

**ANNUAL REPORT  
PERMIT TO MINE NO. 478  
August 19, 2010 through August 18, 2011**

This document provides the information required by the Wyoming Environmental Quality Act, Wyoming Statute 35-11-411 (a). Each section is a response to a specific request listed in the Required Annual Report Information form for large mining operations, which was provided by District III, Land Quality Division, Wyoming Department of Environmental Quality (WDEQ). Additional information reported annually, as required by Permit to Mine No. 478, is provided in Response No. 9 below.

**REQUIRED ANNUAL REPORT INFORMATION**

**1. GENERAL INFORMATION:**

Name of Permittee: Uranium One USA, Inc.  
907 n. Poplar Street, Suite 260  
Casper, Wyoming 82601

Mining Permit Number: Permit to Mine No. 478

Date of Permit Issuance: August 18, 1978  
Amendment No. 1: March 6, 1987  
Amendment No. 2: September 12, 1988

Mineral Mined: Uranium

State and Federal Mineral Lease Numbers Inside Permit Area:

Uranium One USA Inc. operations are primarily conducted on federal mining claims. These claims are too numerous to list here and are listed in the original Licensing document.

**2. REPORTING PERIOD:**

The annual WDEQ report period for Permit No. 478 is August 19, 2010 through August 18, 2011. However, to be consistent with past annual reports and to simplify data reporting the actual period that this report covers is: July 1, 2010 through June 30, 2011.

**3. MINING:**

- a) Uranium One resumed drilling activities in Mine Unit 7 on March 26, 2010 with delineation drilling. Mine Unit-7 (MU7) development continued in Quarters 3 and 4 of 2010, production started in Module 7-1 in January 2011. There has been a total of 40 acres of disturbance. At the time of this report no long term topsoil stockpiles have established.

b) Tabulated surface acreage disturbed to date is provided below:

<b>Irigaray Project:</b>	
<b>Years Affected</b>	<b>Acreage</b>
All disturbances prior to August 17, 1978	9.00 Acres
August 18, 1978 - August 18, 1979	74.56 Acres
August 19, 1979 - August 18, 1980	43.38 Acres
August 19, 1980 - August 18, 1981	4.66 Acres
August 19, 1981 - August 18, 1995	0.00 Acres
August 19, 1995 - August 18, 1996	1.50 Acres
August 19, 1996 - August 18, 2010	0.00 Acres
<b>Total</b>	<b>133.10 Acres</b>
<b>Christensen Ranch Project:</b>	
<b>Years Affected</b>	<b>Acreage</b>
August 19, 1988 - August 18, 1989	79.60 Acres <sup>1</sup>
August 19, 1989 - August 18, 1990	10.50 Acres <sup>2</sup>
August 19, 1990 - August 18, 1992	0.00 Acres
August 19, 1992 - August 18, 1993	106.87 Acres <sup>3</sup>
August 19, 1993 - August 18, 1994	5.00 Acres <sup>4</sup>
August 19, 1994 - August 18, 1995	40.72 Acres <sup>5</sup>
August 19, 1995 - August 18, 1996	66.26 Acres <sup>6</sup>
August 19, 1996 - August 18, 1997	33.70 Acres <sup>7</sup>
August 19, 1997 - August 18, 1998	12.98 Acres <sup>8</sup>
August 19, 1998 - August 18, 1999	95.70 Acres <sup>9</sup>
August 19, 1999 - August 18, 2000	2.53 Acres <sup>10</sup>
August 19, 2000 - August 18, 2008	0.00 Acres
August 19, 2008 - August 18, 2009	0.00 Acres
August 19, 2009 - August 18, 2010	2.29 Acres
August 19, 2010 - August 18, 2011	123.7 Acres
<b>Total</b>	<b>579.89 Acres</b>
<b>GRAND TOTAL (IR &amp; CR)</b>	<b>712.99 Acres</b>

