcy	Guideline-10/2013
Moving Materials: One-Way Distance 2,000 feet, 0% grade	Appendix C	$1.701	$1.871	bcy	Guideline-10/2013
Moving Materials: One-Way Distance 50 feet, 0% grade	Appendix E	$0.160	$0.176	lcy	Guideline-10/2013
Moving Materials: One-Way Distance 100 feet, 0% grade	Appendix E	$0.270	$0.297	lcy	Guideline-10/2013
Moving Materials: One-Way Distance 150 feet, 0% grade	Appendix E	$0.351	$0.386	lcy	Guideline-10/2013
Grading Operating Costs	Appendix G	$77.31	$85.04	acre	Guideline-10/2013
Fencing Removal	Appendix H	$0.39	$0.43	foot	Guideline-10/2013
Ripping Operating Costs (Asphalt)	Appendix I	$881.17	$969.29	acre	Guideline-10/2013

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Ripping Operating Costs (Overburden)	Appendix I1	$1,255.70	$1,381.27	acre	Guideline-10/2013	
Building Demolition - Mixture of Types	Appendix K	$0.287	$0.32	ft3	Guideline-10/2013	
Building Demo Disposal (Average)	Appendix K	$9.62	$10.58	cy	Guideline-10/2013	
Concrete (Floor) Demolition - 6" Thick with Rebar	Appendix K	$5.48	$6.03	ft2	Guideline-10/2013	
Concrete (Footing) Demolition - 2' Thick, 3' Wide	Appendix K	$20.21	$22.23	linear foot	Guideline-10/2013	
Concrete Disposal On-Site	Appendix K	$8.29	$9.12	cy	Guideline-10/2013	
Drill Hole Abandonment: Wet Exploration Holes >25 holes	Appendix L	$3.00	$3.30	foot	Guideline-10/2013	
Well Abandonment: Monitor, Production, and Injection Wells	Appendix L	$2.50	$2.75	foot	Guideline-10/2013	
Incidental Costs: Small Site Grading and Seeding (<1000 sq. feet)	Appendix L	$50	$55	site	Guideline-10/2013	
Incidental Costs: Capping	Appendix L	$10	$11	each	Guideline-10/2013	
Incidental Costs: Site Location	Appendix L	$10	$11	hole	Guideline-10/2013	
Incidental Costs: Remove Pump, Wiring, and Drop Pipe	Appendix L	$0.40	$0.44	foot	Guideline-10/2013	
Incidental Costs: Remove and Dispose Casing (top few feet)	Appendix L	$30	$33	well	Guideline-10/2013	
Incidental Costs: Monitoring Well Concrete Pedestal Disposal	Appendix L	$100	$110	each	Guideline-10/2013	
Scarification Costs	Appendix P	$70.91	$78.00	acre	Guideline-10/2013	
Revegetation Costs-Seed	Appendix Q	$106	$117	acre	Actual Costs-2013	
Revegetation Costs-Mulch	Appendix Q	$91.88	$101.07	acre	Actual Costs-2013	
Revegetation Costs-Fertilizer	Appendix Q	$300.00	$330.00	acre	Actual Costs-2013	
Revegetation Costs-Total	Appendix Q	$497.88	$547.67	acre	Actual Costs-2013	
*Includes additional 10% Profit & Overhead per WDEQ/LQD Guidline No. 12, Section 12(b)						
Construction & Demolition Debris Transportation & Disposal Costs						
Building Volume for Disposal	0.33					
Void Factor (for disposal)	1.1					
	Disposal ($/ton)	**C&D (cy/ton)**	**Tranport ($/load)**	**C&D (cy/load)**	**Total ($/cy)**	**Total ($/ft3)**
C&D Debris (county landfill)	$62.00	2	$335.00	30	$42.17	$1.56
*Transportation and disposal costs based on actual costs (2013). Transportation and disposal costs include profit and overhead of service provider. Conversion factors of 2 cy/ton and 0.33 to account for air space in buildings based on FEMA - Debris Estimating Field Guide, FEMA 320, September 2010.						
11e.(2) Byproduct Material Transportation & Disposal						
Load Correction Factor: Soil, sand, etc.	1.1					
Load Correction Factor: Process materials, etc.	0.42					
White Mesa	**Disposal ($/ton)**	**Disposal ($/cy)**	**Volume (cy)**	**Tranport ($/cy)**	**Total ($/cy)**	**Total ($/ft3)**
Type I: Soil, sand, gravel, rock, concrete rubble,etc.	$138.97	$152.87	13.0	$247.95	$400.82	$14.85
Type II: Process material, pumps, motors, etc.	$160.08	$67.23	24.7	$130.50	$197.73	$7.32
Type II: Chipped piping	$160.08	$67.23	36.4	$88.55	$155.78	$5.77
Pathfinder						
Type I: Soil, sand, rock, gravel, demolition masonry, concrete rubble	N/A	$130.00	13.0	$26.73	$156.73	$5.80
Type II: Other process waste, process equipment, etc.	N/A	$378.00	24.7	$14.07	$392.07	$14.52
Type II: Chipped piping	N/A	$378.00	36.4	$9.55	$387.55	$14.35
*Transportation and disposal costs based on contract amounts as adjusted annually. Transportation and disposal costs include profit and overhead of service provider and include all unloading and decontamination fees, waste tax, fuel surcharges, etc. Tranportation costs assume 1) one truck transports one 13-cy bin of Type I waste, 2) one truck transports one 24.7-cy bin of Type II process waste (including pumps, motors, etc.) and 3) one truck tranports one 36.4-cy bin of Type II chipped piping waste.						

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GROUNDWATER RESTORATION UNIT COSTS		
Wellfield Pumping		
Equipment		
Wellfield Pump Sizes	5	hp
Wellfield Pump Flow Rate	25	gpm
kW to HP Conversion Factor	0.746	
Cost of Electricity	$0.0648	kWhr
Efficiency	80%	
Wellfield Pumping Cost	$0.20	per kgal
Satellite Pumping		
Equipment		
Satellite Pump Sizes	60	hp
Satellite Pump Flow Rate	75	gpm
kW to HP Conversion Factor	0.746	
Cost of Electricity	$0.0648	kWhr
Efficiency	90%	
Satellite Pumping Cost	$0.72	per kgal
Deep Disposal Well Injection		
Equipment		
Deep Disposal Well Pump Size	75	hp
Deep Disposal Well Flow Rate	75	gpm
kW to HP Conversion Factor	0.746	
Cost of Electricity	$0.0648	kWhr
Efficiency	90%	
Reagent		
Antiscalant Cost (Scaletrol)	$4.5177	per lb
Density of Water	8.34	lbs/gal
Specific Gravity (Scaletrol)	1.284	
Antiscalant Cost (Scaletrol)	$48.38	per gal
Antiscalant Dose (ScaleTrol)	0.0000048	gal/gal
Deep Disposal Well Cost	**$1.13**	**per kgal**
Total Groundwater Sweep Costs	**$2.04**	**per kgal**
Reverse Osmosis		
Equipment		
System Capacity	250	gpm
Unit Pump	60	hp
Injection Pump	60	hp
Waste Pump	15	hp
kW to HP Conversion Factor	0.746	
Cost of Electricity	$0.0648	kWhr
Efficiency	90%	
Reagents		
Tripolyphosphate Usage Rate	0.00000130	lb/gal
Tripolyphosphate Cost	$1.0893	per lb
EDTA Usage Rate	0.00000315	lb/gal
EDTA Cost	$1.8774	per lb
Antiscalant Cost (Hypersperse)	$3.9050	per lb
Density of Water	8.34	lbs/gal
Specific Gravity (Hypersperse)	1.124	
Antiscalant Cost (Hypersperse)	$36.6061	per gal
Antiscalant Dose (Hypersperse)	0.0000036	gal/gal
Sodium Sulfide Usage Rate	0.00017	lb/gal
Sodium Sulfide Cost	$0.5520	per lb
RO Cost (without Reductant)	**$0.62**	**per kgal**
RO Cost (with Reductant)	**$0.71**	**per kgal**
MIT Costs for Production Wells		
Equipment		
Pulling Unit Hours	4	hrs/day
Pulling Unit Cost	$38.85	$/hour
MIT Unit Hours	8	hrs/day
MIT Unit Cost	$33.10	$/hour
Labor		

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Required Hours	8	hrs/day
Required Laborers	1.5	per day
Labor Cost	$32.20	$/hour
Productivity	4	wells/day
MIT Cost for Production Wells	**$201.65**	**per well**
MIT Costs for Injection Wells		
Equipment		
Pulling Unit Hours	0	hrs/day
Pulling Unit Cost	$38.85	$/hour
MIT Unit Hours	8	hrs/day
MIT Unit Cost	$33.10	$/hour
Labor		
Required Hours	8	hrs/day
Required Laborers	1	per day
Labor Cost	$32.20	$/hour
Productivity	4	wells/day
MIT Cost for Injection Wells	**$130.60**	**per well**
Booster Pump Operating Cost		
Equipment		
Wellfield Pump Sizes	40	hp
Number of Pumps Running (avg.)	9	per year
Hours Running	24	per day
kW to HP Conversion Factor	0.746	
Cost of Electricity	$0.0648	kWhr
Efficiency	90%	
Booster Pump Operating Costs	**$169,386.16**	**per year**
WELL ABANDONMENT UNIT COSTS		
Removal of Contaminated Soil Around Wells		
Equipment		
Cat 416 Backhoe Time	0.25	hours
Cat 416 Backhoe Cost	$38.47	per hour
Labor		
Radiation Technician	0.25	hours
Radiation Technician Cost	$35.00	per hour
Operator	0.25	hours
Operator Cost	$36.40	per hour
Disposal		
ByProduct Disposal	0.37	cubic yard
Disposal Cost (incl. Transport)	$156.73	per cubic yard
Removal of Contaminated Soil Cost	**$85.46**	**per well**
DDW Pump Dismantling and Disposal		
Labor		
Number of Laborers	2	per day
Number of Pumps Dismanteled	0.5	per day
Hours Per Day	8	hours
Laborers Cost	$32.20	
Disposal		
Volume of DDW Pump	240	ft^3
ByProduct Disposal	$7.32	per ft^3
DDW Pump Dismanteling and Disposal	**$2,788.03**	**per pump**
WELLFIELD RECLAMATION COSTS		
Wellfield Piping Removal		
Equipment		
Trackhoe	1	per day
Trackhoe Cost	$110.03	per hour
Loader	1	per day
Loader Cost	$58.22	per hour
Pickup Truck	1	per day
Pickup Cost	$22.14	per hour
Chipper Cost	$52.72	per hour

Labor			
Backhoe Operator	$36.40	per hour	
Loader Operator	$36.40	per hour	
Laborer	$32.20	per hour	
Hours Per Day	8	per day	
Productivity	1500	ft/day	
Piping Removal Cost	**$1.86**	**per foot of pipe**	
Piping Reduction			
2" Pipe	0.0107		
3" Pipe	0.0233		
4" Pipe	0.0385		
6" Pipe	0.0834		
8" Pipe	0.1413		
10" Pipe	0.2196		
12" Pipe	0.3088		
14" Pipe	0.3723		
16" Pipe	0.4864		
18" Pipe	0.6155		
Trunk Line Removal			
Equipment			
Trackhoe	1	per day	
Trackhoe Cost	$110.03	per hour	
Loader	1	per day	
Loader Cost	$58.22	per hour	
Pickup Truck	1	per day	
Pickup Cost	$22.14	per hour	
Chipper Cost	$52.72	per hour	
Labor			
Trackhoe Operator	$36.40	per hour	
Loader Operator	$36.40	per hour	
Laborer	$32.20	per hour	
Hours Per Day	8	per day	
Productivity	750	ft/day	
Buried Piping Removal Cost	**$3.71**	**per foot of pipe**	
Production Pump Volume			
Length	66	inches	
Diameter	3.8	inches	
Cubic Inch to Cubic Foot Conversion	0.0006		
Production Pump Volume	**0.43**	cubic feet	
Removal of Well Head Covers			
Volume of Well Head Cover (ft^3)	1.86	cubic feet	
Demolition Cost	$0.316	per cubic ft	
Decontamination			
Acid Usage	4.1	pounds per wellhead cover	
Acid Cost	$0.20	per wellhead cover	
Labor			
Radiation Tech	$35.00	per hour	
Operator	$36.40	per hour	
Productivity	10	wellheads per hour	
Disposal			
Void space	10%		
Transportation and Disposal Cost	$1.56	per cubic ft	
Removal of Well Head Cover Cost	**$11.74**	**per well**	
Header House Decontamination			
Decontamination			

Acid Usage	20	pounds per header house
Acid Cost	$0.20	per pound
Labor		
Radiation Tech	$35.00	per hour
Number of Operators	2	per day
Operator	$36.40	per hour
Hours Per Day	8	per day
Productivity	1	header house per day
Header House Decontamination Cost	**$621**	**per header house**
Header House Heating		
Heater Power Usage	7.5	kW/day
Days Used	180	days per year
Electricity Cost	$0.0648	kWhr
Header House Heating Cost	**$1,050**	**per year**
WELLFIELD AND SATELLITE AND SURFACE RECLAMATION		
Wellfield Road Reclamation		
Gravel Road Base		
Average Depth	0.25	feet
Average Width	10	feet
Material Moved (0% Grade)	$1.44	bcy
Cubic Yard to Cubic Feet Conversion	0.04	
Scarification of Road		
Scarification Costs	$78	per acre
Average Width	25	feet
Acre to Sq. Foot Conversion	2.29568E-05	
Grading Cost	$85	per acre
Topsoil Depth	0.67	feet
Discing/Seeding Costs	$548	
Linear Feet for Unit Cost	1000	feet
Wellfield Road Reclamation Cost	**$1,437.62**	**per 1000 feet**
EQUIPMENT COSTS		
Tank Removal		
Equipment		
Loader	$58.22	per hour
Trackhoe	$110.03	per hour
Manlift	$52.29	per hour
Pickup	$22.14	per hour
Lift Truck	$62.08	per hour
Labor		
Number of Operators	4	
Operator Cost	$36.40	per hour
Hours Per Day	8	per day
Productivity	25	ft^3/day
Tank Removal Cost	**$144**	**per ft^3**
Pipe Removal		
Equipment		
Manlift	$52.29	per hour
Pickup	$22.14	per hour
Lift Truck	$62.08	per hour
Chipper	$52.72	per hour
Labor		
Number of Operators	4	
Operator Cost	$36.40	per hour
Hours Per Day	8	per day
Productivity	300	ft/day
Pipe Removal Cost (Inside Buildings)	**$8.93**	**per ft**
Pump Removal		
Equipment		
Truck	$22.14	per hour
Skid Steer	$40.23	per hour
Labor		

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	Number of Operators	2		
	Operator Cost	$36.40	per hour	
	Hours Per Day	8	per day	
Productivity		10	ft^3/day	
	Pump Removal	**$108.14**	**per ft^3**	
Dryer Removal				
Equipment				
	Truck	$22.14	per hour	
	Lift Truck	$62.08	per hour	
Labor				
	Number of Operators	4		
	Operator Cost	$36.40	per hour	
	Hours Per Day	8	per day	
Productivity		125	ft^3/day	
	Dryer Removal Cost	**$14.71**	**per ft^3**	
RO and Degasser Removal				
Equipment				
	Truck	$22.14	per hour	
	Lift Truck	$62.08	per hour	
Labor				
	Number of Operators	2		
	Operator Cost	$36.40	per hour	
	Hours Per Day	8	per day	
Productivity		250	ft^3/day	
	RO and Degasser Removal Cost	**$5.02**	**per ft^3**	
BUILDING COSTS				
Acid Wash Walls				
Acid				
	Acid Usage	0.05	per square foot	
	Acid Cost	$0.20	per pound	
Equipment				
	Manlift	$52.29	per hour	
Labor				
	Laborer	2	people	
	Laborer Cost	$32.20	per hour	
Productivity		125	square feet per hour	
	Acid Wash Walls Cost	**$0.94**	**per square foot**	
Acid Wash Floors				
Acid				
	Acid Usage	0.05	per square foot	
	Acid Cost	$0.20	per pound	
Labor				
	Laborer	2	people	
	Laborer Cost	$32.20	per hour	
Productivity		125	square feet per hour	
	Acid Wash Floors Cost	**$0.53**	**per square foot**	
Eletrical Power				
*Pumping Costs for Operating DDWs, RO, and Wellfield are included in GW Rest Costs				
CPP				
	Miscellaneous Pumps, Fans, Sumps, etc.	27.5	HP	
	Lighting	35.0625	kW (per square ft)	
	kW to HP Conversion Factor	0.746		
	Electricity Cost	$0.0648	per kWhr	
	Efficiency Factor	90%		
	Operating Hours Per Year	8760	hours	
	CPP Power Cost	**$30,384**	**per year**	
SR 1 & SR 2 Power Costs				
	Miscellaneous Pumps, Fans, Sumps, etc.	72.5	HP	
	Lighting	24	kW	
	kW to HP Conversion Factor	0.746	kW (per square ft)	