<sup>1</sup>Mine Unit 3 wellfield area - 45.99, ponds & plant - 13.98, topsoil - 3.71, roads - 11.03, lay-down area - 4.88; <sup>2</sup>Unit 3 extension - 10.50; <sup>3</sup>Unit 2 wellfield, pipeline corridors & staging areas - 50.15, Unit 2 topsoil - 0.96, roads - 7.36, Unit 4 development area - 48.08, Unit 4 topsoil - 0.32; <sup>4</sup>Unit 5 lay-down area & delineation holes, - 5.00; <sup>5</sup>Unit 5 roads - 11.1, Unit 5 wellfield, pipeline corridors & staging area - 27.20, Unit 5 topsoil - 2.42; <sup>6</sup>Unit 5 wellfield & pipeline corridors - 47.8, Unit 5 roads & modules - 1.9, Unit 5 topsoil - 0.04, Unit 6 wellfield, delineation holes, & staging area - 11.1, Unit 6 topsoil - 2.52, Deep disposal well # 1 - 2.9, <sup>7</sup>Unit 6 Booster Pump Station & road - 1.8, Unit 6 wellfield, delineation holes & staging area - 29.2, Unit 6 roads & module buildings - 2.7; <sup>8</sup>Unit 7 delineation holes - 10.52, Unit 7 lay-down & borrow area - 0.22, Unit 8 delineation holes - 4.48; <sup>9</sup>Unit 7 development area & delineation holes - 42.7, Unit 8 exploration hole sealing & delineation holes - 53.0 acres; <sup>10</sup>Deep disposal well # 18-3 location & road - 2.3 acres, wellfield electrical line replacement - 0.23.

c) Tabulated topsoil stockpile volumes and dates are provided below:

Stockpile No.	Estimated Volume (yd <sup>3</sup> )	Date Stockpiled
<b>Irigaray Project:</b>		
1	1,657.0	Nov. 1976*
2	267.0	Sep. 1978
3	9,748.0	Sep. 1978
4	120.0	Oct. 1978
5	2,248.0	Oct. 1978
6	9,463.0	Aug. 1979
7	1,553.0	Sep. 1979
8	630.0	Oct. 1979
9	3,032.0	Jul. 1980
10	3,369.0	Aug. 1980
11	1,444.0	Aug. 1980
12	8,771.0	Aug. 1980
*IR stockpile No. 1 was utilized for the restoration efforts of 517 in May 2004.		
<b>Christensen Ranch Project:</b>		
1	71,787.0	Sep. 1988
2	17,182.0	Sep. 1988
3	14,278.0	Oct. 1988
4	16,779.0	Oct. 1988
5	6,520.0	Mar. 1993
6	1,680.0	Apr. 1993
7	8,291.2	May. 1998
8	4,315.0	Jun. 1995
9	16,822.0	Jun. 1995
10	1,157.0	Apr. 1996
11	4,888.9	Jul. 1996
12	4,120.0	Jan. 1997
13	2,284.7	Feb. 1997
13*	1,230.0	May. 1998
14	2,591.3	Dec. 1999

\* Note: Stockpile No. 13 was developed in two consecutive years as construction in Mine Unit 6 continued.

d) Due to the nature of in-situ mining, no spoil material has been produced or stockpiled.

- e) There were 59,332 pounds of uranium as  $U_3O_8$  mined for the report period. Tabulated quantity of uranium historically recovered from both projects is provided below:

Year	Lbs. $U_3O_8$
December, 1978 - August 18, 1979	101,581
August 19, 1979 - August 18, 1980	122,462
August 19, 1980 - August 18, 1981	58,394
August 19, 1981 - August 18, 1982	425
August 19, 1982 - August 18, 1987	0
August 19, 1987 - August 18, 1988	127,350
August 18, 1988 - July 31, 1989	245,514
November 6, 1989 - February 1, 1990	105,030
August 19, 1990 - August 18, 1991	6,224
August 19, 1991 - July 31, 1992	239,723
August 1, 1992 - June 30, 1993	168,967
July 1, 1993 - June 30, 1994	323,726
July 1, 1994 - June 30, 1995	417,237
July 1, 1995 - June 30, 1996	713,238
July 1, 1996 - June 30, 1997	650,197
July 1, 1997 - June 30, 1998	523,237
July 1, 1998 - June 30, 1999	201,010
July 1, 1999 - June 30, 2000	146,264
July 1, 2000 - June 30, 2001	32,411
July 1, 2001 - June 30, 2002	39,415
July 1, 2002 - June 30, 2003	24,712
July 1, 2003 - June 30, 2004	17,700
July 1, 2004 - June 30, 2005	14,705
July 1, 2005 - June 30, 2006	0
July 1, 2006 - June 30, 2007	0
July 1, 2007 - June 30, 2008	0
July 1, 2008 - June 30, 2009	0
July 1, 2009 - June 30, 2010	0
July 1, 2010 - June 30, 2011	59,332
<b>Total</b>	<b>4,059,992</b>

New construction at the Irigaray site during this report period consisted of the relining of two evaporation ponds. Pond D and RA were relined with a double liner system consisting of a geo tech fabric laid down first and then an hdpe liner second. Also new leak detection systems were installed on both ponds.

New construction at the Christensen Ranch site during the report period consisted of Drilling at MU7. These activities included well installation, three module buildings, buried piping and electrical wiring. The modules that were installed are 7-1, 7-2 and 7-3. Also these areas had a livestock fence installed around them. Also Evaporation Pond 1 was relined with the same system as used at the Irigaray site. Activities in MU8 including delineation drilling, monitor well and development wells (injection and

recovery wells). Production from MU8 is scheduled to start in Q1-2012.

- f) One significant environmental problem was noted for the report period. The environmental incident happened when by-weekly sampling of monitor wells in MU7 was missed. A detailed investigation and reporting was sent to the WDEQ and NRC and will not be duplicated in this report. The non-compliance event was self-reported to the WDEQ-LQD and the NRC. The WDEQ-LQD issued a Notice of Violation (Docket No. 4831-11) on April 21, 2011, a Settlement Agreement between the WDEQ-LQD and Uranium One was signed on May 18, 2011. The NRC issued a non-cited violation for the same event. Corrective actions identified in the May Settlement Agreement were adopted by the NRC and no further actions were required by the NRC.
  
- h) There were two reportable spills during this report period. A detailed investigation and reporting was sent to the WDEQ and NRC regarding this and will not be duplicated in this report. One spill reported on March 28, 2011 at well 7I-192 in MU7. A faulty casing near the surface resulted in the release of approximately 1,000 gallons of barren lixivate. The spill was report to the WDEQ and the NRC as per License Condition 12.2 and 9.2. A second spill was reported on June 23, 2011 at well 7P-73 in MU7. A faulty pressure vent was the cause of the release of approximately 1,500 gallons of injection solution. This spill was also reported as per License condition 12.2 and 9.3.

#### 4. SURFACE RECLAMATION:

##### Surface Reclamation: IRIGARAY

- a) No new surface reclamation was done at the Irigaray site during the report period.
  
- b) At the Irigaray Production MU7 through 9 wellfields, removal of buried piping began in late June of 2009 with the removal of buried pipe in MU7. Units 8 and 9 are not done at this time.
  
- c) Vegetation cover remains good in the 5I7 pond and wellfield areas where the permanent seed mix was planted in May 2004. Grasses in the area grew very well this year due to the abundant rain fall during the spring of 2011.
  
- d) The annual noxious weed-spraying program was done in the summer of 2010 and continued in 2011 at the time of this report. A total of 25 acres was sprayed at the Willow Creek sites.

### **Groundwater Restoration - Christensen Ranch Project:**

All groundwater restoration activities, including stabilization monitoring, ended at Christensen Ranch on May 30, 2005. The results of all wellfield restoration were compiled into a report and submitted to the WDEQ and NRC on April 8, 2008.

### **Surface Reclamation – Christensen Ranch Project:**

Surface reclamation at the Christensen Ranch site during the report period consisted of approximately 53.7 acres of reclamation work done in MU 7. This included installation of replacement culverts, contouring of slopes and trenches, installation of wellfield fencing and reseeding with the interim seed mix that is approved by the WDEQ.

## **5. MINING PLANS:**

COGEMA suspended all mining activities on June 23, 2000. Groundwater restoration of existing wellfields at Christensen and Irigaray, and decommissioning of un-used facilities has been in progress since that time.

On January 25, 2010, Uranium One Exploration U.S.A. Inc. purchased Cogema Mining, Inc., the operator of the Irigaray and Christensen Ranch ISR sites. Uranium One Exploration U.S.A., Inc. also purchased Malapai Resources Company, the owner of the properties. These operational ISR properties are operated under U.S. Nuclear Regulatory Commission Materials License No. SUA-1341 and the Wyoming Department of Environmental Quality Permit to Mine No. 478. Effective February 1, 2010, the name of the operating corporation Cogema Mining, Inc. was changed to Uranium One USA, Inc.