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Electricity Cost	$0.0648	per kWhr	
Efficiency Factor	90%		
Operating Hours Per Year	8760	hours	
SR 1 & SR 2 Power Costs	**$41,255**	**per year**	
Reynolds Ranch Power Costs			
Miscellaneous Pumps, Fans, Sumps, etc.	72.5	HP	
Lighting	24	kW	
kW to HP Conversion Factor	0.746	kW (per square ft)	
Electricity Cost	$0.0648	per kWhr	
Efficiency Factor	90%		
Operating Hours Per Year	8760	hours	
Reynolds Ranch Power Costs	**$41,255**	**per year**	
DDW - Typical			
Miscellaneous Pumps, Fans, Sumps, etc.	2	HP	
Lighting	0.4875	kW	
Heating	12.5	kW	
kW to HP Conversion Factor	0.746	kW (per square ft)	
Electricity Cost	$0.0648	per kWhr	
Efficiency Factor	90%		
Operating Hours Per Year	8760	hours	
DDW Electrical Cost	**$4,587**	**per year**	
Maintenance Shop Power Costs			
Miscellaneous Pumps, Fans, Sumps, etc.	2	HP	
Lighting	8.785	kW	
kW to HP Conversion Factor	0.746	kW (per square ft)	
Electricity Cost	$0.0648	per kWhr	
Efficiency Factor	90%		
Operating Hours Per Year	8760	hours	
Maintenance Shop Power Costs	**$5,749**	**per year**	
Fresh Water Pumphouse Power Costs			
Miscellaneous Pumps, Fans, Sumps, etc.	10	HP	
Lighting	1.04	kW	
Heating	10	kW	
kW to HP Conversion Factor	0.746	kW (per square ft)	
Electricity Cost	$0.0648	per kWhr	
Efficiency Factor	90%		
Operating Hours Per Year	8760	hours	
Fresh Water Pumphouse Power Costs	**$10,078**	**per year**	
Office Building Power Costs			
Miscellaneous Pumps, Fans, Sumps, etc.	7.5	HP	
Lighting	10	kW	
Air Conditioning	30	kW	
kW to HP Conversion Factor	0.746	kW (per square ft)	
Electricity Cost	$0.0648	per kWhr	
Efficiency Factor	90%		
Operating Hours Per Year	8760	hours	
Office Building Power Costs	**$25,564**	**per year**	
MISCELLANEOUS RECLAMATION AND RESTORATION COSTS			
Liner and Subsoil Removal Costs			
Equipment			
Trackhoe Cost	$ 110.03	per hour	
Loader Cost	$ 58.22	per hour	
Labor			
Operator	36.40	per hour	
Productivity	40	cubic yards/hour	
Total Removal	**$ 5.12**	**per cubic yard**	

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Highland Operations
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Total Restoration and Reclamation Cost Estimate			
I.	Groundwater Restoration (GWR-WF and GWR-SITE Sheets)		$52,125,527
II.	Well & Drill Hole Abandonment (WA Sheet)		$9,418,436
III.	Wellfield Buildings & Equipment Removal & Disposal (WF BLDGS Sheet)		$5,215,961
IV.	Wellfield & Satellite Surface Reclamation (WF REC Sheet)		$540,605
V.	Equipment Removal and Disposal (EQUIP Sheet)		$752,980
VI.	Building Demolition and Disposal (BLDGS Sheet)		$3,189,557
VII.	Miscellaneous Reclamation (MISC REC Sheet)		$7,293,180
	Subtotal Restoration and Reclamation Cost Estimate		$78,536,246
	Contractor Profit & Overhead (10%)[1]	See Master Costs	
	Contingency (15%)[2]	15%	$11,780,437
		TOTAL[3]	$90,316,700

[1], Per WDEQ/LQD Guideline No. 12, Section 12(b)

[2], Per WDEQ/LQD Guideline No. 12, Section 12(a) and (c-h), Section 13 and NRC License Condition 9.5 (SUA-1548)

[3], Costs reflect both WDEQ & NRC requirements. No salvage value assumed.

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Ground Water Restoration -Wellfield	A-Wellfield	B-Wellfield	C-Wellfield	C-22 Pattern	C Haul Drifts	D-Wellfield	D-Extension	E-Wellfield	F-Wellfield	H-Wellfield	I-Wellfield	J-Wellfield	J-Extension
I. Ground Water Sweep Costs													
Estimated PV's	0	0	0	0	0	0	0	0.5	1	1	1	1	1
Total kgals for GWS	0	0	0	0	0	0	0	45,540	232,890	90,864	84,780	66,812	50,673
Bleed to Deep Disposal Well (%)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Groundwater Sweep Unit Cost ($/kgal)	$1.32	$1.32	$1.32	$1.32	$1.32	$1.32	$1.32	$1.32	$1.32	$1.32	$1.32	$1.32	$1.32
Subtotal Ground Water Sweep Costs per Wellfield	$0	$0	$0	$0	$0	$0	$0	$30,127	$308,141	$120,224	$112,174	$88,400	$67,046
Total Ground Water Sweep Costs	**$659,066**												
II. Reverse Osmosis Costs													
Estimated PV's	0	0	0	0	0	0	0	3	4.5	4.5	4.5	4.5	4.5
Total Kgals for RO	0	0	0	0	0	0	0	273,240	1,048,005	408,888	381,510	300,654	228,029
Wellfield Pumping Cost	$0.20	$0.20	$0.20	$0.20	$0.20	$0.20	$0.20	$0.20	$0.20	$0.20	$0.20	$0.20	$0.20
Reverse Osmosis Unit Cost ($/kgal)	$0.62	$0.62	$0.62	$0.62	$0.62	$0.62	$0.62	$0.62	$0.62	$0.62	$0.62	$0.62	$0.62
Bleed to Deep Disposal Well (%)	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
Brine Volume for Disposal	0	0	0	0	0	0	0	54,648	209,601	81,778	76,302	60,131	45,606
DDW Disposal Cost($/kgal)	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13
Permeate Volume for Re-Use	0	0	0	0	0	0	0	218,592	838,404	327,110	305,208	240,523	182,423
Satellite Pumping Cost ($/kgal)	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72
Subtotal Reverse Osmosis Costs per Wellfield	$0	$0	$0	$0	$0	$0	$0	$441,288	$1,692,550	$660,363	$616,147	$485,562	$368,271
Total Reverse Osmosis Costs	**$3,895,910**												
III. Reverse Osmosis with Chemical Reductant Costs													
Estimated PV's	0	0	1.5	1	1	1	1	3	3.5	3.5	3.5	3.5	3.5
Total kgals for RO	0	0	127,233	19,691	0	32,309	19,233	273,240	815,115	318,024	296,730	233,842	177,356
Wellfield Pumping Cost	$0.20	$0.20	$0.20	$0.20	$0.20	$0.20	$0.20	$0.20	$0.20	$0.20	$0.20	$0.20	$0.20
Reverse Osmosis with Chemical Reductant Unit Cost ($/kgal)	$0.71	$0.71	$0.71	$0.71	$0.71	$0.71	$0.71	$0.71	$0.71	$0.71	$0.71	$0.71	$0.71
Bleed to Deep Disposal Well (%)	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
Brine Volume for Disposal (kgal)	0	0	25,447	3,938	0	6,462	3,847	54,648	163,023	63,605	59,346	46,768	35,471
DDW Disposal Cost($/kgal)	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13
Permeate Volume for Re-Use	0	0	101,786	15,753	0	25,847	15,386	218,592	652,092	254,419	237,384	187,074	141,884
Satellite Pumping Cost ($/kgal)	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72	$0.72
Subtotal RO with Chemical Reductant Costs per Wellfield	$0	$0	$217,423	$33,649	$0	$55,212	$32,867	$466,929	$1,392,918	$543,459	$507,070	$399,603	$303,076
Total Reverse Osmosis with Chemical Reductant Costs	**$3,952,206**												
IV. Mechanical Integrity Testing (MIT) Costs													
Pre-Restoration, Restoration and Stability Period (yrs)	0	0	2	2	2	2	2	5	21	8	7	17	14
Number of Injection Wells	1	194	258	0	0	143	0	229	704	285	234	233	112
Number of MITs per Injection Well	0.0	0.0	0.4	0.4	0.4	0.4	0.4	1.0	4.2	1.6	1.4	3.4	2.8
MIT Costs per Injection Well	$130.60	$130.60	$130.60	$130.60	$130.60	$130.60	$130.60	$130.60	$130.60	$130.60	$130.60	$130.60	$130.60
Subtotal MIT Costs per Wellfield	$0	$0	$13,478	$0	$0	$7,470	$0	$29,907	$386,152	$59,553	$42,784	$103,460	$40,956
Total Wellfield MIT Costs	**$683,760**												
V. Wellfield Refurbishment Costs													
Well Replacement (#)	0	0	5	0	0	0	0	10	180	5	10	18	0
Replacement ($/well)	$14,763	$14,763	$14,763	$14,763	$14,763	$14,763	$14,763	$14,763	$14,763	$14,763	$14,763	$14,763	$14,763
Bellhole Refurbishment (#)	0	0	0	0	0	0	0	0	0	0	6	0	0
Refurbishment ($/bellhole)	$5,530	$5,530	$5,530	$5,530	$5,530	$5,530	$5,530	$5,530	$5,530	$5,530	$5,530	$5,530	$5,530
Header House Refurbishment (#)	0	0	0	0	0	0	0	0	26	0	0	0	0
Refurbishment ($/header house)	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000
Subtotal Refurbishment Cost per Wellfield	$0	$0	$73,815	$0	$0	$0	$0	$147,630	$2,917,340	$73,815	$180,810	$265,734	$0
Total Wellfield Refurbishment Cost	**$3,659,144**												
VI. Monitoring and Sampling Costs													
A. Pre-Restoration Monitoring													
1. Excursion Monitoring (M, MO and MU wells, twice per month)													
# of Wells	0	0	0	0	0	0	0	0	90	72	29	42	20

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Ground Water Restoration -Wellfield	A-Wellfield	B-Wellfield	C-Wellfield	C-22 Pattern	C Haul Drifts	D-Wellfield	D-Extension	E-Wellfield	F-Wellfield	H-Wellfield	I-Wellfield	J-Wellfield	J-Extension
Total # samples	0	0	0	0	0	0	0	0	15120	0	0	8064	3840
UCL Parameters ($/sample)	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
Subtotal Pre-Restoration Monitoring Costs per Mine Unit	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$453,600.00	$0.00	$0.00	$241,920.00	$115,200.00
Total Pre-Restoration Monitoring Costs	$810,720.00												
B. Restoration Monitoring													
1. Sampling Prior to Start-up (MP Wells)													
# of Wells	0	0	0	0	0	0	0	0	21	12	6	12	5
Modified Guideline 8 ($/sample)	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00
2. Restoration Progress Monitoring (MP Wells, every 2 months)													
# of Wells	0	0	32	0	11	9	5	29	21	12	6	12	5
Total # samples	0	0	192	0	66	54	30	696	1638	504	216	576	150
Restoration Progress Parameters ($/sample)	$50.00	$50.00	$50.00	$50.00	$50.00	$50.00	$50.00	$50.00	$50.00	$50.00	$50.00	$50.00	$50.00
3. Excursion Monitoring (M, MO and MU wells, every 2 months)													
# of Wells	0	0	71	0	0	22	16	51	90	72	29	42	20
Total # samples	0	0	426	0	0	132	96	1224	7020	3024	1044	2016	600
UCL Parameters ($/sample)	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
Subtotal Restoration Monitoring Costs per Mine Unit	$0.00	$0.00	$22,380.00	$0.00	$3,300.00	$6,660.00	$4,380.00	$71,520.00	$297,729.00	$118,908.00	$43,614.00	$92,268.00	$26,745.00
Total Restoration Monitoring Costs	$660,759												
C. Stability Monitoring													
1. Beginning of stability (MP wells)													
# of Wells	0	0	32	0	11	9	5	29	21	12	6	12	5
Modified Guideline 8 ($/sample)	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00
2. Quarterly sampling (MP wells)													
# of Wells	0	0	32	0	11	9	5	29	21	12	6	12	5
Total # samples	0	0	128	0	44	36	20	116	84	48	24	48	20
Modified Guideline 8 ($/sample)	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00	$249.00
3. Monitor Well Sampling (M wells, every 2 months)													
# of Wells	0	0	37	0	0	17	10	26	48	45	20	28	20
Total # samples	0	0	222	0	0	102	60	156	288	270	120	168	120
UCL Parameters ($/sample)	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00	$30.00
Subtotal Stability Monitoring Costs per Mine Unit	$0.00	$0.00	$46,500.00	$0.00	$13,695.00	$14,265.00	$8,025.00	$40,785.00	$34,785.00	$23,040.00	$11,070.00	$19,980.00	$9,825.00
Total Stability Monitoring Costs	$212,145.00												
D. Other Laboratory Costs													
Radon, Bioassay, etc.	$0	$0	$26,400	$26,400	$26,400	$26,400	$26,400	$66,000	$277,200	$105,600	$92,400	$224,400	$184,800
Subtotal Monitoring and Sampling Costs per Mine Unit	$0	$0	$95,280	$26,400	$43,395	$47,325	$38,805	$178,305	$1,063,314	$247,548	$147,084	$578,568	$336,570
Total Monitoring and Sampling Costs	**$2,802,594**												
VII. Header House Heating Costs													
Number of Header Houses per Unit(s)	5	18	20	0	0	4	3	15	43	10	6	9	5
Pre-Restoration and Restoration Period (yrs)	0	0	1	1	1	1	1	4	20	7	6	16	13
Electrical Heating Costs ($/yr)	$1,050	$1,050	$1,050	$1,050	$1,050	$1,050	$1,050	$1,050	$1,050	$1,050	$1,050	$1,050	$1,050
Subtotal Header House Heating Cost per Wellfield	$0	$0	$20,995	$0	$0	$4,199	$3,149	$62,986	$902,794	$73,483	$37,791	$151,165	$68,234
Total Header House Heating Costs	**$1,324,796**												
TOTAL RESTORATION COST PER WELLFIELD	$0	$0	$420,991	$60,049	$43,395	$114,206	$74,821	$1,357,172	$8,663,209	$1,778,445	$1,643,860	$2,072,492	$1,184,153
TOTAL WELLFIELD RESTORATION COST	**$16,977,476**												

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Ground Water Restoration - Site Wide						**Deep Disposal Wells**		
I.	**Building Utility Costs**	**Satellite No.2**	**Selenium Plant**	**Satellite No.3**	**Morton 1-20**	**Vollman 33-27**	**SRHUP #9**	
	Assumptions:							
	Electricity Unit Cost ($/yr)	$28,478	$40,857	$28,478	$4,588	$4,588	$4,588	
	Propane ($/yr)	$506	$506	$43,188	$0	$0	$0	
	Natural Gas ($/yr)	$9,044	$9,044	$0	$0	$0	$0	
	Number of Years	7	18	14	18	18	18	
	Subtotal Utility Cost per Building	$266,199	$907,332	$1,003,333	$82,587	$82,587	$82,587	
	*Yrs for Satellite No. 2 assumes end of restoration for MU-I							
	*Yrs for Satellite No. 3 assumes end of restoration for MU-K-North							
	Total Building Utility Costs	**$2,424,625**						
II.	**Irrigation Maintenance and Monitoring**	**Irrigator No. 1A**	**Irrigator No. 2**					
	A. Phytoremediation Study							
	Phytoremediation Study, PPCU	$0	$40,000	*Based on two year contract (2013)				
	Phytoremediation Study, University of Wyoming	$0	$82,080	*Based on two year proposal (2012)				
	Subtotal Phytoremediation Studies	$0	$122,080					
	B. Harvesting Costs							
	Irrigation Area (acres)	55	106					
	Harvesting Costs ($/acre)	$250	$250					
	Restoration Period (yrs)	18		* Based on timeline to support Smith Ranch restoration activities				
	Subtotal Harvesting Costs per Irrigator	$247,500	$477,000					
	C. Irrigation Monitoring							
	# of Irrigation Fluid Samples/Year	6	6					
	$/sample	$245	$245					
	# of Vegetation Samples/Year	5	5					
	$/sample	$270	$270					
	# of Soil Samples/Year	30	34					
	$/sample	$255	$255					
	# of Soil Water Samples/Year	12	2					
	$/sample	$150	$150					
	Restoration Period (yrs)	18		* Based on timeline to support Smith Ranch restoration activities				
	Subtotal Monitoring Costs per Irrigator	$220,860	$212,220					
	Subtotal Monitoring and Harvesting Costs per Irrigator	$468,360	$811,300					
	Total Maintenance and Monitoring Costs	**$1,279,660**						
III.	**Selenium Plant Operation Costs**							
	Restoration Period (yrs)	18		* Based on timeline to support Smith Ranch restoration activities				
	Selenium Plant Operating Cost ($/yr)	$157,852						
	Total Selenium Plant Operating Cost	**$2,841,339**						
IV.	**Booster Pump Operation Costs**							
	Restoration Period (yrs)	20						