Mining resumed at Christensen Ranch with Mine Unit 7 (MU7) starting in Q 1, 2011. Activities associated with the development of MU7 in the first half of 2011 included drilling and well installation, followed by the initiation of surface construction of wells to module buildings 7-1, 7-2 and 7-3. Module buildings 7-4, 7-5 and 7-6 will be completed and put into production in Q3 and Q4, 2011.

Mine Unit 8 is scheduled to start production in Module 8-1 in the first Quarter 2012, with Module buildings 8-2 and 8-3 in production before June 30, 2012. Some delineation drilling will be conducted in the MU9 area as the next operating Mine Unit scheduled for production. The reclamation bond includes the installation of new wells in MU7 and MU8. Restoration cost estimates for MU7 have been included in this bond estimate as well as Mine Unit 8.

The resumption of mining at Christensen Ranch will also involve processing of the uranium at the Irigaray central plant facility. Reclamation of the Irigaray wellfield area is near completion with all wells now plugged and abandoned. Reclamation of other Irigaray facilities not associated with uranium processing will continue.

6. **RECLAMATION & RESTORATION PLANS - NEXT REPORT PERIOD:**

**Irigaray Surface Reclamation:**

In Production Units 8 through 9 the remaining buried piping will be removed. After all work is completed in the wellfields, associated roads and surfaces will be reclaimed. Final surface gamma surveys will be completed prior to topsoil placement and final reclamation.

**Christensen Ranch Surface Reclamation:**

Reclamation of surface disturbance associated with the development of MU7 and MU8 will be initiated during the fall of 2011 for MU7 and MU8 if (available areas are ready for reclamation) with the majority of reclamation activities for MU8 being conducted in the spring of 2012.

7. **MONITORING ACTIVITIES:**

a) **Groundwater Monitoring - Wellfield Monitor Wells:**

Groundwater quality at the Christensen site is monitored by routine sampling of 327 monitor and trend wells surrounding or within the wellfields. Sampling frequency on these wells is done quarterly during post-restoration/stabilization monitoring and thereafter. There are 67 monitor well in MU7 that are sampled on a by-weekly basis. Monitor wells on excursion status are sampled weekly.

Sample data for each monitor and trend well from July 1, 2010 through June 30, 2011 are contained in Appendix 2.

Uranium One had five monitor wells on excursion status during the report period. All reported excursions were in restored Mine Units. Ring well 2MW89 was on excursion status from March 9, 2011 to May 16, 2011. 4MW1 was on excursion status from June 9, 2010 to August 25, 2010 and again on March 23, 2011 to May 2, 2011. By letter dated March 18, 2010 the WDEQ requested that Uranium One return 5MW66 to excursion status. 5MW66 was terminated from excursion status on March 14, 2011. 5MW8 was on excursion from April 19, 2011 to May 31, 2011. Written reports were sent to the WYDEQ and NRC concerning these matters and will not be duplicated in this report.

**Groundwater Monitoring - Regional Ranch Wells:**

Quarterly samples were collected from seven regional ranch wells. During the report period two of the ranch wells that are normally sampled had problems with inoperable pumps or power to the wells therefore they were not sampled every quarter. Willow Corral 32# was not sampled in the 4<sup>th</sup> quarter of 2010 and IR Willow 2# was not sampled in the 2<sup>nd</sup> quarter of 2011. Regional well samples were

analyzed for uranium along with four other radionuclides in the decay chain. The resulting concentrations were primarily Non Detectable (ND) with the detected concentrations within normal historical ranges. The 2010 - 2011 sample data are provided in Table 1 of Appendix 1.

### **Underground Injection Wells:**

Two Class I injection wells are installed at the Christensen Ranch project and are licensed by WDEQ Permit Number UIC00-340 for industrial wastes.

As required by UIC Permit 00-340 section I, paragraph 4, Uranium One shall shut one of the wells covered by this permit in annually for a period of time long enough to observe a valid pressure falloff curve. Each year, a well which was not tested in the previous year shall be tested, until all wells are tested in sequence. On August 25, 2009 through September 2, 2009 all annual and 5-year mechanical integrity test (MIT) was done on both DW No 1. and Christensen 18-3. The (MIT) activities consisted of injection fall off test, annulus pressure test, radioactive tracer (RAT) surveys and static and dynamic temperature surveys. The wells satisfactorily demonstrated mechanical integrity pursuant to the UIC permit. All testing was done by Petrotek Engineering of Littleton, Colorado. With the above referenced test done in 2009 Uranium One was granted authority to omit APFT's during 2010 by letter dated October 29, 2010 from the WDEQ. Annual fall off test will be done on September 29<sup>th</sup> and 30<sup>th</sup>, 2011. Quarterly disposal reports for both wells are submitted to the WDEQ - Water Quality Division in Cheyenne, Wyoming. No exceedances of the permit limits were recorded for flow, pressure or water quality during this annual report period. Well DDW #1 remained inactive during the reporting period. Well 18.3 was uses on an intermitted basis as start up of operations in MU7 advance.

### **b) Surface Water Monitoring:**

Willow Creek is an intermittent stream present within the permit boundary of both the IR and CR projects. Three sample locations are designated at each site: upstream, downstream and within the permit boundary. Quarterly samples were collected from the locations where flow was available. An annual sample of the Powder River (IR-5) was also collected near the IR site, downstream from its confluence with Willow Creek.

Please note that at the request of the NRC, GS-01 has been moved further down gradient on Willow Creek to the existing mine permit boundary.

The samples were analyzed for both radionuclide and chemical parameters. The resulting radionuclide concentrations were mostly non-detectable, with the remaining concentrations within historical ranges. The chemical parameters were also within historical ranges. 2010 - 2011 sample data are contained in Table 2 of Appendix 1.



The Federal Water Pollution Control Act and WDEQ - NPDES Program requires facilities with an approved Storm Water Discharge permit to collect water samples and report, "run-off from storm events with greater than 0.1 inches of rainfall", semi-annually in the second, fourth and sixth year of the license period. The CR project is covered by NPDES license WYR00-0904 for the period from September 29, 2007 to August 31, 2012. No samples were collected because personnel were not present during discharge events.

**Surface Discharge Monitoring:**

A surface discharge outfall is present at the CR project for disposal of treated groundwater generated by restoration activities. The outfall is licensed under National Pollutant Discharge Elimination System (NPDES) permit issued by the WDEQ. No water was discharged at the CR site (Permit No. WY0033642, discharge 002) during this report period, therefore no data set is included

**Evaporation Pond Monitoring:**

Weekly inspections are conducted on all operable evaporation ponds (currently four at IR and five at CR). During the spring of 2010 the leak detection system (LDS) for Pond #1 reported measurable water. Multiple attempts were undertaken to find and patch the potential sources of water reporting to the LDS. After repair efforts were unsuccessful, it was determined that the pond should be relined and in November of 2010 a new pond liner was installed in Pond #1 at the Christensen Ranch facilities. No leaks were detected at any of the other facility ponds during this report period. Pond sample analytical data are contained in Table 3 of Appendix 1.

c-f) N/A.

g) Anticipating an eventual restart of mining, wildlife monitoring was reinitiated during 2007 and continued in 2010. Consultant, Jones and Stokes, prepared a summary report of the 2010 wildlife monitoring which is included here as Appendix 6.

h) Maps showing the monitored locations discussed in this section are located in Appendix 4.

**8. RECLAMATION PERFORMANCE BOND ESTIMATE:**

In accordance with SUA-1341 License Condition 9.5 as required by 10 CFR 40, Appendix A, Criterion 9 an updated reclamation/restoration surety estimate for July 2011 through June 2012 is provided in Appendix 3. Significant changes have been made to the 2011-2012 bond estimate to account for CR MU8 wellfield development and the start of mining in MU8 which is anticipated by the beginning of 2012. No mining (lixiviant injection) or wellfield development is planned for MU9 until the 2012-2013 reporting period. Also, in "Worksheet 6" costs pertaining to Irigaray pump, surface trunkline, and buried trunkline have been removed as these

reclamation activities have been completed. Other updates include planned expansion of the IX circuit in the CR satellite facility, the addition of two new precipitation tanks at the Irigaray plant and, at the request of the WDEQ; a "recurring cost summary" sheet has been added to the surety estimate. This new sheet updates many costs used repeatedly throughout the surety estimate to reflect actual costs and costs based on WDEQ-LQD Guideline No. 12: Standardized Reclamation Performance Bond Format and Cost Calculation Methods. For an explanation of cost changes and their origins, see the cost summary sheet. Changes directly related to expansion and development has been highlighted in gray throughout the surety estimate worksheets.