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		Booster Pump Operating Cost ($/yr)	$37,641.37					
	Total Booster Pump Operating Cost		**$752,827**					
V.	**Infrastructure, Equipment Maintenance,**							
		Replacement and Repair Costs						
		Annual Maintenance Cost ($/yr)	$92,320		*Based on planned expenditures (2013)			
		Restoration Period (yrs)	20					
	Total Cost		**$1,846,400**					
VI.	**Deep Disposal Well MIT Costs**							
		Five-year MIT Costs for Disposal Wells	$31,625.00					
		Number of DDWs	3					
		Number of MITs per DDW	3		* Based on timeline to support Smith Ranch restoration activities			
	Total DDW MIT Cost		**$284,625**					
VII.	**Capital Costs**							
		*Estimates based on planned expenditures (2013)						
		Irrigator No. 1 Pivot Replacement	$906,000					
		SR-HUP Connecting Pipeline	$532,752					
	Total Capital Costs		**$1,438,752**					
VIII.	**Vehicle Operation Costs**							
		Number of Pickup Trucks (Gas)	10					
		Truck Cost ($/hr)	$22.14					
		Average Operating Time (hrs/yr)	1000					
		Restoration and Stability Period (yrs)	21					
	Total Vehicle Operation Cost		**$4,650,030**					
IX.	**Labor Costs**							
	Assumptions:							
		Number of Environmental Managers/RSOs	0.5		*Management positions split between Highland and Smith Ranch			
		$/hr	$64.40					
		Number of Restoration Managers	0.5		*Management positions split between Highland and Smith Ranch			
		$/hr	$56.00					
		Number of Environmental Techs/HPTs	2					
		$/hr	$35.00					
		Number of Operators/Laborers	7					
		$/hr	$36.40					
		Number of Maintenance Technicians	2					
		$/hr	$32.20					
		Hrs/yr	2080					
		Restoration and Stability Period (yrs)	21					
	Total Labor Cost		**$19,629,792**					
TOTAL SITE-WIDE RESTORATION COSTS			**$35,148,051**					

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Well and Drill Hole Abandonment	A-Wellfield	B-Wellfield	C-Wellfield	C-22 Pattern	C Haul Drifts	D-Wellfield	D-Extension	E-Wellfield	F-Wellfield	H-Wellfield	I-Wellfield	J-Wellfield	J-Extension	Other
I. Well Abandonment (Wellfields)														
A. Sealing Costs				Inc in MU-C	Inc in MU-C		Inc in MU-D							
Total # of Wells per Wellfield	8	392	567	0	0	288	0	438	1470	534	411	410	193	3
Production, Injection and Perimeter Well Average Depth (ft)	500	450	550	550	550	600	600	550	650	500	650	540	540	650
Well Abandonment (Sealing) Costs ($/ft)	$2.75	$2.75	$2.75	$2.75	$2.75	$2.75	$2.75	$2.75	$2.75	$2.75	$2.75	$2.75	$2.75	$2.75
Subtotal Sealing Costs per Wellfield	$11,000	$485,100	$857,588	$0	$0	$475,200	$0	$662,475	$2,627,625	$734,250	$734,663	$608,850	$286,605	$5,363
B Casing Removal and Diposal Costs														
Total # of Wells per Wellfield	8	392	567	0	0	288	0	438	1470	534	411	410	193	3
# of Previously Abandoned Wells Pending Release	54	118	180	0	0	86	0	271	330	50	40	20	0	0
Total # of Wells for Casing Removal and Disposal	62	510	747	0	0	374	0	709	1800	584	451	430	193	3
Remove and Dispose Casing ($/well)	$33	$33	$33	$33	$33	$33	$33	$33	$33	$33	$33	$33	$33	$33
Subtotal Casing Removal and Diposal Costs per Wellfield	$2,046	$16,830	$24,651	$0	$0	$12,342	$0	$23,397	$59,400	$19,272	$14,883	$14,190	$6,369	$99
Subtotal Well Abandonment Costs per Wellfield	$13,046	$501,930	$882,239	$0	$0	$487,542	$0	$685,872	$2,687,025	$753,522	$749,546	$623,040	$292,974	$5,462
Total Well Abandonment Costs	**$7,682,198**													
II. Removal of Contaminated Soil Around Wells														
# of Production and Injection Wells	1	327	464	0	0	234	0	379	1343	456	375	365	168	
Removal of Contaminated Soil Around Wells ($/well)	$85.46	$85.46	$85.46	$85.46	$85.46	$85.46	$85.46	$85.46	$85.46	$85.46	$85.46	$85.46	$85.46	
Subtotal Contaminated Soil Removal/Disposal Costs per Wellfield	$85	$27,944	$39,652	$0	$0	$19,997	$0	$32,388	$114,769	$38,968	$32,046	$31,192	$14,357	
Total Contaminated Soil Removal/Disposal Costs	**$351,398**													
III. Drill Hole Abandonment														
A. Drill Hole Plug and Abandonment														
# of Drill Holes Pending Bond Release														
2009-10	89													
2010-11	133													
2011-12	195													
2012-13	95													
2013-14	2													
Total # of Drill Holes	514													
# of Projected Drill Holes														
2014-15	300													
Total # of Drill Holes	814													
% of Drill Holes Requiring Bentonite Top 100 ft	20%													
Total Footage Requiring Abandonment (ft)	16,280													
Hole Abandonment ($/ft)	$3.30													
Subtotal Plug and Abandonment Costs	$53,724													
Projected Drill Hole Abandonment; ave depth 800ft	$792,000													
B. Incidental Costs														
Total # of Drill Holes	814													
Site Location ($/hole)	$11													
Capping ($/hole)	$11													
Small Site Grading and Seeding ($/site)	$55													
Subtotal Incidental Costs	$62,678													
Total Delineation Hole Abandonment	**$908,402**													
IV. Waste Disposal Well Abandonment	**Morton No. 1-20**	**Vollman No. 33-27**	**SRHUP # 9**											
A. Well Sealing														
Total Depth of Well	9,206	14,412	9,500											
Sealing Cost Per Foot	$13.62	$13.62	$13.62											
*Sealing costs per foot includes surface reclamation costs														
Subtotal Plugging Costs per Well	$125,386	$196,291	$129,390											
B. Pump Dismantling and Decontamination														
Number of Pumps	2	2	2											
Pump Dismantling and Disposal Cost	$2,788	$2,788	$2,788											
Subtotal Dismantling and Decon Costs per Well	$5,576.06	$5,576.06	$5,576.06											
C. Tubing String Disposal (NRC-Licensed Facility)														
Length of Tubing String (ft)	8,498	8,869	8,820											
Diameter of Tubing String (inches)	2.875	2.875	2.875											
Volume of Tubing String (ft^3)	383	400	397											
Transportation and Disposal Unit Cost ($/ft3)	$7.32	$7.32	$7.32											
Subtotal Tubing String Disposal Costs per Well	$2,804	$2,927	$2,911											
Subtotal Waste Disposal Well Abandonment Costs per Well	$133,766	$204,795	$137,877											
Total Waste Disposal Well Abandonment Costs	**$476,438**													
TOTAL WELL AND DRILL HOLE ABANDONMENT COSTS	**$9,418,436**													

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Wellfield Buildings and Equipment Removal and Disposal	A-Wellfield	B-Wellfield	C-Wellfield	C-22 Pattern	C Haul Drifts	D-Wellfield	D-Extension	E-Wellfield	F-Wellfield	H-Wellfield	I-Wellfield	J-Wellfield	J-Extension
I. Wellfield Piping				Inc in MU-C	Inc in MU-C								
Number of Header Houses per Wellfield	5	18	20	0	0	4	3	15	43	10	6	9	5
Approximate Length of Piping per Header House (ft)	13,800	13,800	13,800	13,800	13,800	13,800	13,800	13,800	13,800	13,800	13,800	13,800	13,800
*average 46 wells per with 300 ft pipeline/well)													
Approximate Total Length of Piping (ft)	69,000	248,400	276,000	0	0	55,200	41,400	207,000	593,400	138,000	82,800	124,200	69,000
A. Removal and Loading													
Wellfield Piping Removal Unit Cost ($/ft of pipe)	$1.86	$1.86	$1.86	$1.86	$1.86	$1.86	$1.86	$1.86	$1.86	$1.86	$1.86	$1.86	$1.86
Subtotal Wellfield Piping Removal and Loading Costs	$128,109	$461,192	$512,436	$0	$0	$102,487	$76,865	$384,327	$1,101,737	$256,218	$153,731	$230,596	$128,109
B. Transport and Disposal Costs (NRC-Licensed Facility)													
Average Diameter of Piping (inches)	2	2	2	2	2	2	2	2	2	2	2	2	2
Chipped Volume Reduction (ft3/ft)	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011
Chipped Volume per Wellfield (ft^3)	740	2663	2959	0	0	592	444	2219	6362	1480	888	1332	740
Volume for Disposal Assuming 10% Void Space (ft^3)	814	2930	3255	0	0	651	488	2441	6998	1628	977	1465	814
Transportation and Disposal Unit Cost ($/ft3)	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77
Subtotal Wellfield Piping Transport and Disposal Costs	$4,697	$16,905	$18,781	$0	$0	$3,756	$2,816	$14,084	$40,377	$9,393	$5,637	$8,453	$4,697
Subtotal Wellfield Piping Costs per Wellfield	$132,806	$478,097	$531,217	$0	$0	$106,243	$79,681	$398,411	$1,142,114	$265,611	$159,368	$239,049	$132,806
Total Wellfield Piping Costs	**$3,665,403**												
II. Well Pumps and DownholeTubing													
Assumptions: Pump and tubing removal costs included under ground water restoration labor													
60% of production/injection wells contain pumps and/or tubing													
A. Pump and Tubing Transportation and Disposal				Inc in MU-C	Inc in MU-C		Inc in MU-D						
Number of Production Wells	0	133	204	0	0	91	0	145	549	169	136	123	56
Number of Injection Wells	1	194	261	0	0	143	0	234	794	288	239	242	112
Number of Monitor Wells	7	64	85	0	0	50	0	59	113	74	34	45	25
1. Pump Volume													
Number of Production Wells with Pumps	0	133	203.5	0	0	91	0	145	549	168.5	136	123	56
Pump Volume (ft^3)	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Pump Volume per Wellfield (ft^3)	0.0	57.6	88.1	0.0	0.0	39.4	0.0	62.8	237.8	73.0	58.9	53.3	24.3
2. Tubing Volume													
Average Tubing Length per Well (ft)	475	425	525	525	525	575	575	525	625	475	625	515	515
*Average tubing length/wellfield based on average well depth minus 25 ft													
Number of Production Wells with Tubing	0	80	122	0	0	55	0	87	329	101	82	74	34
Number of Injection Wells with Tubing	1	116	156	0	0	86	0	140	476	173	143	145	67
Tubing Length per Wellfield (ft)	3,800	110,500	190,575	0	0	109,825	0	150,150	573,750	165,300	161,875	135,960	64,890
Diameter of Production Well Fiberglass Tubing (inches)	2	2	2	2	2	2	2	2	2	2	2	2	2
Diameter of Injection Well HDPE Tubing (inches)	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Chipped Volume Reduction (ft^3/ft)	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011
Chipped Volume per Wellfield (ft^3)	41	1185	2043	0	0	1177	0	1610	6151	1772	1736	1458	696
Volume of Pump and Tubing (ft^3)	41	1243	2131	0	0	1216	0	1673	6389	1845	1795	1511	720
Volume for Disposal Assuming Void Space (ft^3)	45	1367	2344	0	0	1338	0	1840	7028	2029	1974	1662	792
Transportation and Disposal Unit Cost ($/ft3)	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77
Subtotal Pump and Tubing Transport and Disposal Costs Per Wellfield	$260	$7,887	$13,524	$0	$0	$7,720	$0	$10,616	$40,550	$11,707	$11,390	$9,589	$4,570
Total Pump and DownholeTubing Costs	**$117,813**												
III. Buried Trunkline (Includes $ for fiber optic cable removal)													
Assumptions:		Inc in MU-A		Inc in MU-C	Inc in MU-C			Inc in MU-D					
Length of Trunkline Trench (ft)	6500	0	5900	0	0	12000	5500	0	11700	13200	10750	2500	2000
A. Removal and Loading													
Main Pipeline Removal Unit Cost ($/ft of trench)	$3.71	$3.71	$3.71	$3.71	$3.71	$3.71	$3.71	$3.71	$3.71	$3.71	$3.71	$3.71	$3.71
Subtotal Trunkline Removal and Loading Costs	$24,136	$0	$21,908	$0	$0	$44,560	$20,423	$0	$43,446	$49,016	$39,918	$9,283	$7,427
B. Transport and Disposal Costs (NRC-Licensed Facility)													
1. 3" HDPE Trunkline													
Piping Length (ft)	6500	0	5900	0	0	12000	5500	0	11700	13200	10750	0	0
Chipped Volume per Lft (ft3/ft)	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023
Chipped Volume (ft^3)	151	0	137	0	0	279	128	0	272	307	250	0	0
2. 6" HDPE Trunkline													
Piping Length (ft)	0	0	0	0	0	0	11000	0	0	0	3000	0	0
Chipped Volume per Lft (ft3/ft)	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.083

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Wellfield Buildings and Equipment Removal and Disposal	A-Wellfield	B-Wellfield	C-Wellfield	C-22 Pattern	C Haul Drifts	D-Wellfield	D-Extension	E-Wellfield	F-Wellfield	H-Wellfield	I-Wellfield	J-Wellfield	J-Extension
Chipped Volume (ft^3)	0	0	0	0	0	0	917	0	0	0	250	0	0
3. 10" HDPE Trunkline													
Piping Length (ft)	13000	0	0	0	0	0	0	0	0	0	750	2000	1500
Chipped Volume per Lft (ft3/ft)	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220
Chipped Volume (ft^3)	2854	0	0	0	0	0	0	0	0	0	165	439	329
4. 12" HDPE Trunkline													
Piping Length (ft)	0	0	11800	0	0	24000	0	0	0	0	0	2000	1500
Chipped Volume per Lft (ft3/ft)	0.309	0.309	0.309	0.309	0.309	0.309	0.309	0.309	0.309	0.309	0.309	0.309	0.309
Chipped Volume (ft^3)	0	0	3644	0	0	7411	0	0	0	0	0	618	463
5. 14" HDPE Trunkline													
Piping Length (ft)	0	0	0	0	0	0	0	0	23400	26400	8500	0	0
Chipped Volume per Lft (ft3/ft)	0.372	0.372	0.372	0.372	0.372	0.372	0.372	0.372	0.372	0.372	0.372	0.372	0.372
Chipped Volume (ft^3)	0	0	0	0	0	0	0	0	8712	9829	3165	0	0
6. 16" HDPE Trunkline													
Piping Length (ft)	0	0	0	0	0	0	0	0	23400	26400	8500	0	0
Chipped Volume per Lft (ft3/ft)	0.486	0.486	0.486	0.486	0.486	0.486	0.486	0.486	0.486	0.486	0.486	0.486	0.486
Chipped Volume (ft^3)	0	0	0	0	0	0	0	0	11381	12841	4134	0	0
Total Trunkline Chipped Volume (ft^3)	3006	0	3781	0	0	7691	1045	0	20366	22977	7964	1057	793
Volume for Disposal Assuming 10% Void Space (ft^3)	3306	0	4159	0	0	8460	1150	0	22403	25275	8761	1162	872
Transportation and Disposal Unit Cost ($/ft3)	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77
Subtotal Trunkline Transport and Disposal Costs	$19,075	$0	$23,996	$0	$0	$48,812	$6,635	$0	$129,260	$145,831	$50,549	$6,704	$5,031
Subtotal Trunkline Decommissioning Costs per Wellfield	$43,211	$0	$45,904	$0	$0	$93,372	$27,058	$0	$172,706	$194,847	$90,467	$15,987	$12,458
Total Trunkline Decommissioning Costs	**$696,010**												
IV. Wellhead Cover Removal				Inc in MU-C	Inc in MU-C								
Number of Production and Injection Wells	1	327	459	0	0	234	0	369	1163	451	365	347	168
Well Head Removal, Decontamination, and Disposal Cost	$11.74	$11.74	$11.74	$11.74	$11.74	$11.74	$11.74	$11.74	$11.74	$11.74	$11.74	$11.74	$11.74
Subtotal Wellhead Removal Costs	$12	$3,839	$5,388	$0	$0	$2,747	$0	$4,332	$13,653	$5,294	$4,285	$4,074	$1,972
Total Wellhead Cover Removal Costs	**$45,596**												
IV. Header Houses (Includes Booster Stations)				Inc in MU-C	Inc in MU-C								
Total Quantity	5	18	21	0	0	4	3	15	43	11	6	9	5
Average Header House Volume (ft^3)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
A. Removal													
Total Volume (ft^3)	8000	28800	33600	0	0	6400	4800	24000	68800	17600	9600	14400	8000
Demolition Cost	$0.316	$0.316	$0.316	$0.316	$0.316	$0.316	$0.316	$0.316	$0.316	$0.316	$0.316	$0.316	$0.316
Subtotal Building Demolition Costs	$2,526	$9,092	$10,608	$0	$0	$2,020	$1,515	$7,577	$21,720	$5,556	$3,031	$4,546	$2,526
B. Survey and Decontamination													
Cost per Header House	$621	$621	$621	$621	$621	$621	$621	$621	$621	$621	$621	$621	$621
Subtotal Survey and Decontamination Costs	$3,107	$11,185	$13,049	$0	$0	$2,486	$1,864	$9,321	$26,720	$6,835	$3,728	$5,592	$3,107
C. Disposal													
Total Volume for Disposal - Incl. 33% Factor (cy)	98	352	411	0	0	78	59	293	841	215	117	176	98
Volume for Disposal Assuming Void Space (cy)	108	387	452	0	0	86	65	323	925	237	129	194	108
Disposal Cost, Landfill (cy)	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17
Subtotal County Landfill Disposal Costs	$4,554	$16,319	$19,059	$0	$0	$3,626	$2,741	$13,620	$39,004	$9,994	$5,440	$8,180	$4,554
Headerhouse Soil Removal Volume (assumes 10'Wx20'Lx2.5'D)	500	500	500	500	500	500	500	500	500	500	500	500	500
11e.(2) Disposal Cost (ft^3)	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80	$5.80
Subtotal 11(e)2 Disposal Cost	$14,512	$52,243	$60,951	$0	$0	$11,610	$8,707	$43,536	$124,804	$31,926	$17,414	$26,122	$14,512
Subtotal Header House Removal and Disposal Costs per Wellfield	$24,699	$88,839	$103,667	$0	$0	$19,742	$14,827	$74,054	$212,248	$54,311	$29,613	$44,440	$24,699
Total Header House Removal and Disposal Costs	**$691,139**												
TOTAL REMOVAL AND DISPOSAL COSTS PER WELLFIELD	$200,988	$578,662	$699,700	$0	$0	$229,824	$121,566	$487,413	$1,581,271	$531,770	$295,123	$313,139	$176,505
TOTAL WELLFIELD BUILDINGS AND EQUIPMENT REMOVAL	**$5,215,961**												

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Wellfield and Satellite Surface Reclamation	Mine Unit-A/B	Mine Unit-C	Mine Unit-D	Mine Unit-E	Mine Unit-F	Mine Unit-H	D-Extension	Mine Unit-I	Mine Unit-J	J-Extension
I. Wellfield Pattern Area Reclamation										
Pattern Area (acres)	37.9	63.9	15.0	44.6	157.6	56.1	9.3	52.7	52.7	40.0
*Assumes wellfield pattern area X 2										
Discing/Seeding Unit Cost ($/acre)	$548	$548	$548	$548	$548	$548	$548	$548	$548	$548
Subtotal Pattern Area Reclamation Costs per Wellfield	$20,746	$35,007	$8,215	$24,437	$86,302	$30,746	$5,071	$28,840	$28,884	$21,907
Total Wellfield Pattern Area Reclamation Costs	**$290,155**									
II. Wellfield Road Reclamation										
Road Construction										
Length of Wellfield Roads (1000 ft)	12.8	11.3	2.4	13.3	18	15.7	5	5	5	5
Wellfield Road Reclamation Unit Cost ($/1000 ft)	$1,438	$1,438	$1,438	$1,438	$1,438	$1,438	$1,438	$1,438	$1,438	$1,438
Subtotal Wellfield Road Reclamation Costs	$18,402	$16,245	$3,450	$19,120	$25,877	$22,571	$7,188	$7,188	$7,188	$7,188
Total Wellfield Road Reclamation Costs	**$134,417**									
III. Laydown area reclamation										
Area of Disturbance (acres)	1	1	1	1	1	1	1	1	1	1
Average Depth of Stripped Topsoil (ft)	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Surface Grade: Level Ground										
Average Length of Topsoil Haul (ft)	500	500	500	500	500	500	500	500	500	500
A. Ripping Overburden with Dozer										
Ripping Cost (per acre)	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381
Subtotal Ripping Costs	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381	$1,381
B. Topsoil Application with Scraper										
Volume of Topsoil Removed (cy)	1081	1081	1081	1081	1081	1081	1081	1081	1081	1081
Moving Materials (0% Grade)	$1.21	$1.21	$1.21	$1.21	$1.21	$1.21	$1.21	$1.21	$1.21	$1.21
Subtotal Topsoil Application Costs	$1,307	$1,307	$1,307	$1,307	$1,307	$1,307	$1,307	$1,307	$1,307	$1,307
C. Discing and Seeding										
Discing/Seeding Unit Cost ($/acre)	$548	$548	$548	$548	$548	$548	$548	$548	$548	$548
Subtotal Discing/Seeding Costs	$548	$548	$548	$548	$548	$548	$548	$548	$548	$548
Subtotal Surface Reclamation Costs per WF laydown area	$3,236	$3,236	$3,236	$3,236	$3,236	$3,236	$3,236	$3,236	$3,236	$3,236
Total Wellfield Laydown Area Reclamation Costs	**$32,360**									
IV. Fence Removal										
Length of Fencing (ft)	13,720	18,694	14,060	18,426	29,540	9,680	0	0	9,977	10,000
Fence Removal Costs	$0.43	$0.43	$0.43	$0.43	$0.43	$0.43	$0.43	$0.43	$0.43	$0.43
Subtotal Fence Removal Costs per Wellfield	$5,886	$8,020	$6,032	$7,905	$12,673	$4,153	$0	$0	$4,280	$4,290
Total Fence Removal Costs	**$53,238**									
SUBTOTAL SURFACE RECLAMATION COSTS PER WELLFIELD	**$48,270**	**$62,508**	**$20,933**	**$54,698**	**$128,088**	**$60,706**	**$15,495**	**$39,264**	**$43,588**	**$36,621**
TOTAL WELLFIELD SURFACE RECLAMATION COSTS	**$510,170**									
V. Satellite Area Reclamation	**Satellite No.1**	**Satellite No.2**	**Satellite No.3**	**Se Plant**						
Assumptions:										
Area of Disturbance (acres)	1	3	2.5	2						
Average Depth of Stripped Topsoil (ft)	1	0.67	0.67	0.67						
Surface Grade: Level Ground										
Average Length of Topsoil Haul (ft)	1000	500	500	500						
A. Ripping Overburden with Dozer										
Ripping Cost (per acre)	$1,381.27	$1,381.27	$1,381.27	$1,381.27						
Subtotal Ripping Costs	$1,381.00	$4,144.00	$3,453	$2,763						
B. Topsoil Application with Scraper										
Volume of Topsoil Removed (cy)	1613	3243	2702	2162						
Moving Materials (0% Grade)	$1.44	$1.44	$1.44	$1.44						
Subtotal Topsoil Application Costs	$2,330	$4,684	$3,903	$3,122						
C. Discing and Seeding										
Discing/Seeding Unit Cost ($/acre)	$548	$548	$548	$548						
Subtotal Discing/Seeding Costs	$548	$1,643	$1,369	$1,095						
Subtotal Surface Reclamation Costs per Satellite	$4,259	$10,471	$8,725	$6,980						
Total Satellite Building Area Reclamation Costs	**$30,435**									
TOTAL WELLFIELD & SATELLITE SURFACE RECLAMATION COSTS	**$540,605**									

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Equipment Removal and Loading	Central Plant	Satellite No. 1	Satellite No. 2	Satellite No. 3	Selenium Plant
I. Removal and Loading Costs					
A. Tankage					
Number of Tanks	39	8	14	18	7
Volume of Tank Construction Material (ft^3)	1629	162	290	397	290
Tank Removal Cost	$144.12	$144.12	$144.12	$144.12	$144.12
Subtotal Tankage Removal and Loading Costs	$234,773	$23,348	$41,795	$57,216	$41,795
B. PVC/Steel Pipe					
PVC Pipe Footage	12996	1000	4000	4000	4000
Average PVC Pipe Diameter (inches)	3	3	3	3	3
Shredded PVC Pipe Volume Reduction (ft3/ft)	0.023	0.023	0.023	0.023	0.023
Volume of Shredded PVC Pipe (ft^3)	303	23	93	93	93
Steel Pipe Footage	645	0	0	0	0
Average Steel Pipe Diameter (inches)	2	0	0	0	0
Volume (ft^3)	15	0	0	0	0
Pipe Removal Cost	$8.93	$8.93	$8.93	$8.93	$8.93
Subtotal PVC/Steel Pipe Labor & Equipment Costs	$121,803	$8,929	$35,717	$35,717	$35,717
C. Pumps					
Number of Pumps	52	10	14	13	14
Average Volume (ft^3/pump)	4.93	4.93	4.93	4.93	4.93
Volume of Pumps (ft^3)	256.36	49.3	69.02	64.09	69.02
Pump Removal Cost	$108.14	$108.14	$108.14	$108.14	$108.14
Subtotal Pump Removal and Loading Costs	$27,722	$5,331	$7,464	$6,930	$7,464
D. Dryer					
Dryer Volume (ft^3)	885	0	0	0	0
Dryer Removal Cost	$14.71	$14.71	$14.71	$14.71	$14.71
Subtotal Dryer Removal Costs	$13,017	$0	$0	$0	$0
E. RO and Degasser Units					
Number of RO Units (500 gpm)					
Current	0	0	2.5	0	0
Planned	0	0	0	0	0
Number of Degasser Units					
Current	0	0	0	0	1
Planned	0	0	0	0	0
RO/Degasser Average Volume (ft3/Unit)	250	250	250	250	250
RO and Degasser Removal Cost	$5.02	$5.02	$5.02	$5.02	$5.02
Subtotal RO Unit Removal and Loading Costs	$0	$0	$3,141	$0	$1,256
Subtotal Equipment Removal and Loading Costs per Facility	$397,315	$37,608	$88,116	$99,863	$86,231
Total Equipment Removal and Loading Costs	**$709,133**				

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Equipment Removal and Loading	Central Plant	Satellite No. 1	Satellite No. 2	Satellite No. 3	Selenium Plant
II. Transportation and Disposal Costs (NRC-Licensed Facility)					
A. Tankage					
Volume of Tank Construction Material (ft^3)	1629	162	290	397	290
Volume for Disposal Assuming Void Space (ft^3)	1792	178	319	437	319
Transportation and Disposal Unit Cost ($/ft3)	$7.32	$7.32	$7.32	$7.32	$7.32
Subtotal Tankage Transportation and Disposal Costs	$13,124	$1,304	$2,336	$3,200	$2,336
B. PVC / Steel Pipe					
Volume of Shredded PVC Pipe (ft^3)	303	23	93	93	93
Volume for Disposal Assuming Void Space (ft^3)	333	25	102	102	102
Volume of Steel Pipe (ft^3)	15	0	0	0	0
Volume for Disposal Assuming Void Space (ft^3)	17	0	0	0	0
Transportation and Disposal Unit Cost ($/ft3)	$5.77	$5.77	$5.77	$5.77	$5.77
Subtotal PVC Pipe Transportation and Disposal Costs	$2,019	$144	$589	$589	$589
C. Pumps					
Volume of Pumps (ft^3)	256.36	49.3	69.02	64.09	69.02
Volume for Disposal Assuming Void Space (ft^3)	282	54	76	70	76
Transportation and Disposal Unit Cost ($/ft3)	$7.32	$7.32	$7.32	$7.32	$7.32
Subtotal Pump Transportation and Disposal Costs	$2,065	$395	$557	$513	$557
D. Dryer					
Dryer Volume (ft^3)	885	0	0	0	0
Volume for Disposal Assuming Dryer Remains Intact (ft^3)	885	0	0	0	0
Transportation and Disposal Unit Cost ($/ft3)	$7.32	$7.32	$7.32	$7.32	$7.32
Subotal Dryer Transportation and Disposal Costs	$6,481	$0	$0	$0	$0
E. RO/Degasser Units					
Volume of RO/Degasser Units (ft^3)	0	0	625	0	250
Volume for Disposal Assuming Volume Reduction (ft^3)	0	0	687.5	0	275
Transportation and Disposal Unit Costs	$7.32	$7.32	$7.32	$7.32	$7.32
Subtotal RO Unit Transportation and Disposal Costs	$0	$0	$5,035	$0	$2,014
Subtotal Equipment Transportation and Disposal Costs per Facility	$23,689	$1,843	$8,517	$4,302	$5,496
Total Equipment Transportation and Disposal Costs	**$43,847**				
III. Health and Safety Costs					
Radiation Safety Equipment — Accounted for on GW REST					
Total Health and Safety Costs					
SUBTOTAL EQUIPMENT REMOVAL AND DISPOSAL COSTS PER FACILITY	$421,004	$39,451	$96,633	$104,165	$91,727
TOTAL EQUIPMENT REMOVAL AND DISPOSAL COSTS	**$752,980**				

Cameco Resources
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Building Demolition and Disposal	Central Plant	Dryer Building	Satellite No. 1	Satellite No. 2	Satellite No. 3	Sat. No. 3 Fab Shop	Yellowcake Warehouse	South Warehouse	Suspended Walkway	Changehouse and Lab	Process/ Fire Water	Potable Water Bldg
I. Decontamination Costs												
A. Wall Decontamination												
Area to be Decontaminated (ft^2)	131,000	20,000	0	0	0	0	0	0	0	0	0	0
HCl Acid Wash, including labor ($/ft2)	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94
Subtotal Wall Decontamination Costs	$123,600	$18,870	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
B. Concrete Floor Decontamination												
Area to be Decontaminated (ft^2)	17,820	0	6,000	9,600	9,600	0	0	0	0	0	0	0
HCl Acid Wash, including labor ($/ft2)	$0.53	$0.53	$0.53	$0.53	$0.53	$0.53	$0.53	$0.53	$0.53	$0.53	$0.53	$0.53
Subtotal Concrete Floor Decontamination Costs	$9,358	$0	$3,151	$5,042	$5,042	$0	$0	$0	$0	$0	$0	$0
C. Deep Well Injection Costs												
Total kgals for Injection (1 gal used per ft2)	148.82	20	6	9.6	9.6	0	0	0	0	0	0	0
Deep Well Injection Unit Cost ($/kgals)	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13
Subtotal Deep Well Injection Costs	$168	$23	$7	$11	$11	$0	$0	$0	$0	$0	$0	$0
Subtotal Decontamination Costs per Building	$133,126	$18,893	$3,158	$5,053	$5,053	$0	$0	$0	$0	$0	$0	$0
Total Decontamination Costs	**$176,103**											
II. Demolition Costs												
A. Building												
Height of Building (ft)	24	24	24	25	25	25	14	19	0	14	21	35
Volume of Building (ft^3)	794,000	30,720	192,000	320,000	320,000	37,560	91,000	333,000	5,600	73000	16,500	6,300
Demolition Cost	$0.316	$0.316	$0.316	$0.316	$0.316	$0.316	$0.316	$0.316	$0.316	$0.316	$0.316	$0.316
Subtotal Building Demolition Costs	$250,666	$9,698	$60,614	$101,024	$101,024	$11,858	$28,729	$105,128	$1,768	$23,046	$5,209	$1,989
B. Concrete Floor												
Area of Concrete Floor (ft^2)	23,760	500	8,000	12800	12800	0	6500	18000	0	5400	800	180
Demolition Cost	$6.03	$6.03	$6.03	$6.03	$6.03	$6.03	$6.03	$6.03	$6.03	$6.03	$6.03	$6.03
Subtotal Concrete Floor Demolition Costs	$143,225	$3,014	$48,224	$77,158	$77,158	$0	$39,182	$108,504	$0	$32,551	$4,822	$1,085
C. Concrete Footing												
Length of Concrete Footing (ft)	617	89	358	453	453	0	322	537	0	294	113	54
Demolition Cost	$22.23	$22.23	$22.23	$22.23	$22.23	$22.23	$22.23	$22.23	$22.23	$22.23	$22.23	$22.23
Subtotal Concrete Footing Demolition Costs	$13,707	$1,988	$7,954	$10,061	$10,061	$0	$7,169	$11,930	$0	$6,535	$2,515	$1,193
Subtotal Demolition Costs per Building	$407,598	$14,700	$116,792	$188,243	$188,243	$11,858	$75,080	$225,562	$1,768	$62,132	$12,546	$4,267
Total Demolition Costs	**$1,598,519**											
III. Disposal Costs												
A. Building												
Volume of Building (cy)	29407	1138	7111	11852	11852	1391	3370	12333	207	2704	611	233
Off-Site County Landfill												
Percentage (%)	100	100	100	100	100	100	100	100	100	100	100	100
Total Volume for Disposal - Incl. 33% Factor (cy)	9704	375	2347	3911	3911	459	1112	4070	68	892	202	77
Disposal Cost, Landfill (cy)	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17
Subtotal County Facility Off-Site Disposal Costs	$409,204	$15,832	$98,951	$164,919	$164,919	$19,357	$46,899	$171,618	$2,886	$37,622	$8,504	$3,247
B. Concrete Floor												
Area of Concrete Floor (ft^2)	23760	500	8000	12800	12800	1500	6500	18000	1186	3000	800	180
Average Thickness of Concrete Floor (ft)	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Volume of Concrete Floor (ft^3)	17820	375	6000	9600	9600	1125	4875	13500	889.5	2250	600	135
Volume of Concrete Floor (cy)	660	14	222	356	356	42	181	500	33	83	22	5
1. On-Site Concrete Disposal												
Percentage (%)	75	75	75	100	100	100	100	100	100	100	100	100