### **Revised Recurring Costs**

- Transportation costs for a trip to the licensed site (Shirley Basin) have been revised based on actual costs with a local trucking company.
- Transportation costs for a trip to the local landfill (construction debris, garbage, non-contaminated items) have been revised based on a quote from a local trucking company.
- Local landfill disposal costs have been revised based on the City of Casper's current landfill rates.
- Onsite disposal costs have been revised per WDEQ Guideline 12, Appendix K.
- Labor costs have been revised per Heavy and Highway Prevailing Wages (February 2011), referenced as State Building Construction Prevailing Wages in WDEQ Guideline 12, Section I.
- Cost of building demolition has been revised per WDEQ Guideline 12, Appendix K.
- Cost of concrete demolition has been revised per WDEQ Guideline 12, Appendix K.
- Cost of equipment rental and operation has been revised per WDEQ Guideline 12, Table D-1.
- Backfill cost has been revised based on WDEQ Guideline 12, Appendix B.
- Grading cost has been revised per WDEQ Guideline 12, Appendix M.
- Cost of fence removal has been revised based on WDEQ Guideline 12, Appendix H.
- Cost of transformer removal has been revised per WDEQ Guideline 12, Appendix H.
- Cost of culvert removal has been revised based on WDEQ Guideline 12, Appendix J.

### **Worksheet 1: Groundwater Restoration**

- Recurring costs have been revised as discussed above.
- Well numbers and wellfield area for MU7 and MU8 have been adjusted for production and development plans.
- MU7 "Wellfield Area" has been revised to reflect current conditions.

- The number of "Baseline Water Quality wells" for MU7 has been reduced from 38 to 11 per WDWQ-LQD Guideline 4 recommendations of a density of 1 well per 3 acres for establishing restoration values.
- Credit for completion of groundwater sweep for Christensen Ranch Mine Units 2-6 has been granted by the WDEQ but has not been authorized by NRC; therefore, separate WDEQ estimates and NRC estimate are provided.
- Costs for the groundwater restoration of MU8 have been added. Lixiviant injection (subject to WDEQ approval) is anticipated in the first module of MU8 by the beginning of 2012.

### **Worksheet 2: Plant Equipment Removal and Disposal**

- Recurring costs have been revised as discussed above.
- During the 2011-2012 reporting period Uranium One plans to add six additional IX vessels to the satellite plant accounting for an increase in plant and filter media volume.

### **Worksheet 3: Restoration and Reclamation Costs**

- Worksheet 3 addresses building demolition and disposal.
- Recurring costs have been revised as discussed above.
- During the 2011-2012 reporting period Uranium One plans to add an additional 9 wellfield module buildings and one booster pump building.

### **Worksheet 4: Pond Reclamation Cost**

- This worksheet has been revised to reflect the recurring costs as discussed above.

### **Worksheet 5: Well Plugging and Abandonment**

- Recurring costs have been revised as discussed above.
- The number of wells for CR MU7 and MU8 has been revised to reflect wells completed during the current reporting period and planned for 2011-2012.
- The row "Misc. Baseline / Regional Wells" has been removed, as these wells are either existing production or injection wells and their number is already reflected in the number of production/injection Wells. Past surety estimates mistakenly accounted for these wells as separate wells and included them in the total number of wells to be plugged in each mine unit.

## **Worksheet 6: Wellfield Equipment Removal & Disposal**

### **Section I: Wellfield Piping**

- Recurring costs have been revised as discussed above.
- The amount of wellfield pipeline for CR MU8 has been added.