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Building Demolition and Disposal	Central Plant	Dryer Building	Satellite No. 1	Satellite No. 2	Satellite No. 3	Sat. No. 3 Fab Shop	Yellowcake Warehouse	South Warehouse	Suspended Walkway	Changehouse and Lab	Process/ Fire Water	Potable Water Bldg
Volume for Disposal (cy)	495	10	167	356	356	42	181	500	33	83	633	5
Concrete Disposal On Site (cy)	$9.12	$9.12	$9.12	$9.12	$9.12	$9.12	$9.12	$9.12	$9.12	$9.12	$9.12	$9.12
Subtotal County Facility Off-Site Disposal Costs	$4,514	$95	$1,520	$3,242	$3,242	$380	$1,646	$4,560	$300	$760	$5,775	$46
2. NRC-Licensed Facility												
Percentage (%)	25	25	25	0	0	0	0	0	0	0	0	0
Volume for Disposal (ft^3)	4455	94	1500	0	0	0	0	0	0	0	0	0
Transportation and Disposal Unit Cost ($/$ft^3$)	$7.32	$7.32	$7.32	$7.32	$7.32	$7.32	$7.32	$7.32	$7.32	$7.32	$7.32	$7.32
Subtotal NRC-Licensed Facility Disposal Costs	$32,626	$687	$10,985	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Concrete Floor Disposal Costs	$37,140	$782	$12,505	$3,242	$3,242	$380	$1,646	$4,560	$300	$760	$5,775	$46
C. Concrete Footing												
Length of Concrete Footing (ft)	617	89	358	453	453	0	322	537	124	294	113	54
Average Depth of Concrete Footing (ft)	4	4	4	4	4	4	4	4	4	4	4	4
Average Width of Concrete Footing (ft)	1	1	1	1	1	1	1	1	1	1	1	1
Volume of Concrete Footing (ft^3)	2466	358	1431	1810	1810	0	1290	2147	496	1176	453	215
Volume of Concrete Footing (cy)	91	13	53	67	67	0	48	80	18	44	17	8
Concrete Disposal On Site (cy)	$9.12	$9.12	$9.12	$9.12	$9.12	$9.12	$9.12	$9.12	$9.12	$9.12	$9.12	$9.12
Subtotal Concrete Footing Disposal Costs	$833	$121	$483	$611	$611	$0	$436	$725	$168	$397	$153	$73
Subtotal Disposal Costs per Building	$447,177	$16,735	$111,939	$168,772	$168,772	$19,737	$48,981	$176,903	$3,354	$38,779	$14,432	$3,366
Total Disposal Costs	**$1,414,935**											
IV. Health and Safety Costs Accounted for on GW REST												
SUBTOTAL BUILDING DEMOLITION AND DISPOSAL COSTS	$987,901	$50,328	$231,889	$362,068	$362,068	$31,595	$124,061	$402,465	$5,122	$100,911	$26,978	$7,633
TOTAL BUILDING DEMOLITION AND DISPOSAL COSTS	**$3,189,557**											

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Building Demolition and Disposal	Potable Water Tank Slab	Central Plant Tank Slabs	Selenium Plant	SRHUP #9 DDW	Vollman 33-27 DDW	Morton 1-20 DDW
I. Decontamination Costs						
A. Wall Decontamination						
Area to be Decontaminated (ft^2)	0	0	4,000	0	0	0
HCl Acid Wash, including labor ($/ft2)	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94
Subtotal Wall Decontamination Costs	$0	$0	$3,774	$0	$0	$0
B. Concrete Floor Decontamination						
Area to be Decontaminated (ft^2)	0	0	9,600	1260	1260	1260
HCl Acid Wash, including labor ($/ft2)	$0.53	$0.53	$0.53	$0.53	$0.53	$0.53
Subtotal Concrete Floor Decontamination Costs	$0	$0	$5,042	$662	$662	$662
C. Deep Well Injection Costs						
Total kgals for Injection (1 gal used per ft2)	0	0	13.6	1.26	1.26	1.26
Deep Well Injection Unit Cost ($/kgals)	$1.13	$1.13	$1.13	$1.13	$1.13	$1.13
Subtotal Deep Well Injection Costs	$0	$0	$15	$1	$1	$1
Subtotal Decontamination Costs per Building	$0	$0	$8,831	$663	$663	$663
Total Decontamination Costs						
II. Demolition Costs						
A. Building						
Height of Building (ft)	0	0	25	12	12	12
Volume of Building (ft^3)	0	0	320,000	15120	15120	15120
Demolition Cost	$0.316	$0.316	$0.316	$0.316	$0.316	$0.316
Subtotal Building Demolition Costs	$0	$0	$101,024	$4,773	$4,773	$4,773
B. Concrete Floor						
Area of Concrete Floor (ft^2)	1256	7854	12800	1260	1260	1260
Demolition Cost	$6.03	$6.03	$6.03	$6.03	$6.03	$6.03
Subtotal Concrete Floor Demolition Costs	$7,571	$47,344	$77,158	$7,595	$7,595	$7,595
C. Concrete Footing						
Length of Concrete Footing (ft)	0	0	453	142	142	142
Demolition Cost	$22.23	$22.23	$22.23	$22.23	$22.23	$22.23
Subtotal Concrete Footing Demolition Costs	$0	$0	$10,061	$3,156	$3,156	$3,156
Subtotal Demolition Costs per Building	$7,571	$47,344	$188,243	$15,524	$15,524	$15,524
Total Demolition Costs						
III. Disposal Costs						
A. Building						
Volume of Building (cy)	0	0	11852	560	560	560
Off-Site County Landfill						
Percentage (%)	100	100	100	100	100	100
Total Volume for Disposal - Incl. 33% Factor (cy)	0	0	3911	185	185	185
Disposal Cost, Landfill (cy)	$42.17	$42.17	$42.17	$42.17	$42.17	$42.17
Subtotal County Facility Off-Site Disposal Costs	$0	$0	$164,919	$7,792	$7,792	$7,792
B. Concrete Floor						
Area of Concrete Floor (ft^2)	1256	7854	12800	1260	1260	1260
Average Thickness of Concrete Floor (ft)	0.75	0.75	0.75	0.75	0.75	0.75
Volume of Concrete Floor (ft^3)	942	5890.5	9600	945	945	945
Volume of Concrete Floor (cy)	35	218	356	35	35	35
1. On-Site Concrete Disposal						
Percentage (%)	100	100	100	100	100	100

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	Potable Water Tank Slab	Central Plant Tank Slabs	Selenium Plant	SRHUP #9 DDW	Vollman 33-27 DDW	Morton 1-20 DDW
Building Demolition and Disposal						
Volume for Disposal (cy)	35	218	356	35	35	35
Concrete Disposal On Site (cy)	$9.12	$9.12	$9.12	$9.12	$9.12	$9.12
Subtotal County Facility Off-Site Disposal Costs	$318	$1,989	$3,242	$319	$319	$319
2. NRC-Licensed Facility						
Percentage (%)	0	0	0	0	0	0
Volume for Disposal (ft^3)	0	0	0	0	0	0
Transportation and Disposal Unit Cost ($/$ft^3$)	$7.32	$7.32	$7.32	$7.32	$7.32	$7.32
Subtotal NRC-Licensed Facility Disposal Costs	$0	$0	$0	$0	$0	$0
Subtotal Concrete Floor Disposal Costs	$318	$1,989	$3,242	$319	$319	$319
C. Concrete Footing						
Length of Concrete Footing (ft)	0	0	453	142	142	142
Average Depth of Concrete Footing (ft)	4	4	4	4	4	4
Average Width of Concrete Footing (ft)	1	1	1	1	1	1
Volume of Concrete Footing (ft^3)	0	0	1810	568	568	568
Volume of Concrete Footing (cy)	0	0	67	21	21	21
Concrete Disposal On Site (cy)	$9.12	$9.12	$9.12	$9.12	$9.12	$9.12
Subtotal Concrete Footing Disposal Costs	$0	$0	$611	$192	$192	$192
Subtotal Disposal Costs per Building	$318	$1,989	$168,772	$8,303	$8,303	$8,303
Total Disposal Costs						
IV. Health and Safety Costs Accounted for on GW REST						
SUBTOTAL BUILDING DEMOLITION AND DISPOSAL COSTS	$7,889	$49,333	$365,846	$24,490	$24,490	$24,490
TOTAL BUILDING DEMOLITION AND DISPOSAL COSTS						

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Miscellaneous Reclamation															
I.	**CPF/Office Area Reclamation**														
		Concrete Pad= 0.3 acres													
		Total Area = 10 acres													
	A.	Asphalt													
		Area of Asphalt (acres)				3.4									
		Ripping Cost (per acre)				$969.29									
		Average Thickness (ft)				0.50									
		Moving Materials (0% Grade)				$1.209									
		Volume of Asphalt (cy)				2,743									
		Disposal Cost				$42.17									
		Subtotal Asphalt Ripping and Disposal Costs				$130,525									
	B.	Ripping Overburden with Dozer													
		Overburden Surface Area (acres)				10.6									
		Ripping Cost (per acre)				$1,381.27									
		Subtotal Ripping Overburden Costs				$14,600									
	C.	Topsoil Application													
		Area of surface disturbance (ft^2)				130680									
		Average thickness of topsoil (ft)				0.5									
		Average haul distance (ft)				2000									
		Surface grade (%)				0%									
		Volume of Topsoil (cy)				2,420									
		Moving Materials (0% Grade)				$1.87									
		Subtotal Topsoil Application Costs				$4,528									
	D.	Discing/Seeding													
		Surface Area (acres)				13									
		Discing/Seeding Unit Cost ($/acre)				$548									
		Subtotal Discing/Seeding Costs				$7,120									
Total CPP/Office/Yard Area Reclamation						**$156,773**									
II.	**Access Road Reclamation (includes culverts)**					**CPP/Office Area**	**Sat No. 1**	**Sat No. 3**	**Connecting Road**	**Sat No. 2 to Rancher Rd**					
	A.	Assumptions													
		Surface grade				5%	0%	0%	0%	0%					
		Length of Road (ft)				13200	15840	5280	10560	2640					
		Width of Road (ft)				25	30	30	30	10					
		Area of road (acres)				7.6	10.9	3.6	7.3	0.6					
	B.	Ripping and Hauling Asphalt													
		Assumptions													
		Average Haul Distance (feet)				5500	0	0	0	0.0					
		Average Thickness of Asphalt (ft)				0.5	0.5	0.5	0.5	0.5					
		Ripping Cost (per acre)				$969.29	$969.29	$969.29	$969.29	$969.29					
		Volume of Asphalt (cy)				6111	8800	2933	5867	489					
		Moving Materials (0% Grade)				$1.87	$1.87	$1.87	$1.87	$1.87					
		Subtotal Ripping and Hauling Asphalt				$18,777.58	$27,039.72	$9,013.24	$18,026.48	$1,502.21					
	C.	Gravel Road Base Removal													
		Average haul distance (ft)				0	1000	1000	1000	0					
		Gravel Road Base Width (ft)				0	14	14	14	0					
		Gravel Road Base Area (acres)				0.00	5.09	1.70	3.39	0.00					
		Average Road Base Depth (ft)				0	0.5	0.5	0.5	0					
		Volume of Road Base (cy)				0	4107	1369	2738	0					
		Moving Materials (0% Grade)				$1.44	$1.44	$1.44	$1.44	$1.44					
		Subtotal Gravel Road Base Removal Costs				$0	$5,931	$1,977	$3,954	$0					
	D.	Ripping Overburden with Dozer													
		Overburden Surface Area (acres)				0.0	10.9	3.6	7.3	0.6					
		Ripping Cost (per acre)				$1,381.27	$1,381.27	$1,381.27	$1,381.27	$1,381.27					
		Subtotal Ripping Overburden Costs				$0	$15,068	$5,023	$10,046	$837					
	E.	Topsoil Application													
		Average haul distance (ft)				1500	5000	1500	1500	1500					

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Miscellaneous Reclamation														
			Topsoil Surface Area (ft^2)	330000	475200	158400	316800	26400					
			Depth of Topsoil (ft)	0	0	0	0	0					
			Volume of Topsoil (cy)	0	0	0	0	0					
			Moving Materials (0% Grade)	$1.44	$1.44	$1.44	$1.44	$1.44					
			Subtotal Topsoil Application Costs	$0	$0	$0	$0	$0					
	F.		Discing/Seeding										
			Surface Area (acres)	7.6	10.9	3.6	7.3	0.6					
			Discing/Seeding Unit Cost ($/acre)	$548	$548	$548	$548	$548					
			Subtotal Discing/Seeding Costs	$4,149	$5,975	$1,992	$3,983	$332					
			Multiplier for Projected Additions	0	0	0	0	0					
			Subtotal Reclamation Costs per Access Road	$22,927	$54,014	$18,005	$36,009	$2,671					
Total Access Road Reclamation Costs				**$133,626**									
III.			**Waste Water Pipeline Reclamation**	**SAT2 to SAT1 / Morton 1-20 WW Pipeline**	**SAT3 to SAT2 PSR**	**H-WF Rest. Bypass**	**Vollman WW Pipeline**	**SRHUP 9 WW Pipeline**	**SAT3 to SAT2**	**HUP to SR DDW Pipeline**	**Pipeline to Irrigator 1**	**SAT2 to PSR2**	
			Length of Trench (ft)	24000	22000	2200	13000	4000	10950	9700	24000	5600	
	A.		Removal and Loading										
			Main Pipeline Removal Unit Cost ($/ft of trench)	$3.71	$3.71	$3.71	$3.71	$3.71	$3.71	$3.71	$3.71	$3.71	
			Subtotal Trunkline Removal and Loading Costs	$89,119	$81,693	$8,169	$48,273	$14,853	$40,661	$36,019	$89,119	$20,794	
	B.		Transport and Disposal Costs (NRC-Licensed Facility)										
		1.	3" HDPE Trunkline										
			Piping Length (ft)	24000	0	2200	0	4000	0	0	0	0	
			Chipped Volume Reduction (ft3/ft)	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	
			Chipped Volume (ft^3)	559	0	51	0	93	0	0	0	0	
		2.	4" HDPE Trunkline										
			Piping Length (ft)	0	22000	0	13000	0	0	0	6000	0	
			Chipped Volume Reduction (ft3/ft)	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	
			Chipped Volume (ft^3)	0	846	0	500	0	0	0	231	0	
		3.	6" HDPE Trunkline										
			Piping Length (ft)	0	0	0	0	0	10950	9700	0	3500	
			Chipped Volume Reduction (ft3/ft)	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.083	
			Chipped Volume (ft^3)	0	0	0	0	0	913	809	0	292	
		4.	8" HDPE Trunkline										
			Piping Length (ft)	0	0	0	0	0	0	0	24000	0	
			Chipped Volume Recution (ft3/ft)	0.141	0.141	0.141	0.141	0.141	0.141	0.141	0.141	0.141	
			Chipped Volume	0	0	0	0	0	0	0	3391	0	
			Total Pipeline Disposal Volume	559	846	51	500	93	913	809	3622	292	
			Volume for Disposal Assuming Void Space (ft^3)	615	931	56	550	102	1004	890	3984	321	
			Transportation and Disposal Unit Cost (NRC-Licensed Facility) ($/ft3)	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	$5.77	
			Subtotal Transport and Disposal Costs	$3,548	$5,372	$323	$3,173	$589	$5,793	$5,135	$22,987	$1,852	
	C.		Discing/Seeding										
			Width of Pipeline Trench (ft)	10	10	8	8	8	8	8	8	8	
			Area of Pipeline Trench (acres)	5.5	5.1	0.4	2.4	0.7	2.0	1.8	4.4	1.0	
			Discing/Seeding Unit Cost ($/acre)	$548	$548	$548	$548	$548	$548	$548	$548	$548	
			Subtotal Discing/Seeding Costs	$3,017	$2,766	$221	$1,308	$402	$1,101	$976	$2,414	$563	
			Subtotal Reclamation Costs per Pipeline	$95,684	$89,831	$8,713	$52,754	$15,844	$47,555	$42,130	$114,520	$23,209	
Total Pipeline Reclamation Costs				**$490,240**									
IV.			**Radium Settling Basin Reclamation**	**E. Radium Pond**	**W. Radium Pond**								
			*Cost estimates based on planned expenditures (June 2013)										
	A.		Soil Sampling and Monitoring	$0	$0								
			*Soil Sampling and Characterization were Complete in 2011.										
	B.		Task Training and Access Control	$3,657	$3,657								
	C.		Subsoil Removal and Loading	$15,687	$15,687								
	D.		Site Backfill	$14,334	$14,334								
	E.		Revegetation	$6,318	$6,318								
	F.		Transportation & Disposal to 11e.(2) Facility										

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Miscellaneous Reclamation			
Volume of Subsoil for Disposal (cy)	242.5	242.5	
Transportation and Disposal Unit Cost ($/cy)	$156.73	$156.73	
Subtotal Byproduct Material Transportation & Disposal Costs	$38,007	$38,007	
Subtotal Radium Pond Reclamation	$78,002	$78,003	
Total Settling Basin/Ponds Reclamation Costs	**$156,005**		
V. Purge Storage Reservoir Reclamation	**PSR-1**	**PSR-2**	
A. Soil Sampling and Monitoring			
Number of Soil Samples	10	10	
$/Sample	$255	$255	
Subtotal Soil Sampling and Monitoring Costs	$2,550	$2,550	
B. Leachate Collection System Removal Costs	$5,000	$0	
C. Topsoil/Subsoil Application			
Assumptions:			
Average haul distance (ft)	1000	150	
Surface grade (%)	0	0	
Volume of Topsoil/Subsoil (cy)	83000	74000	
Topsoil/Subsoil Unit Cost per WDEQ Guideline No.12, App.C ($/cy)	$1.444	$0.00	
Topsoil/Subsoil Unit Cost per WDEQ Guideline No.12, App.E ($/cy)	$0.00	$0.386	
Subtotal Topsoil/Subsoil Application Costs per Reservoir	$119,877	$28,571	
D. Discing/Seeding			
Surface Area (acres)	6	32	
Discing/Seeding Unit Cost ($/acre)	$548	$548	
Subtotal Discing/Seeding Costs	$3,286	$17,525	
E. Well Abandonment			
Number of Wells	5	16	
Average Depth (ft)	60	100	
Abandonment Cost	$2.75	$2.75	
Small Site Grading and Seeding (<1000 sq. feet)	$55	$55	
Remove and Dispose Casing (top few feet)	$33	$33	
Monitoring Well Concrete Pedestal Disposal	$110	$110	
Subtotal Well Abandonment Cost	$1,815	$7,568	
Subtotal Reclamation Costs per Reservoir	$132,528	$56,214	
Total Purge Storage Reservoir Reclamation Costs	**$188,742**		
VI. Irrigation Area Reclamation	**Irrigator No. 1A**	**Irrigator No. 2**	
A. Irrigation Equipment Removal Costs	$2,000	$2,000	
B. Plowing			
Assumptions:			
Plowing Unit Cost ($/acre)	$100	$100	
Irrigation Area (acres)	55	106	
Number of Cultivations	2	2	
Subtotal Plowing Costs	$11,000	$21,200	
C. Discing/Seeding			
Discing/Seeding Unit Cost ($/acre)	$548	$548	
Subtotal Discing/Seeding Costs	$30,122	$58,053	
Subtotal Reclamation Costs per Irrigation Area	$43,122	$81,253	
Total Irrigation Area Reclamation Costs	**$124,375**		
VII. Potential Subsoil Mitigation for Purge Storage Reservoirs	**PSR-1**	**PSR-2**	
A. Subsoil Removal and Loading			
Surface Area (acres)	6	32	
Depth (inches)	6	6	
Volume for Removal (cy)	4,840	25,813	
Liner and Subsoil Removal Cost	$5.12	$5.12	
Subtotal Removal and Loading	$24,763	$132,071	
B. Subsoil Transportation and Disposal to 11e.(2) Facility			
Disposal Cost	$156.73	$156.73	
Subtotal Disposal Cost	$758,573	$4,045,724	
Subtotal Reclamation Costs per Reservoir	$783,336	$4,177,795	
Total Purge Storage Reservoir Mitigation Costs	**$4,961,131**		