### **Section II: Production Well Pumps**

- The amount of production well pumps has been added for CR MU8.
- The number of production wells and pumps for CR MU7 has been revised to reflect the current number.
- The cost of removal and disposal for production well pumps at Irigaray has been deducted. All wells have been plugged and abandoned; and all well pumps have been removed from the site and disposed of at a licensed facility or moved to another operating facility.
- The cost of surface trunkline removal at Irigaray has been deducted, as all surface trunkline has been removed and disposed of at a licensed facility.
- The cost of buried trunkline removal at Irigaray has been deducted, as all buried trunkline has been removed and disposed of at a licensed facility.

### **Section 3, Buried Trunkline**

- Trunkline for CR MU8 has been added.

### **Section V: Manholes**

- Manholes have been added for CR MU8.
- The cost of manhole removal for Irigaray has been deducted, as all manholes have been removed and disposed of.

## **Worksheet 7: Topsoil Replacement & Revegetation**

- Recurring costs have been revised as discussed above.

### **Section III: Wellfields**

- Affected acreage for CR MU7 and MU8 remains the same from the last surety update.
- Mine Unit 8 Radiation and Survey & Soil Analysis costs have been added.

### **Section IV: Roads**

- Affected acreage for CR MU7 and MU8 remains the same from the last surety update.

### **Section V: Other**

- Affected acreage for CR MU7 and MU8 remains the same from the last surety update.

### **Worksheet 8: Miscellaneous Reclamation**

- Recurring costs have been revised as discussed above.
- For CR MU7 Sections I, II, III, and V have been adjusted to reflect actual numbers.
- Costs for CR MU8 development have been added throughout.

### **Table 1, Summary:**

- In past surety estimate revisions, the costs have been inflated from September 2006 levels to reporting period levels based using the current CPI. In light of the of fact that a number of costs have been updated in Sheets 2-6, Uranium One has chosen to apply the inflation adjustment only to Sheet 1 "Groundwater Restoration" which has not had any costs escalated.
- "Miscellaneous Costs Associated with Third Party Contractors" has been updated to reflect the amounts in WDEQ-LQD Guideline 12, Section 2, Subsection 12.
- The overall difference from all the changes made to Worksheets 1 through 8 amounts to an increase for the WDEQ surety estimate amount of \$3,849,407 and an increase of \$3,311,788 to the NRC estimate.

In summary, the new Grand Total restoration and reclamation surety estimate for WDEQ is \$16,390,489 and the NRC estimate is \$16,240,210. This represents an increase of \$3,849,407 for the WDEQ estimate an increase of \$3,311,788 for the NRC estimate, over the currently approved amount of \$12,928,432. Uranium One respectfully requests that WDEQ approve the new bond amount of \$16,389,261.

### **9. ADDITIONAL INFORMATION AS REQUESTED BY THE DIVISION:**

- A) No orders occurred during this report period.
- B) No permit stipulations occurred during the report period.
- C) Other: The following additional information is provided to meet the reporting requirements of Section 5.10.1.1 and 5.10.1.2 of the 1996 Permit No. 478 Update Application:

#### **1. GENERAL LOCATION MAPS**

General Location Maps showing the locations of monitor wells and wellfields in conjunction with past mining activities are located in Appendix 4.

#### **2. WATER QUALITY MONITORING DATA**

Data were previously provided in Section 7. a).

3. PIEZOMETRIC MAPS

Piezometric maps of the monitored aquifers shallow zone, ore zone and deep zone for Christensen Ranch project are included in Appendix 5. The maps were constructed using water level data from monitor wells and production wells where applicable. This data was collected during June 2011.

4. MECHANICAL INTEGRITY TESTING

MIT results are reported to the WDEQ on a quarterly basis. Three hundred and twenty (320) MITs were completed during the report period with nine (9) wells failing the test. The wells that failed the test were plugged with the approved WDEQ method. The data is provided as Table 4 in Appendix 1.

5. DRILL HOLES AND ABANDONED WELLS

A total of 813 holes were drilled at the site during the reporting period. At MU7 170 delineation holes were drilled; 284 Injection wells were completed; 141 recovery wells were completed and one monitoring well for a total of 596 total holes/wells. At MU8, 11 baseline wells were completed; 166 delineation holes were drilled; 9 deep monitoring wells were completed; 15 ring wells (monitoring wells) were completed; 7 shallow monitoring wells were completed and 71 recovery well were completed for a total of 217 holes/wells.