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Miscellaneous Reclamation																			
VIII.	**Revegetation of Exxon Reclaimed Lands**																		
		Surface Area (acres)							217										
		Assumptions:																	
			10% Reseeding potential areas of erosion ($/acre)						$548										
	Total Exxon Reclaimed Lands Revegetation Costs								**$11,884**										
IX.	**Potential Ground Water Mitigation for Casing Leak Investigation and PSR-2**																		
	A.	CLI Investigation Costs							$891,067	*Based on planned expenditures (June 2013)									
	B.	Ground Water Pump and Treat Costs																	
			Area (ft2)						1,000,000	*Includes PSR-2, C-North and E-Wellfield Areas									
			Sand Thickness (ft)						20										
			Porosity (%)						27%										
			Affected ground water (kgal)						40,392										
			Wellfield Pumping Cost						$0.20										
			Reverse Osmosis Unit Cost ($/kgal)						$0.62										
			Bleed to Deep Disposal Well (%)						25%										
			Brine Volume for Disposal						10,098										
			DDW Disposal Cost($/kgal)						$1.13										
			Permeate Volume for Re-Use						30,294										
			Satellite Pumping Cost ($/kgal)						$0.72										
		Subtotal Ground Water Pump and Treat Costs							$66,064										
	C.	Well Abandonment (CLI Shallow Wells)																	
			# of Monitoring Wells (Current)						151										
			Average Well Depth (ft)						156										
			# of Monitoring Wells (Planned)						21										
			Average Well Depth (ft)						250										
			Total Well Depth (ft)						28,806										
			Well Abandonment ($/ft)						2.75										
			Small Site Grading and Seeding ($/site)						55										
			Remove and Dispose Casing ($/well)						33										
			Concrete Pedestal Disposal ($/each)						110										
		Subtotal Well Abandonment Costs							$113,273										
	Total CLI and PSR-2 Ground Water Mitigation Costs								**$1,070,404**										
TOTAL MISCELLANEOUS RECLAMATION COSTS									**$7,293,180**										

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	A-Wellfield	B-Wellfield	C-Wellfield	C-22 Pattern	C Haul Drifts	D-Wellfield	D-Extension	E-Wellfield	F-Wellfield	H-Wellfield	I-Wellfield	J-Wellfield	J-Extension
Pore Volume Calculations													
Flare Factor	4.13	4.13	2.46	2	0	2.88	2.78	2.9	2.1	2.3	1.83	1.92	1.92
Wellfield Area (ft2)	148,600	676,550	1,067,056	325,000	0	326,750	201,509	971,941	3,431,990	1,222,583	1,146,959	1,148,680	871,200
Wellfield Area (acres)	3.41	15.53	24.50	7.46	0.00	7.50	4.63	22.31	78.79	28.07	26.33	26.37	20.00
Affected Ore Zone Area (ft2)	148,600	676,550	1,067,056	325,000	0	326,750	201,509	971,941	3,431,990	1,222,583	1,146,959	1,148,680	871,200
Avg. Completed Thickness	15.0	15.0	16.0	15.0	0.0	17.0	17.0	16.0	16.0	16.0	20.0	15.0	15.0
Porosity	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Affected Volume (ft3)	9,205,770	41,912,273	41,999,324	9,750,000	0	15,997,680	9,523,315	45,098,062	115,314,864	44,991,054	41,978,699	33,081,984	25,090,560
Kgallons per Pore Volume	18,592	84,646	84,822	19,691	0	32,309	19,233	91,080	232,890	90,864	84,780	66,812	50,673
Restoration Schedule (Based on Annual Water Balance/Schedule Update)													
Pre-Restoration Period (yrs)	0	0	0	0	0	0	0	0	7	0	0	8	8
Restoration Period (yrs)	0	0	1	1	1	1	1	4	13	7	6	8	5
Stability Period (yrs)	0	0	1	1	1	1	1	1	1	1	1	1	1
Total # of Years	0	0	2	2	2	2	2	5	21	8	7	17	14
End of Restoration (yrs)	20												
End of Stability (yrs)	21												
Number of Header Houses per Wellfield													
Current	5	18	20	0	0	4	3	15	43	10	6	9	0
Planned	0	0	0	0	0	0	0	0	0	0	0	0	5
Total Estimated	5	18	20	0	0	4	3	15	43	10	6	9	5
Average Header House Volume (ft3)	1600												
Number of Wells (In Service) per Wellfield													
Production Wells (P)				Inc in MU-C	Inc in MU-C		Inc in MU-D						
Current	0	133	201	0	0	91	0	140	459	166	131	114	0
Planned	0	0	0	0	0	0	0	0	0	0	0	0	56
Total Estimated	0	133	201	0	0	91	0	140	459	166	131	114	56
Injection Wells (I)													
Current	1	194	258	0	0	143	0	229	704	285	234	233	0
Planned	0	0	0	0	0	0	0	0	0	0	0	0	112
Total Estimated	1	194	258	0	0	143	0	229	704	285	234	233	112
Restoration Wells (R)													
Current	0	0	18	0	0	0	0	0	14	0	0	0	0
Planned	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Estimated	0	0	18	0	0	0	0	0	14	0	0	0	0
Monitor Wells (M, MO, MU, etc.)													
Current	7	64	85	0	0	50	0	59	113	74	34	45	0
Planned	0	0	0	0	0	0	0	0	0	0	0	0	25
Total Estimated	7	64	85	0	0	50	0	59	113	74	34	45	25
Other Wells (Pumping Wells, etc.)													
Current	0	1	0	0	0	4	0	0	0	4	2	0	0
Planned	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Estimated	0	1	0	0	0	4	0	0	0	4	2	0	0
Wellfield Refurbishment (I or P)													
Planned	0	0	5	0	0	0	0	10	180	5	10	18	0
Number of Wells per Wellfield	8	392	567	0	0	288	0	438	1470	534	411	410	193
Total Number of In Service Wells	4711												
Well Completion Details													
Average Well Depth (ft)	500	450	550	550	550	600	600	550	650	500	650	540	540
Average Diameter of Casing (inches)	5	5	5	5	5	5	5	5	5	5	5	5	5
Wellfield Fencing													
Length of Fencing (ft)	0	13720	18694	0	0	14060	0	18426	29540	9680	0	9977	10000

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Labor Costs		**Rate ($)**	**Net Benefits***	**Units**	**Source**
Environmental Manager/RSO		$46.00	$64.40	hour	MSEC**
Restoration Manager		$40.00	$56.00	hour	MSEC
Environmental Tech/HPT		$25.00	$35.00	hour	MSEC
Operator/Laborer		$26.00	$36.40	hour	MSEC
Maintenance Tech		$23.00	$32.20	hour	MSEC
*Includes additional 40% net benefits based on InfoMine USA cost data for Surface Metal and Industrial Mineral Mines - Western U.S. (Table 5)					
**Mountain States Employers Council, 2012 Survey, Mining Industry Compensation & Benefits					
Utility Costs		**Rate ($)**	**Profit & Overhead**	**Units**	**Source**
Electrical Costs		$0.0648	included	kWhr	Actual Costs-2013
Kilowatt to Horsepower		0.746	included	Kw/HP	N/A
Efficiency - Downhole Pumps		80%	included	Percent	N/A
Efficiency - Surface Pumps		90%	included	Percent	N/A
Natural Gas - Satellite No. 2/Selenium Treatment Plant		$18,088.78	included	year	Actual Costs-2013
Propane - Satellite No. 2/Selenium Treatment Plant		$1,011.27	included	year	Actual Costs-2013
Propane - Satellite No. 3		$43,188.29	included	year	Actual Costs-2013
Chemical & Material Costs		**Rate ($)**	**Profit & Overhead**	**Units**	**Source**
Antiscalant for RO (Hypersperse)		$3.9050	included	pound	Actual Costs-2013
Antiscalant for RO (ScaleTrol)		$4.5177	included	pound	Actual Costs-2013
Sodium Tripolyphosphate		$1.0893	included	pound	Actual Costs-2013
EDTA Tetrasodium Dihydrate		$1.8774	included	pound	Actual Costs-2013
Sodium Sulfide		$0.5520	included	pound	Quote-2013
Hydrochloric Acid		$0.1992	included	pound	Actual Costs-2013
Barium Chloride		$0.7970	included	pound	Actual Costs-2013
Iron Aggregate		$0.5516	included	pound	Actual Costs-2013
Silica Sand		$0.1407	included	pound	Actual Costs-2011
Pea Gravel		$0.0190	included	pound	Actual Costs-2013
Analytical Costs		**Rate ($)**	**Profit & Overhead**	**Units**	**Source***
Modified Guideline 8		$249.00	included	analysis	Quote: 2012-13
Excursion Parameters (UCL)		$30.00	included	analysis	Fee Schedule-2013
Restoration Progress Parameters (UCL + U + Se)		$50.00	included	analysis	Fee Schedule-2013
Irrigator Fluid		$245.00	included	analysis	Actual Costs-2012
Irrigator Vegetation		$270.00	included	analysis	Actual Costs-2012
Irrigator Soil		$255.00	included	analysis	Actual Costs-2012
Irrigator Soil Water		$150.00	included	analysis	Fee Schedule-2013
Other (Radon, Bioassay, etc.)		$1,000.00	$1,100.00	month	Cost Estimate
*All quotes, fee schedules and actual costs based on Energy Laboratories, Inc., Casper, WY					
Equipment Costs		**Rate ($)**	**Profit & Overhead***	**Units**	**Source**
Bandit 1290XP Trailer Mounted Brush Chipper		$47.93	$52.72	hour	Equipment Watch**
Bobcat S250 Skid Steer Loader		$36.57	$40.23	hour	Equipment Watch
Cat 320C L Trackhoe - 1.25 cu yd bucket		$100.03	$110.03	hour	Equipment Watch
Cat 416E Backhoe		$34.97	$38.47	hour	Equipment Watch
Cat 924H Loader - 2.4 cu yd bucket		$52.93	$58.22	hour	Equipment Watch
Concrete Jaws Labounty - CP-60		$18.51	$20.36	hour	Equipment Watch
GEHL DL-8 Rough Terrain Lift Truck		$56.44	$62.08	hour	Equipment Watch
Manlift (JLG 600S)		$47.54	$52.29	hour	Equipment Watch
MIT Unit		$30.09	$33.10	hour	Equipment Watch
Pick-up Truck 3/4 ton 4X4		$20.13	$22.14	hour	Equipment Watch
Pulling Unit***		$35.32	$38.85	hour	Equipment Watch
*Includes additional 10% Profit & Overhead per WDEQ/LQD Guidline No. 12, Section 12(b)					
**Equipment Watch Rental Rate Blue Book: Volume 1 (1st Half 2013)					
***1 3/4 Ton 4x4 Truck with Hoist					
Quoted Costs		**Rate ($)**	**Profit & Overhead**	**Units**	**Source**
Deep Disposal Well - Plug & Abandonment Costs		$13.62	included	foot	UIC Permit-2012
DDW MIT		$31,625	included	well	Quote-2013
Well Replacements (Restoration)		$14,763	included	well	Actual Costs-2013
Bellhole Refurbishment		$5,530	included	bellhole	Contract-2012
Header House Refurbishment (Typical Wellfield)		$10,000	included	header house	Actual Costs-2013
WDEQ/LQD Guideline No. 12 Costs	**Appendix**	**Rate ($)**	**Profit & Overhead***	**Units**	**Source**
Moving Materials: One-Way Distance 500 feet, 0% grade	Appendix C	$1.099	$1.209	bcy	Guideline-10/2013
Moving Materials: One-Way Distance 1,000 feet, 0% grade	Appendix C	$1.313	$1.444	bcy	Guideline-10/2013
Moving Materials: One-Way Distance 2,000 feet, 0% grade	Appendix C	$1.701	$1.871	bcy	Guideline-10/2013
Moving Materials: One-Way Distance 150 feet, 0% grade	Appendix E	$0.351	$0.386	lcy	Guideline-10/2013
Grading Operating Costs	Appendix G	$77.31	$85.04	acre	Guideline-10/2013
Fencing Removal	Appendix H	$0.39	$0.43	foot	Guideline-10/2013
Ripping Operating Costs (Asphalt)	Appendix I	$881.17	$969.29	acre	Guideline-10/2013
Ripping Operating Costs (Overburden)	Appendix I1	$1,255.70	$1,381.27	acre	Guideline-10/2013
Building Demolition - Mixture of Types	Appendix K	$0.287	$0.316	ft3	Guideline-10/2013
Building Demo Disposal (Average)	Appendix K	$9.62	$10.58	cy	Guideline-10/2013

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Concrete (Floor) Demolition - 6" Thick with Rebar	Appendix K	$5.48	$6.03	ft2	Guideline-10/2013	
Concrete (Footing) Demolition - 2' Thick, 3' Wide	Appendix K	$20.21	$22.23	linear foot	Guideline-10/2013	
Concrete Disposal On-Site	Appendix K	$8.29	$9.12	cy	Guideline-10/2013	
Drill Hole Abandonment: Wet Exploration Holes >25 holes	Appendix L	$3.00	$3.30	foot	Guideline-10/2013	
Well Abandonment: Monitor, Production, and Injection Wells	Appendix L	$2.50	$2.75	foot	Guideline-10/2013	
Incidental Costs: Small Site Grading and Seeding (<1000 sq. feet)	Appendix L	$50	$55	site	Guideline-10/2013	
Incidental Costs: Capping	Appendix L	$10	$11	each	Guideline-10/2013	
Incidental Costs: Site Location	Appendix L	$10	$11	site	Guideline-10/2013	
Incidental Costs: Remove Pump, Wiring, and Drop Pipe	Appendix L	$0.40	$0.44	foot	Guideline-10/2013	
Incidental Costs: Remove and Dispose Casing (top few feet)	Appendix L	$30	$33.00	well	Guideline-10/2013	
Incidental Costs: Monitoring Well Concrete Pedestal Disposal	Appendix L	$100	$110.00	each	Guideline-10/2013	
Scarification Costs	Appendix P	$70.91	$78.00	acre	Guideline-10/2013	
Revegetation Costs-Seed	Appendix Q	$106	$116.60	acre	Actual Costs-2013	
Revegetation Costs-Mulch	Appendix Q	$91.88	$101.07	acre	Actual Costs-2013	
Revegetation Costs-Fertilizer	Appendix Q	$300.00	$330.00	acre	Actual Costs-2013	
Revegetation Costs-Total	Appendix Q	$497.88	$547.67	acre	Actual Costs-2013	
*Includes additional 10% Profit & Overhead per WDEQ/LQD Guidline No. 12, Section 12(b)						
Construction & Demolition Debris Transportation & Disposal Costs						
Building Volume for Disposal	0.33					
Void Factor (for disposal)	1.1					
	Disposal ($/ton)	**C&D (cy/ton)**	**Tranport ($/load)**	**C&D (cy/load)**	**Total ($/cy)**	**Total ($/ft3)**
C&D Debris (county landfill)	$62.00	2	$335.00	30	$42.17	$1.56
*Transportation and disposal costs based on actual costs (2013). Transportation and disposal costs include profit and overhead of service provider. Conversion factors of 2 cy/ton and 0.33 to account for air space in buildings based on FEMA - Debris Estimating Field Guide, FEMA 320, September 2010.						
11e.(2) Byproduct Material Transportation & Disposal						
Load Correction Factor: Soil, sand, etc.	1.1					
Load Correction Factor: Process materials, etc.	0.42					
White Mesa	**Disposal ($/ton)**	**Disposal ($/cy)**	**Volume (cy)**	**Tranport ($/cy)**	**Total ($/cy)**	**Total ($/ft3)**
Type I: Soil, sand, gravel, rock, concrete rubble,etc.	$138.97	$152.87	13.0	$247.95	$400.82	$14.85
Type II: Process material, pumps, motors, etc.	$160.08	$67.23	24.7	$130.50	$197.73	$7.32
Type II: Chipped piping	$160.08	$67.23	36.4	$88.55	$155.78	$5.77
Pathfinder						
Type I: Soil, sand, rock, gravel, demolition masonry, concrete rubble	N/A	$130.00	13.0	$26.73	$156.73	$5.80
Type II: Other process waste, process equipment, etc.	N/A	$378.00	24.7	$14.07	$392.07	$14.52
Type II: Chipped piping	N/A	$378.00	36.4	$9.55	$387.55	$14.35
*Transportation and disposal costs based on contract amounts as adjusted annually. Transportation and disposal costs include profit and overhead of service provider and include all unloading and decontamination fees, waste tax, fuel surcharges, etc. Tranportation costs assume 1) one truck transports one 13-cy bin of Type I waste, 2) one truck transports one 24.7-cy bin of Type II process waste (including pumps, motors, etc.) and 3) one truck tranports one 36.4-cy bin of Type II chipped piping waste.						

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GROUNDWATER RESTORATION UNIT COSTS				
Wellfield Pumping				
Equipment				
Wellfield Pump Sizes	5	hp		
Wellfield Pump Flow Rate	25	gpm		
kW to HP Conversion Factor	0.746			
Cost of Electricity	$0.0648	kWhr		
Efficiency	80%			
Wellfield Pumping Cost	**$0.20**	**per kgal**		
Satellite Pumping				
Equipment				
Satellite Pump Sizes	60	hp		
Satellite Pump Flow Rate	75	gpm		
kW to HP Conversion Factor	0.746			
Cost of Electricity	$0.0648	kWhr		
Efficiency	90%			
Satellite Pumping Cost	**$0.72**	**per kgal**		
Deep Disposal Well Injection				
Equipment				
Deep Disposal Well Pump Size	75	hp		
Deep Disposal Well Flow Rate	75	gpm		
kW to HP Conversion Factor	0.746			
Cost of Electricity	$0.0648	kWhr		
Efficiency	90%			
Reagent				
Antiscalant Cost (Scaletrol)	$4.5177	per lb		
Density of Water	8.34	lbs/gal		
Specific Gravity (Scaletrol)	1.284			
Antiscalant Cost (Scaletrol)	$48.38	per gal		
Antiscalant Dose (ScaleTrol)	0.0000048	gal/gal		
Deep Disposal Well Cost	**$1.13**	**per kgal**		
PSR2 & Irrigator				
Equipment				
Feed Water Pump	40	hp		
Irrigator Pump	50	hp		
Sampler	0.5	kW		
Irrigator Flow Rate	200	gpm		
kW to HP Conversion Factor	0.746			
Cost of Electricity	$0.0648	kWhr		
Efficiency	90%			
PSR 2 & Irrigator Cost	**$0.41**	**per kgal**		
Total Groundwater Sweep Costs	**$1.32**	**per kgal**		
Reverse Osmosis				
Equipment				
System Capacity	250	gpm		
Unit Pump	60	hp		
Injection Pump	60	hp		
Waste Pump	15	hp		
kW to HP Conversion Factor	0.746			
Cost of Electricity	$0.0648	kWhr		
Efficiency	90%			
Reagents				
Tripolyphosphate Usage Rate	0.00000130	lb/gal		
Tripolyphosphate Cost	$1.0893	per lb		
EDTA Usage Rate	0.00000315	lb/gal		
EDTA Cost	$1.8774	per lb		
Antiscalant Cost (Hypersperse)	$3.9050	per lb		
Density of Water	8.34	lbs/gal		
Specific Gravity (Hypersperse)	1.124			
Antiscalant Cost (Hypersperse)	$36.6061	per gal		

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		Antiscalant Dose (Hypersperse)	0.0000036	gal/gal			
		Sodium Sulfide Usage Rate	0.00017	lb/gal			
		Sodium Sulfide Cost	$0.5520	per lb			
		RO Cost (without Reductant)	**$0.62**	**per kgal**			
		RO Cost (with Reductant)	**$0.71**	**per kgal**			
MIT Costs for Production Wells							
	Equipment						
		Pulling Unit Hours	4	hrs/day			
		Pulling Unit Cost	$38.85	$/hour			
		MIT Unit Hours	8	hrs/day			
		MIT Unit Cost	$33.10	$/hour			
	Labor						
		Required Hours	8	hrs/day			
		Required Laborers	1.5	per day			
		Labor Cost	$32.20	$/hour			
	Productivity		4	wells/day			
		MIT Cost for Production Wells	**$201.65**	**per well**			
MIT Costs for Injection Wells							
	Equipment						
		Pulling Unit Hours	0	hrs/day			
		Pulling Unit Cost	$38.85	$/hour			
		MIT Unit Hours	8	hrs/day			
		MIT Unit Cost	$33.10	$/hour			
	Labor						
		Required Hours	8	hrs/day			
		Required Laborers	1	per day			
		Labor Cost	$32.20	$/hour			
	Productivity		4	wells/day			
		MIT Cost for Injection Wells	**$130.60**	**per well**			
Selenium Plant Operating Costs							
	Plant Operation						
		Selenium Plant Media Change	4	times/year			
		Number of Columns in Plant	2	columns			
	Reagents						
		Barium Chloride	90,000	lb/year			
		BaCl Cost	$0.7970	$/lb			
	Materials						
		Iron	12,000	lb/column			
		Iron Cost	$0.5516	$/lb			
		Sand	18,000	lb/column			
		Sand Cost	$0.14	$/lb			
		Gravel	20,000	lb/column			
		Gravel Cost	$0.0190	$/lb			
	Disposal						
		ByProduct for Disposal	63	yd^3/year			
		Disposal Cost (incl. Transport)	$157	per yd^3			
		Selenium Plant Operating Cost	**$157,852.16**	**per year**			
Booster Pump Operating Cost							
	Equipment						
		Wellfield Pump Sizes	40	hp			
		Number of Pumps Running (avg.)	2	per year			
		Hours Running	24	per day			
		kW to HP Conversion Factor	0.746				
		Cost of Electricity	$0.0648	kWhr			
		Efficiency	90%				
		Booster Pump Operating Costs	**$37,641.37**	**per year**			
WELL ABANDONMENT UNIT COSTS							
Removal of Contaminated Soil Around Wells							
	Equipment						
		Cat 416 Backhoe Time	0.25	hours			

Cameco Resources
Highland Uranium Project
2013-14 Surety Estimate

		Cat 416 Backhoe Cost	$38.47	per hour			
	Labor						
		Radiation Technician	0.25	hours			
		Radiation Technician Cost	$35.00	per hour			
		Operator	0.25	hours			
		Operator Cost	$36.40	per hour			
	Disposal						
		ByProduct Disposal	0.37	cubic yard			
		Disposal Cost (incl. Transport)	$156.73	per cubic yard			
		Removal of Contaminated Soil Cost	**$85.46**	**per well**			
DDW Pump Dismantling and Disposal							
	Labor						
		Number of Laborers	2	per day			
		Number of Pumps Dismantled	0.5	per day			
		Hours Per Day	8	hours			
		Laborers Cost	$32.20				
	Disposal						
		Volume of DDW Pump	240	ft^3			
		ByProduct Disposal	$7.32	per ft^3			
		DDW Pump Dismanteling and Disposal	**$2,788.03**	**per pump**			
WELLFIELD RECLAMATION COSTS							
Wellfield Piping Removal							
	Equipment						
		Trackhoe	1	per day			
		Trackhoe Cost	$110.03	per hour			
		Loader	1	per day			
		Loader Cost	$58.22	per hour			
		Pickup Truck	1	per day			
		Pickup Cost	$22.14	per hour			
		Chipper Cost	$52.72	per hour			
	Labor						
		Backhoe Operator	$36.40	per hour			
		Loader Operator	$36.40	per hour			
		Laborer	$32.20	per hour			
		Hours Per Day	8	per day			
	Productivity		1500	ft/day			
		Piping Removal Cost	**$1.86**	**per foot of pipe**			
Piping Reduction							
		2" Pipe	0.0107				
		3" Pipe	0.0233				
		4" Pipe	0.0385				
		6" Pipe	0.0834				
		8" Pipe	0.1413				
		10" Pipe	0.2196				
		12" Pipe	0.3088				
		14" Pipe	0.3723				
		16" Pipe	0.4864				
Production Pump Volume							
		Length	66	inches			
		Diameter	3.8	inches			
		Cubic Inch to Cubic Foot Conversion	0.0006				
		Production Pump Volume	**0.43**	**cubic feet**			
Trunk Line Removal							
	Equipment						
		Trackhoe	1	per day			
		Trackhoe Cost	$110.03	per hour			
		Loader	1	per day			
		Loader Cost	$58.22	per hour			
		Pickup Truck	1	per day			
		Pickup Cost	$22.14	per hour			
		Chipper Cost	$52.72	per hour			
	Labor						
		Trackhoe Operator	$36.40	per hour			

Cameco Resources
Highland Uranium Project
2013-14 Surety Estimate

		Loader Operator	$36.40	per hour			
		Laborer	$32.20	per hour			
		Hours Per Day	8	per day			
	Productivity		750	ft/day			
		Buried Piping Removal Cost	**$3.71**	**per foot of pipe**			
Removal of Well Head Covers							
	Volume of Well Head Cover (ft^3)		1.86	cubic feet			
	Demolition Cost		$0.316	per cubic ft			
	Decontamination						
		Acid Usage	4.1	pounds per wellhead cover			
		Acid Cost	$0.1992	per lbs			
	Labor						
		Radiation Tech	$35.00	per hour			
		Operator	$36.40	per hour			
	Productivity		10	wellheads per hour			
	Disposal						
		Void space	10%				
		Transportation and Disposal Cost	$1.56	per ft3			
		Removal of Well Head Cover Cost	**$11.74**	**per well**			
Header House Decontamination							
	Decontamination						
		Acid Usage	20	pounds per header house			
		Acid Cost	$0.20	per pound			
	Labor						
		Radiation Tech	$35.00	per hour			
		Number of Operators	2	per day			
		Operator	$36.40	per hour			
		Hours Per Day	8	per day			
	Productivity		1	header house per day			
		Header House Decontamination Cost	**$ 621.38**	**per header house**			
Header House Heating							
	Heater Power Usage		7.5	kW			
	Days Used		180	days per year			
	Electricity Cost		$0.0648	kWhr			
	Header House Heating Cost		**$1,050**	**per year**			
WELLFIELD AND SATELLITE AND SURFACE RECLAMATION							
Wellfield Road Reclamation							
	Gravel Road Base						
		Average Depth	0.25	feet			
		Average Width	10	feet			
		Material Moved (0% Grade)	$1.44	bcy			
		Cubic Yard to Cubic Feet Conversion	0.04				
	Scarification of Road						
		Scarification Costs	$78	per acre			
		Average Width	25	feet			
		Acre to Sq. Foot Conversion	2.29568E-05				
	Grading Cost		$85	per acre			
	Topsoil Depth		0.67	feet			
	Discing/Seeding Costs		$548	per acre			
	Linear Feet for Unit Cost		1000	feet			
		Wellfield Road Reclamation Cost	**$1,437.62**	**per 1000 feet**			
EQUIPMENT COSTS							
Tank Removal							
	Equipment						
		Loader	$58.22	per hour			
		Trackhoe	$110.03	per hour			
		Manlift	$52.29	per hour			
		Pickup	$22.14	per hour			
		Lift Truck	$62.08	per hour			

Cameco Resources
Highland Uranium Project
2013-14 Surety Estimate

Labor			
Number of Operators	4		
Operator Cost	$36.40	per hour	
Hours Per Day	8	per day	
Productivity	25	ft^3/day	
Tank Removal Cost	**$144**	**per ft^3**	
Pipe Removal			
Equipment			
Manlift	$52.29	per hour	
Pickup	$22.14	per hour	
Lift Truck	$62.08	per hour	
Chipper	$52.72	per hour	
Labor			
Number of Operators	4		
Operator Cost	$36.40	per hour	
Hours Per Day	8	per day	
Productivity	300	ft/day	
Pipe Removal Cost (Inside Buildings)	**$8.93**	**per ft**	
Pump Removal			
Equipment			
Truck	$22.14	per hour	
Skid Steer	$40.23	per hour	
Labor			
Number of Operators	2		
Operator Cost	$36.40	per hour	
Hours Per Day	8	per day	
Productivity	10	ft^3/day	
Pump Removal	**$108.14**	**per ft^3**	
Dryer Removal			
Equipment			
Truck	$22.14	per hour	
Lift Truck	$62.08	per hour	
Labor			
Number of Operators	4		
Operator Cost	$36.40	per hour	
Hours Per Day	8	per day	
Productivity	125	ft^3/day	
Dryer Removal Cost	**$14.71**	**per ft^3**	
RO and Degasser Removal			
Equipment			
Truck	$22.14	per hour	
Lift Truck	$62.08	per hour	
Labor			
Number of Operators	2		
Operator Cost	$36.40	per hour	
Hours Per Day	8	per day	
Productivity	250	ft^3/day	
RO and Degasser Removal Cost	**$5.02**	**per ft^3**	
BUILDING COSTS			
Acid Wash Walls			
Acid			
Acid Usage	0.05	per square foot	
Acid Cost	$0.20	per pound	
Equipment			
Manlift	$52.29	per hour	
Labor			
Laborer	2	people	
Laborer Cost	$32.20	per hour	

Cameco Resources
Highland Uranium Project
2013-14 Surety Estimate

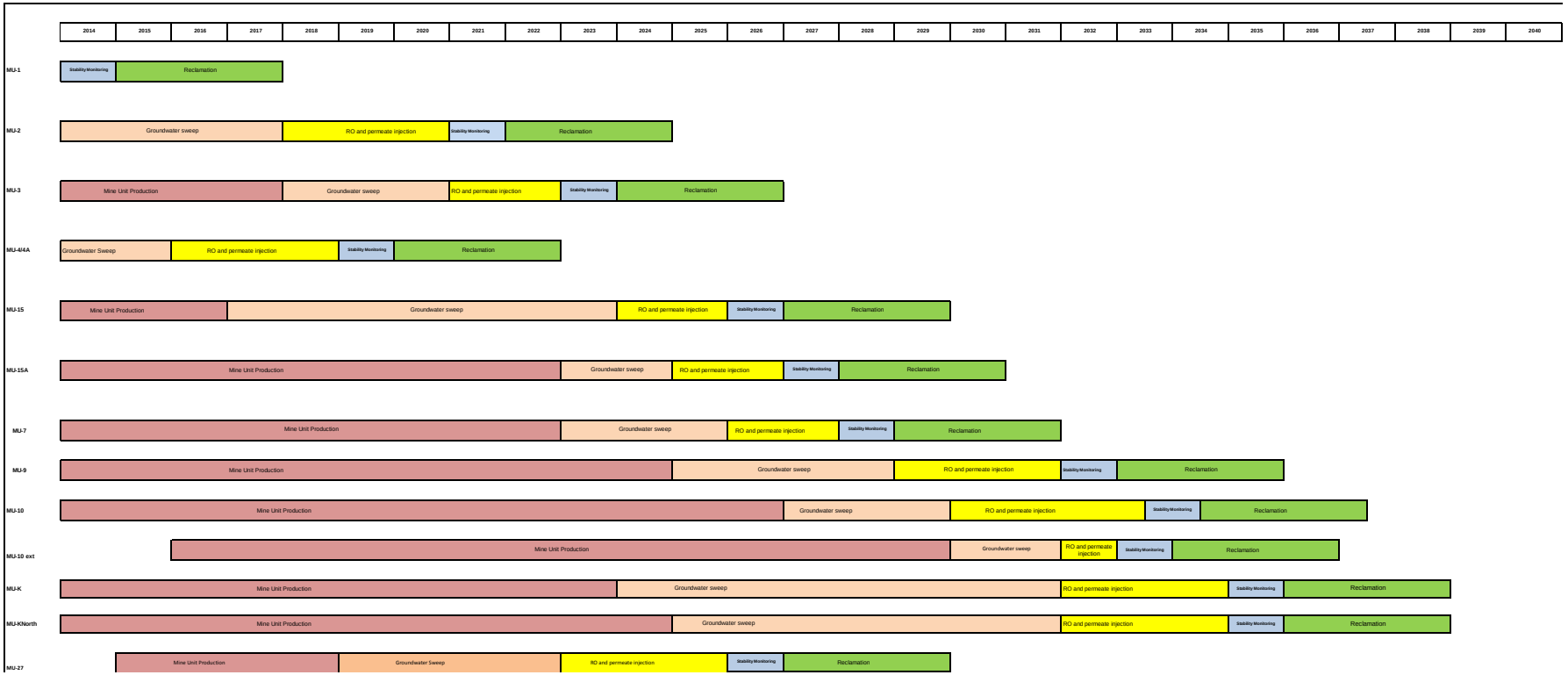
Productivity	125	square feet per hour			
Acid Wash Walls Cost	**$0.94**	**per square foot**			
Acid Wash Floors					
Acid					
Acid Usage	0.05	per square foot			
Acid Cost	$0.20	per pound			
Labor					
Laborer	2	people			
Laborer Cost	$32.20	per hour			
Productivity	125	square feet per hour			
Acid Wash Floors Cost	**$0.53**	**per square foot**			
Eletrical Power					
*Pumping Costs for Operating DDWs, RO, and Wellfield are included in GW Rest Costs					
Satellite 2					
Miscellaneous Pumps, Fans, Sumps, etc.	22.5	HP			
Lighting	35.0625	kW (per square ft)			
kW to HP Conversion Factor	0.746				
Electricity Cost	$0.0648	per kWhr			
Efficiency Factor	90%				
Operating Hours Per Year	8760	hours			
Satellite 2 Power Cost	**$28,478**	**per year**			
Satellite 3					
Miscellaneous Pumps, Fans, Sumps, etc.	22.5	HP			
Lighting	35.0625	kW (per square ft)			
kW to HP Conversion Factor	0.746				
Electricity Cost	$0.0648	per kWhr			
Efficiency Factor	90%				
Operating Hours Per Year	8760	hours			
Satellite 3 Power Cost	**$28,478**	**per year**			
Se Plant					
Miscellaneous Pumps, Fans, Sumps, etc.	72.5	HP			
Lighting	23.3	kW			
kW to HP Conversion Factor	0.746	kW (per square ft)			
Electricity Cost	$0.0648	per kWhr			
Efficiency Factor	90%				
Operating Hours Per Year	8760	hours			
Selenium Power Cost	**$40,857**	**per year**			
DDW - Typical					
Miscellaneous Pumps, Fans, Sumps, etc.	2	HP			
Lighting	0.49	kW			
Heating	12.5	kW	assume operation only 6 mos/yr		
kW to HP Conversion Factor	0.746	kW/hp			
Electricity Cost	$0.0648	per kWhr			
Efficiency Factor	90%				
Operating Hours Per Year	8760	hours			
DDW Electrical Cost	**$4,588**	**per year**			
MISCELLANEOUS RECLAMATION AND RESTORATION COSTS					
Liner and Subsoil Removal Costs					
Equipment					
Trackhoe Cost	$ 110.03	per hour			
Loader Cost	$ 58.22	per hour			
Labor					
Operator	36.40	per hour			
Productivity	40	cubic yards/hour			
Total Removal	**$ 5.12**	**per cubic yard**			

ATTACHMENT 1

UPDATED RESTORATION SCHEDULE (7/11/14)

Smith Ranch/Highland Project

Smith Ranch/Reynolds Ranch Opertions

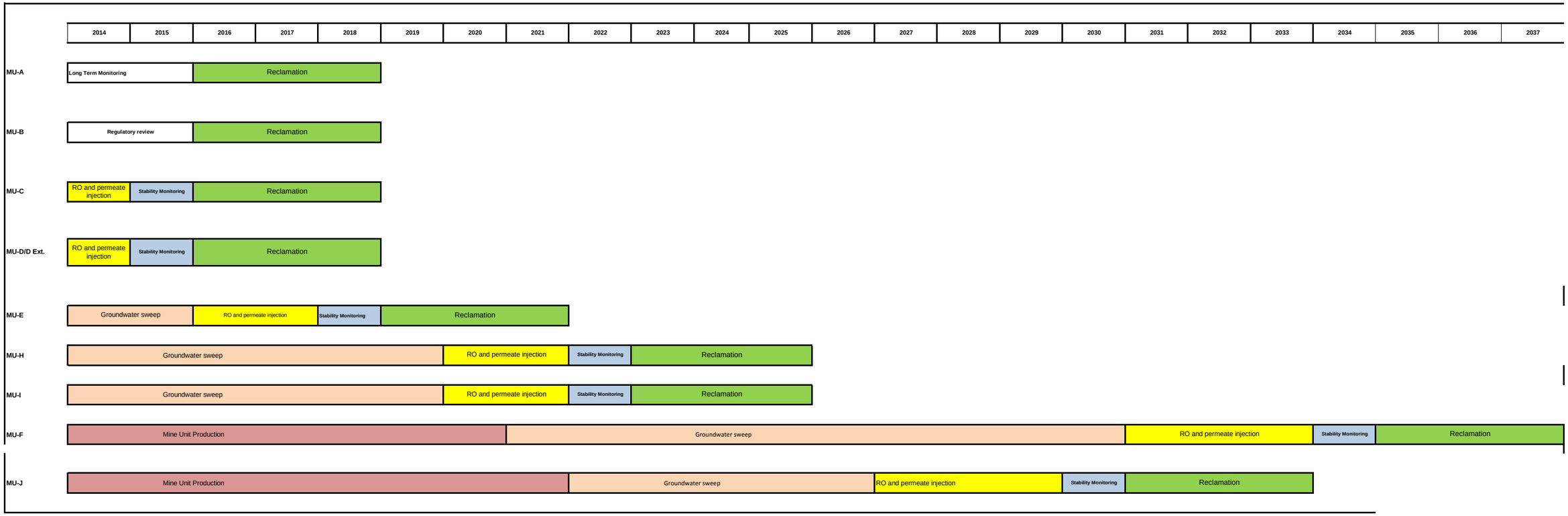


ATTACHMENT 1

UPDATED RESTORATION SCHEDULE (7/11/14)

Smith Ranch/Highland Project

Highland Operations



Smith Ranch Water Balance Permit 633

30-May-14

Assumes 9 Pore Volumes of Treatment (1 P.V. GWS and 8 P.V. RO)

Rev. 9

Year				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
				2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Satellite CPP \ SR1 Water Balance																											
Total CPP /SR 1 Production Flow (gpm)				**6640**	**6675**	**4725**	**2875**	**1750**	**1250**	**900**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total CPP /SR 1 Production Bleed (gpm)				33.2	33.4	23.6	14.4	8.8	6.3	4.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Satellite SR2 Water Balance																											
Total SR 2 Production Flow (gpm)				**4500**	**4500**	**4100**	**2800**	**2200**	**1350**	**425**	**250**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total Production Bleed (gpm)				45	45	41	28	22	13.5	4.3	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total SR 2 Production RO Con. (gpm)				**9.0**	**9.0**	**8.2**	**5.6**	**4.4**	**2.7**	**0.9**	**0.5**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Total Smith Ranch Production Flow				**11140**	**11175**	**8825**	**5675**	**3950**	**2600**	**1325**	**250**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total Production Bleed (gpm)				42.2	42.4	31.8	20.0	13.2	9.0	5.4	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Bleed (gpm)				20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	0	0	0	0

Restoration Flows

	PV With Flair (Kgal)	GWS PV to Finish	RO PV to Finish																								
MU 1 (gal) (RO)	**62,841**	0	0.5	100																							
GWS (gal)																											
Total Disposal (gal)				20																							
MU 2 (gal)(RO)	**110,793**	1	8.0		300	320	320	320	320	320																	
GWS (gal)					71	76	76																				
Total Disposal (gal)					75	80	80	80	80	80																	
MU 3 (gal)(RO)	**152,836**	1	8.0					200	400	400	720	720															
GWS (gal)								48	95	171	0	0															
Total Disposal (gal)								50	100	100	180	180															
MU 4/4A (gal)(RO)	**119,224**	0.6	6.6	300	300	400	400	200																			
GWS (gal)				71	71																						
Total Disposal (gal)				75	75	100	100	50																			
MU 15(gal) (RO)	**137,435**	1	8.0				200	200	200	200	200	200	400	400	200												
GWS (gal)							48	48	48	48	48	48															
Total Disposal (gal)							50	50	50	50	50	50	100	100	50												
MU15A (gal)(RO)	**52,673**	1	8.0										200	200	200	400											
GWS (gal)													48	48	48												
Total Disposal (gal)													50	50	50	100											
MU 7 (gal)(RO)	**88,472**	1	8.0										320	320	320	320	320										
GWS (gal)													76	76	76												
Total Disposal (gal)													80	80	80	80	80										
MU 9(gal)(RO)	**136,386**	1	8.0												200	200	400	400	400	400	200						
GWS (gal)															48	48	95	95			48						
Total Disposal (gal)															50	50	100	100	100	100	50						
MU 10 (gal)(RO)	**190,448**	1	8.0														200	600	600	600	600	600					
GWS (gal)																	48	143	143	143	143						
Total Disposal (gal)																	50	150	150	150	150	150					
MU 10 Ext (gal)(RO)	**56,474**	1	8																		200	400	400				
GWS (gal)																					48	95	95				
Total Disposal (gal)																					50	100	100				
Total Restoration Disposal (gpm)				**95**	**150**	**180**	**230**	**230**	**230**	**230**	**230**	**230**	**230**	**230**	**230**	**230**	**230**	**250**	**250**	**250**	**250**	**250**	**100**	**0**	**0**	**0**	**0**

Installed RO Capacity (gpm) (feed)

Current (gpm)	Future (gpm)
200	
200	
250	
250	
	250
	250
900	**500**

Deep Disposal Well Capacity (gpm)	Permitted	Current	Future																								
DDW #1	**150**	**50**		50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
DDW #2	**158**	**80**		80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
DDW #10	**126**	**20**		20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
DDW #6	**105**	**30**		30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
DDW #7 (Fut)	**100**	**0**	**50**	0	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
DDW #8 (Fut)	**100**	**0**	**50**	0	0	0	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Pipeline to HUP		**0**	**100**		90.4	86.8	68.0	55.2	42.0	33.4	20.5	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	0.0	0.0	0.0	0.0
Total Available		**180**	**200**	180	320.4	316.8	348	335.2	322	313.36	300.5	300	300	300	300	300	300	300	300	300	300	300	300	280	280	280	280
Smith Ranch CPP Elutions				31.2	31.0	29.5	30.5	30.2	30.7	31.0	30.7	30.0	29.3	29.5	28.8	29.0	28.6	28.1	27.4	26.9	27.4	26.9	5.5	5.2	5.0	0.0	0.0
Total Production Bleed (gpm)				42.2	42.4	31.8	20.0	13.2	9.0	5.4	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water from Reynolds Ranch (to HUP)					38.0	35.0	28.0	22.0	13.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Bleed				10.0	10.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	0.0	0.0	0.0	0.0
Total Restoration Disposal (gpm)				95.0	150.0	180.0	230.0	230.0	230.0	230.0	230.0	230.0	230.0	230.0	230.0	230.0	230.0	250.0	250.0	250.0	250.0	250.0	100.0	0.0	100.0	0.0	0.0
Total Disposal Required (gpm)				178.4	271.4	296.3	328.5	315.4	302.7	294.4	281.2	280.0	279.3	279.5	278.8	279.0	278.6	298.1	297.4	296.9	297.4	296.9	125.5	5.2	105.0	0.0	0.0
Total Disposal Balance				**2**	**49**	**21**	**20**	**20**	**19**	**19**	**19**	**20**	**21**	**21**	**21**	**21**	**21**	**2**	**3**	**3**	**3**	**3**	**175**	**275**	**175**	**280**	**280**

Highland Water Balance Permit 603

30-May-14

Assumes 9 Pore Volumes of Treatment (1 P.V. GWS and 8 P.V. RO)

Rev. 9

Year				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	32
				2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Production Flows																															
Total Production Flow (gpm)				4095	2370	1600	915	625	410	265	205	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Production Bleed (gpm)				41	23.7	16	9.2	6.3	4.1	2.7	2.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Misc. GWS					10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	0	0	0	0	0	0	0
Control Bleed (gpm)				40	40	40	40	40	40	20	20	20	40	40	40	40	40	40	40	40	40	40	40	40	0	0	0	0	0	0	0
Restoration Flows																															
	PV With Flair (Kgal)	GWS PV to Finish	RO PV to Finish																												
MU C (gal) (RO)	**84,828**	0	1.5	275																											
GWS (gal)																															
Total Disposal (gal)				55																											
MU D (gal) (RO)	**32,311**	0	1	75																											
GWS (gal)																															
Total Disposal (gal)				15																											
MU D Ext. (gal) (RO)	**19,235**	0	1	50																											
GWS (gal)																															
Total Disposal (gal)				10																											
MU E (gal) (RO)	**91,086**	0.5	6		400	400	400																								
GWS (gal)				30	95	95																									
Total Disposal (gal)				30	100	100	100																								
MU H(gal) (RO)	**90,870**	1	8		100	100	100	300	300	300	300																				
GWS (gal)					24	24	24	71	71	71																					
Total Disposal (gal)					25	25	25	75	75	75	75																				
MU I (gal)(RO)	**84,786**	1	8		100	100	100	300	300	300	200																				
GWS (gal)					24	24	24	71	71	71																					
Total Disposal (gal)					25	25	25	75	75	75	50																				
MUF(gal)(RO)	**232,906**	1	8								100	400	400	300	300	300	300	300	300	400	400	100	100								
GWS (gal)											24	95	95	71	71		71														
Total Disposal (gal)											25	100	100	75	75	75	75	75	75	100	100	25	25								
MU J (gal)(RO)	**66,817**	1	8									200	200	200	100	100	100	100	100												
GWS (gal)												48	48	48	24	24	24	24	24												
Total Disposal (gal)												50	50	50	25	25	25	25	25												
MU K (gal)(RO)	**84,214**	1	8											100	100	100	100	100	100	100	100	300	300	200							
GWS (gal)														24	24	24	24	24	24	24	24										
Total Disposal (gal)														25	25	25	25	25	25	25	25	75	75	50							
MU K North (gal)(RO)	**78,568**	1	8												100	100	100	100	100	100	100	200	200	200							
GWS (gal)															24	24	24	24	24	24	24										
Total Disposal (gal)															25	25	25	25	25	25	25	50	50	50							
Total Restoration Disposal (gpm)				**110**	**150**	**150**	**150**	**150**	**150**	**150**	**150**	**150**	**150**	**150**	**150**	**150**	**150**	**150**	**150**	**150**	**150**	**150**	**150**	**100**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Restoratio Water From Smith Ranch (gpm)																															

Installed RO Capacity (gpm) (feed)	**Current (gpm)**	**Feed (Future)**
	200	
	200	
	100	
	250	
	250	
	250	
Total RO Capacity (gpm)	**1250**	

Deep Disposal Well Capacity (gpm)	**Permitted**	**Current**	**Future**																												
Morton 1-20 (gpm)	**147**	**30**		30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
DDW 9 (gpm)	**158**	**30**		30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Volman 33-27 (gpm)	**105**	**50**		50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
PSR2 Evaporation (gpm)		**20**		20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Irrigator Circle 2 (gpm)		**180**		180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180
Irrigator Circle 1 (gpm)		**0**	**100**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Available		**310**	**100**	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310
HUP Resin Transfer				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Production Bleed (gpm)				41	23.7	16	9.2	6.3	4.1	2.7	2.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Misc. GWS				0	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	0	0	0	0	0	0	0
Control Bleed (gpm)				40	30	40	40	40	40	20	20	20	40	40	40	40	40	40	40	40	40	40	40	40	0	0	0	0	0	0	0
Total Restoration Disposal (gpm)				110	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	100	0	0	0	0	0	0	0
Total Disposal Required (gpm)				191	213.7	216	209.2	206.3	204.1	182.7	182.1	180	200	200	200	200	200	200	200	200	200	200	200	150	0	0	0	0	0	0	0
Water from Smith Ranch				0	90.4	86.8	68	55.2	42	33.36	20.5	20	20	20	20	20	20	20	20	20	20	20	20	0	0	0	0	0	0	0	0
Total Disposal Balance				**119**	**6**	**7**	**33**	**49**	**64**	**94**	**107**	**110**	**90**	**90**	**90**	**90**	**90**	**90**	**90**	**90**	**90**	**90**	**90**	**160**	**310**	**310**	**310**	**310**	**310**	**310**	**310**

Reynolds Ranch Satellite

5/30//2014
Rev 4.
Assume 9 PV of Treatment
(1 PV of GWS and 8 PV of RO Sweep)

Year				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Total Production Flow (gpm)				**0**	**3800**	**3500**	**2800**	**2200**	**1300**	**800**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Control Bleed Capacity Available				**0**	**20**	**70**	**70**	**70**	**120**	**120**	**120**	**120**	**120**	**120**	**120**	**120**	**120**	**120**	**120**	**120**	**120**	**120**	**120**	**120**	**190**	**190**	**190**	**200**	**200**	**150**	**100**
Total Production Bleed (gpm)				**0**	**38**	**35**	**28**	**22**	**13**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Restoration Flows

	PV With Flair (Kgal)	GWS PV to Finish	RO PV to Finish																											
MU 27(gal) (RO)	149140	1	8					200	400	400	400	400	400	200																
GWS (gal)								25	95	95	95	95																		
Total Disposal (gal)								50	100	100	100	100	100	50																
Total Restoration Disposal (gpm)				**0**	**0**	**0**	**0**	**50**	**100**	**100**	**100**	**100**	**100**	**50**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Installed RO Capacity (gpm) (feed)	**Current (gpm)**	**Future (Feed (gpm))**
		250
		250
		0
		0

Total Capacity

Deep Disposal Well Capacity (gpm)	**Assumed**	**Future**																													
Reynolds Ranch I (gpm)	**20**			0	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Additional Disposal Capacity (gpm)		**50**		0	0	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Additional Disposal Capacity (gpm)		**0**							50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Additional Disposal Capacity (gpm)		**0**								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Available	**20**	**50**		0	20	70	70	70	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120
Control Bleed Capacity Available (gpm)				0	20	70	70	20	20	20	20	20	20	70	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120
Total Production Bleed (gpm) (Sent to HUP)				0	38	35	28	22	13	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Restoration Disposal (gpm)				0	0	0	0	50	100	100	100	100	100	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concentrate Sent to (HUP)																						0	0	0	0	0					
Total Disposal Required (gpm)				0	38	35	28	72	113	108	100	100	100	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Disposal Balance				**0**	**20**	**70**	**70**	**20**	**20**	**20**	**20**	**20**	**20**	**70**	**120**	**120**	**120**	**120**	**120**	**120**	**120**	**120**	**120**	**120**	**120**	**120**	**120**	**120**	**120**	**120**	**120**